The West Indies: the natural and physical history of the Windward and Leeward Colonies; with some account of the moral, social, and political condition of their inhabitants, immediately before and after the abolition of negro slavery / By Sir Andrew Halliday.

Contributors

Halliday, Andrew, Sir, 1781-1839.

Publication/Creation

London : J. W. Parker, 1837.

Persistent URL

https://wellcomecollection.org/works/p2j74w2b

License and attribution

This work has been identified as being free of known restrictions under copyright law, including all related and neighbouring rights and is being made available under the Creative Commons, Public Domain Mark.

You can copy, modify, distribute and perform the work, even for commercial purposes, without asking permission.

wellcome collection

Wellcome Collection
183 Euston Road
London NW1 2BE UK
T +44 (0)20 7611 8722
E library@wellcomecollection.org
https://wellcomecollection.org


121
CHARING
CROSS RD
LONDON
BOOKS
BOUGHT
FOYLES
BOOK
SELLERS
CATALOGUES
FREE
WE ALLOW MORE
FOR BOOKS BEARING THIS LABEL



Standidge & Co. litho. London.

Supposed Course of the Volcanic Current from A under the Equator.

THE WEST INDIES:

THE

NATURAL AND PHYSICAL HISTORY

OF THE

WINDWARD AND LEEWARD COLONIES;

WITH SOME ACCOUNT OF

THE MORAL, SOCIAL, AND POLITICAL CONDITION
OF THEIR INHABITANTS, IMMEDIATELY
BEFORE AND AFTER

THE ABOLITION OF NEGRO SLAVERY:

BY

SIR ANDREW HALLIDAY, K.H., M.D., F.R.S.E.,

DEPUTY INSPECTOR GENERAL OF ARMY HOSPITALS;

FELLOW OF THE ROYAL SOCIETY OF GÖTTINGEN;

FELLOW OF THE ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH; LICENTIATE OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON;

HONORARY MEMBER OF THE MEDICAL AND PHYSICAL SOCIETIES OF EDINBURGH AND OF THE HIGHLAND AND AGRICULTURAL SOCIETY OF SCOTLAND;

&c. &c. &c.

LONDON:

JOHN WILLIAM PARKER, WEST STRAND.

M.DCCC.XXXVII.

WELLCOME
HISTORICAL
MEDICAL
LIBRARY

TO

LIEUTENANT-GENERAL

SIR HERBERT TAYLOR, G.C.B., G.C.H.

&c. &c. &c.

THIS VOLUME

IS RESPECTFULLY INSCRIBED,

BY

HIS GRATEFUL AND ATTACHED FRIEND,

THE AUTHOR.

HAMPTON COURT, 17*th March*, 1837.

Digitized by the Internet Archive
in 2017 with funding from
Wellcome Library

https://archive.org/details/b29304751

CONTENTS.

Page

CHAPTER I.

VOYAGE OUT.—My Reasons for going to the West Indies.—The Packet-ship Pandora.—Her First Voyage and many good Qualities.—Arrival at Barbados in twenty-five Days . . 1

CHAPTER II.

BARBADOS.—Advice gratis to those who intend to visit the West Indies.—First Impressions of the Country and People.—Description of the Island.—External Appearances.—Its component parts.—Discovery and first Colony.—Scotland, its Scenery, Mineral Wells, &c.—Burning Fountain.—Currents of the Ocean.—Remarkable Fact connected with the Burning of the Kent East Indiaman.—Voyage of a Bottle.—Hurricanes, their Limits.—Frequency in certain Latitudes.—The most remarkable in Barbados mentioned . 8

CHAPTER III.

THE HURRICANE OF 1831.—A full Account of all the Phenomena previous to, and during the continuance of, this awful Visitation.—Anecdotes of Persons miraculously preserved, and of the force of the Wind.—Attempt to account for the Cause of these awful Visitations.—Regularity of the Under-current of Air, or Trade-Winds, blowing from East to West.—Proofs that an Upper-current blows from West to East.—Account of the Volcano of St. Vincent's, in 1812.—Alarm created in Barbados.—The effects in St. Vincent's . . 32

CHAPTER IV.

COLONIZATION.—Taken possession of by Settlers from England, in consequence of the Account of it brought home by a Dutch Captain.—Hay, Earl of Carlisle, made King of the West Indies.—Respectability of first Settlers.—The honourable Conduct of their distinguished Descendants contrasted with Men in other Colonies.—Early Opinions respecting the African Slaves.—Free Tenants.—Their Character . . 52

Page

CHAPTER V.

NATURAL HISTORY OF BARBADOS. — Not very abundant in Minerals. — Shells found in the Chalk Beds not petrified. — Great variety of Shells found on the Shore. — Flying-Fish common here. — Barracuta, a dangerous Fish. — Crabs abundant. — Dr. Maycock, Author of the Flora Barbadensis. — Birds and Lizards 60

CHAPTER VI.

DISEASES IN BARBADOS. — The Barbados Leg. — Tetanus epidemic. — Intermittent and Remittent Fevers not contagious. — Soon generate a Contagious Fever. — Numbers of Sick and of Deaths in our Military Hospitals. — Bad Effects of a Salt-Meat Diet. — Importance as to Health of frequently changing Regiments in the Colonies 69

CHAPTER VI*.

RELIGION. — Great Exertion made at a very early period to convert the Negroes. — Opposition of the Planters. — Present improved condition of the Colonies as regards Religious Instruction. — Bishop of Barbados, his Zeal and Success in propagating the Gospel. — Excellent conduct of the Clergy. — Dr. Coleridge's conduct above all Praise 76

CHAPTER VII.

BRITISH GUIANA. — Departure from Barbados. — Arrival at Georgetown. — Extent and Importance of the Colony of British Guiana 95

CHAPTER VIII.

HISTORY OF THE COLONY. — Berbice the first Settlement. — Then Essequibo and Demerara. — Consolidation of the three Colonies in British Guiana. — This Colony fortunate in its Governors 100

CHAPTER IX.

THE PRESENT STATE OF BRITISH GUIANA. — The Dutch People severe Task-masters. — Condition of the first British Colonists influenced their Character. — Prejudices of the Planters. — Their Opposition to the Measures of Government. — Present Improved Condition of all Parties. — Great Increase of Produce from Free Labour 110

* Incorrectly printed VI. for VII.

Page

CHAPTER X.

CIVIL CONSTITUTION, COURTS OF JUSTICE, &c.—Union of the Colonies during the present Reign.—Sir B. D'Urban, first Governor-General.—Dutch Laws and Dutch Forms still prevail.—Civil Government.—Court of Policy.—How formed.—Combined Court.—High Courts of Civil and Criminal Justice.—Inferior Courts 132

CHAPTER XI.

RELIGION, AND THE CHURCH ESTABLISHMENT.—Colony remained long without a Church.—St. George's first built.—St. Andrew's next.—Colony divided into Parishes.—Inadequacy of the present Establishment.—Respectability and Usefulness of the Missionaries.—Exertions of the Planters.—Great Britain urgently called upon to assist in the Good Cause . 144

CHAPTER XII.

COMMERCE AND FINANCE.—Want of Labourers still felt.—Mission to Cuba.—Its failure.—Advantages of the Port of Demerara.—Returns, showing the extent of Commerce.—Increase of Labourers.—Importance of the Timber Trade.—Financial arrangements, and amount of Currency 170

CHAPTER XIII.

NATURAL HISTORY.—Nature of the Soil in British Guiana.—Extent and Depth.—Accumulation of Trees under Georgetown.—Richness of Vegetation.—Dr. M'Turk, and Major Staples, Benefactors of the Community.—Artesian Wells, and Lamaha Canal.—Variety of Animals, Birds, and Reptiles.—Habits and Instincts of Birds and Insects.—Fishes 203

CHAPTER XV.

MEDICAL STATISTICS—Climate—Diseases—Colony now Healthy.—Climate regular.—Chief Causes of Sickness and Mortality amongst British Troops.—Barracks and Food.—Drs. Jackson and Fergusson's valuable Reports.—Little Attention paid to Medical Opinions by Military Commanders.—Fatal Consequences 245

CHAPTER XVI.

TOBAGO.—Departure from Demerara.—Arrival at Tobago.—Scarborough Bay.—History of the Colony.—Unhealthiness of Fort King George.—Causes of its being so.—Improvement recommended.—Extent and Commerce.—Appearance and Formation of the Island.—Its History . . . 267

Page

CHAPTER XVII.

TOBAGO.—Formation of the Island considered.—General View of the Volcanic Origin of the Islands in the Carribean Sea.—Probable Order of their Appearance.—Facts in support of the proposed Theory 275

CHAPTER XVIII.

TRINIDAD.—Passage to Trinidad.—Scenery of the Bocas.—Port of Spain.—Discovery and History of the Island.—Sir Walter Raleigh visits the Island, and plunders the Spanish Colony.—Present Population of the Island.—Its Value as a Colony.—French Language generally spoken.—Courts of Justice still regulated by the Laws of Spain 286

CHAPTER XIX.

TRINIDAD.—Colonization.—Commerce, Origin, and Increase of the Port of Spain.—Character of Sir Ralph Woodford.—Prosperity of the Colony.—Revenue of the Capital.—Markets.—Produce of each District.—Imports, Exports, and Shipping 296

CHAPTER XX.

TRINIDAD.—Civil Government and Courts of Law, and Military Establishment.—State of Religion and Churches.—Black Colony at Manzanilla.—General Remarks 313

CHAPTER XXI.

TRINIDAD.—Formation and Natural History of the Island.—Remarkable Phenomena.—Pitch Lake.—Mud Volcanoes.—Animal and Vegetable Productions.—Ants, their Habits and Economy 328

CHAPTER XXII.

CLIMATE AND DISEASES.—Trinidad unhealthy.—Causes of Fever.—Locality of Barracks bad.—Atmospheric Phenomena.—Earthquakes 356

APPENDIX 380

Map of the supposed Course of the Volcanic Current . . . . . *To face Title Page.*

Geological Map of Barbados 24

Position and supposed Extent of British Guiana 96

THE WEST INDIES.

CHAPTER I.

VOYAGE OUT.

MY REASONS FOR GOING TO THE WEST INDIES—THE PACKET-SHIP PANDORA — HER FIRST VOYAGE AND MANY GOOD QUALITIES — ARRIVAL AT BARBADOS IN TWENTY-FIVE DAYS.

Some men travel for their amusement,—others to acquire knowledge, and not a few in search of health; I was unfortunately of the latter class. That most severe of all human ailments, gout, had made such inroads upon a constitution, otherwise sound, and had so enfeebled a frame, originally strong, that before I was fifty years of age I could with difficulty walk a hundred yards, and was seldom free from pain and suffering for a week together. The usual remedies had failed to produce any permanent relief, and as a last chance it was recommended that I should try the effects of a warm climate.

When the opinion of friends so entirely coincides with one's own wishes, as this did with mine, it is

pretty certain their advice will be followed. I therefore was not long in soliciting to be placed on the full pay of my commission as a Deputy Inspector General of Army Hospitals, being well aware that wherever an officer of my rank might be required, it would be in a more southern latitude than that of England. My request, after a reasonable time, was granted. I expected to have been sent to the Mediterranean, where the vacancy had occurred that admitted of my being employed, but in this was disappointed; an officer was removed from Barbados to Corfu, and I was ordered to the West Indies. I cannot say that I felt it as any very great disappointment. My principal objects in going upon service were active employment and to get to a warm climate, and I believed Barbados under all circumstances was just as healthy as Corfu. At any rate, the West Indies at that critical period, and when so great a change in the relative condition of their inhabitants was about to take place, presented a wider field for study, and a greater range for original observation, than could possibly be found in the isles of the Mediterranean, and more especially for such studies as through life had been my chiefest delight; consequently I proceeded according to orders, and embarked at Falmouth on the morning of the 9th of November, 1833.

The packet appointed to carry out the West India

mail on this occasion, was the newly-finished brigantine, Pandora. This was to be her first voyage, and as she was the first of her class built by Captain Symonds, upon his much-disputed plans and principles, and was intended to put these principles fairly to the test of experience, there was even some interest attached to the going out in such a vessel. It was very evident, from the moment we got on board, that the commander and his officers considered themselves as intrusted with more than the usual routine of their nautical duties, and had higher objects in view than the mere safe navigation of a packet-ship, and they proved themselves well qualified for the duties required of them. Of the ship's best trim they were as yet perfectly ignorant, and when a sail was set it was more to ascertain its effects than to prove its necessity. But as every league we proceeded on our way was to afford us some valuable information as to the good or bad qualities, as a sea-boat, of this beautiful little vessel, we started with that kind of excitement which is often the chief ingredient in the ordinary composition of human happiness.

On leaving Falmouth harbour the wind was contrary, but moderate; and as it soon became more southerly, we were enabled to pass the Scilly Islands during the night, and to make a good west course. The Pandora was found to steer well upon a wind, and as

we experienced "a little bit of a gale," when near the longitude of Cape Clear, we had an early opportunity of proving various others of her many good points. Every minute particular, even to the setting of a sail or the pulling of a rope, was carefully recorded in the log; but all that I can find in my note-book, as claiming especial notice, is, the horrible creaking noise made by the beams and timbers, which, for the first week, most effectually banished sleep.

We were able to steer west and by south till the 15th of November, when the wind veered round right a-head, and made it necessary to stand on the other tack, a course about east and by south. We kept on this tack during the whole of the 16th, but on the morning of the 17th we again stood to the westward. It blew pretty fresh all this forenoon, but as the Pandora lay well up, we made a tolerable course.

To our great joy, however, about noon on the 17th, the wind became right fair, and blew a steady breeze, and our good ship's head was turned direct for Barbados. On the 20th at noon we were in latitude 37° 30′ north, and longitude 20° west, with a fair wind and a following sea.

Our whole time was now spent in experimenting—in altering, newly arranging, and in trimming of the sails, high and low, before and abaft, and on both sides, so as to increase the speed or steady the motions

of the lively Pandora; and certainly she did "walk the waters like a thing of life," and her speed may have been equalled, but was never surpassed, by any vessel under canvass.

If we discovered the mast-heads of a ship at sunrise, we had seen her hull down by noon, and such was the "arrow-like" swiftness with which we passed some of the craft we fell in with, that, as I heard afterwards, the crews of these vessels began to suspect that "the flying Dutchman" had been blown from his usual latitudes, and was now cruizing in the Atlantic Ocean.

We made twenty-four degrees of latitude (or fourteen hundred and forty miles), and forty degrees of longitude (nearly two thousand and four hundred miles,—above three thousand miles of a direct run), in fourteen days, and without any necessity for altering a single sail, except for the amusement of the commander, or to exercise the men. We anchored in Carlisle Bay at five o'clock on the afternoon of Thursday, the 5th of December.

On the 22d of November (and thirteenth day of our voyage) my remorseless enemy (who had never completely left me for more than a few days during the whole of the previous twelve months) made a violent seizure upon the left lower extremity, and soon confined my observations to a very narrow space. The

foot, the ancle, and the knee, became affected in regular succession, and the pain—but to the initiated I need only say it was inflammatory gout.

From the 22d of November till the 5th of December I could not move in, and far less stir out of, my cot; but when the cry of "land" was heard, I did beg to be hoisted upon deck, to see the green palms and velvet-looking fields of Barbados. In this I was kindly indulged, when I found we were approaching the shore near to that dangerous reef of rocks, called "the Cobblers," and certainly the view which burst upon my sight was new and interesting, but not calculated to excite any great astonishment, even in the mind of a "Johnny Raw."

After doubling the southern point we stood up along the west coast, and soon had a view of the ships of war and other ships anchored off Bridgetown. Five or six of his majesty's frigates and sloops of war were then in Carlisle Bay, a larger number than usual; and a great many merchant-vessels were busily employed in discharging or taking in their cargoes.

We anchored, as I have said, about five P.M., and the commander went instantly on shore to deliver the mails at the post-office; but I was too unwell to be moved. With the dawn on Friday an effort was made. I was swung down into a boat, and as the

tide answered, was rowed close under the walls of Hannah Lewis's respectable hotel, and carefully removed by two of her stout black fellows from the shore to the apartments that had been prepared for my use.

The severity of my sufferings soon began to give way under the genial warmth of the Barbados climate. In a few days I was able to walk about my room, and in less than a week to ride out. In twelve days I was quite well, and, thank God, passed three years without any very serious symptom of the enemy's return. I hoped that gout had taken its departure for ever, and was about to offer some sage advice to those who might suffer as I had done, "recommending a trip to the West Indies as *an infallible cure*," but I had scarcely conceived the thought, when I received a very *painful* warning that, like many other "infallible remedies," this, too, had failed. My disappointment was great, but the pain greater; and the only comfort I have had for many months has been in writing this book.

But I have said enough, and more than enough, of self. The reader now knows why I went to the West Indies, and the way in which I got there; and therefore it is time to put an end to this very uninteresting, but fortunately short chapter.

*

CHAPTER II.

BARBADOS.

ADVICE GRATIS TO THOSE WHO INTEND TO VISIT THE WEST INDIES—FIRST IMPRESSION OF THE COUNTRY AND PEOPLE—DESCRIPTION OF THE ISLAND—EXTERNAL APPEARANCES—ITS COMPONENT PARTS—DISCOVERY AND FIRST COLONY—SCOTLAND, ITS SCENERY, MINERAL WELLS, ETC.—BURNING FOUNTAIN—CURRENTS OF THE OCEAN—REMARKABLE FACT CONNECTED WITH THE BURNING OF THE KENT EAST INDIAMAN—VOYAGE OF A BOTTLE—HURRICANES, THEIR LIMITS—FREQUENCY IN CERTAIN LATITUDES—THE MOST REMARKABLE IN BARBADOS MENTIONED.

I WOULD say to such of my readers as intend to visit the West Indies, "Banish from your memories all that you may have read or heard of the country, the climate, or the people; and, with a mind as little fettered as possible by any prevailing theory or preconceived opinion, begin and study them on the spot each for himself. You will find the scenery, at whatever island you may arrive, new, and very beautiful; and every spot of earth in the Carribean sea well calculated to engage the attention of any one accustomed to study or to take an interest in the various productions of animated nature." The climate, according to the period of the year at which the traveller may arrive, will at

first be felt as more or less oppressively hot; and the people, whether white, black, or brown, will receive him with a pleasing openness of manner, and an apparent kindness of heart, which, whether real or affected, is at first very engaging; and certainly, all classes, particularly the higher, are most hospitable and courteous to strangers.

Notwithstanding many annoyances from poisonous reptiles, and from stinging insects, and from the sight of crawling vermin, and ugly creeping things, the newly-arrived may (if his own temper will permit,) enjoy tolerable comfort in any one of our West India colonies; and, as a physician, I may tell him, that unless by his own imprudence he lays the foundation of serious disease, there is nothing inherent in the country, the climate, or the annoyances he may meet with, that will lead to any sudden attack of ill-health, or induce either a plague or a pestilence.

The high degree of cultivation at which almost all the islands have arrived, has destroyed the virulence of that marsh-poison, which in former ages frequently proved most destructive to Europeans on their first landing; but, above all, the great and salutary changes which have taken place in the modes of living, and in the habits and customs of the people; the better education and more polished manners of the planters and merchants; and the greater attention paid to clean-

liness and to comfort,—have tended more than any other change to produce that diminished expenditure of human life which, for several years past, has been so remarkable amongst the higher classes of society in the West Indies, and particularly amongst the British officers.

I would, however, warn the reader, that on his arrival in these colonies, the temptations that surround him at first are great, and the incitements to indulgence almost overpowering, yet they must be resisted; for the facility with which disease is contracted, and the fearful rapidity with which it runs its course, ought never for a moment to be lost sight of.

On first landing, the craving desire for liquids is incessant, and most distressing; and the more we drink, the more our desire for drink increases, and by indulging this depraved appetite, there arises that vicious habit of tippling in the morning, which in the olden time too often ended in confirmed drunkenness. But if this desire for drink is resisted, and we endeavour by gentle exercise, constant occupation, and social amusements (as is now generally done), to forget our sufferings, we shall soon overcome that lassitude which is occasioned by unusual exhaustion, and that irritation and craving for liquids, which are encouraged and strengthened by solitary indulgences. The thirst as I have perceived, will become less and

less every day, and at last cease to give any uneasiness.

There is another rule which I recommend the newly-arrived to adhere to with the utmost punctuality; and that is, to go early to bed, and to rise early. This "golden rule" has always been considered of as much value in Europe as it can be in the West Indies; but I recommend it here, neither on account of the wealth it may procure nor of the wisdom that it may promise him who practises it, but to call the reader's attention to the great difference which there is in the hours (relatively as to day and night), between England and these western longitudes; and which I fear is very seldom taken into consideration, as I have not found it mentioned even by medical writers, and I suppose it is never thought of by the careless voyager; yet our wonted periods of rest and exercise—of repose and exertion, are very seriously altered.

When the hand of the clock at Barbados points to the hour of eight in the evening, it is already past midnight all over England; and if we wait here till the dial-plate tells us it is our usual hour of going to bed, say eleven o'clock, we shall interfere greatly with those arrangements of nature which the habitual routine of our whole previous existence has made as it were a part of her economy.

Every physician knows with what pertinacity the

animal machine adheres to its accustomed motions,—its modes and periods of action, and of rest. A few weeks may serve so to change our position upon the earth's surface, as to convert our English day into an American night, but the tardiness with which the human frame accommodates itself to so complete a revolution is very remarkable. It requires many months, and sometimes years, at a certain period of life, to establish a corresponding change in the thus suddenly intercepted regularity of the whole of our animal functions.

The reader may easily conceive, that if he has been accustomed, for thirty or forty years of his life, to go to bed at eleven at night, and rise at or before eight o'clock in the morning, as shown by the dial-plate in England, his health, and much of his happiness, will depend in a great measure upon the continuance of these regular habits; and that, although he may occasionally remain till a late hour at a ball or a convivial party, such irregularities, if too frequently repeated, will even in Europe be attended with sickness and suffering; what then must be the consequence, if he now takes the Barbados clock for his guide, and sits up till it tells him it is eleven or twelve, and does not rise next morning until eight or nine are striking? This manner of proceeding will, for a considerable time, have the same effect upon his constitution as if

he had commenced in England to sit up every night, till three or four o'clock in the morning, and did not rise till afternoon; and who, even here, would expect to enjoy health, if he began to deviate so widely from the course of his former life?

But it is time to return to Barbados. This is the most eastwardly of all the West Indian Islands, and though it seems only as a point or speck in the chart of the great Atlantic Ocean, it has a very interesting appearance when first viewed from the sea. It is impossible by any similitude to illustrate sufficiently the irregular figure of Barbados. The southern extremity is the broadest, the northern the most contracted. It is convex on the east, and concave on the west side. Bridgetown, the capital, stands on the west coast, and Carlisle Bay is the harbour or roadstead of the capital.

The surface of the island is very irregular, and although there are no lofty mountains, we see one or two points that may be considered as rather high hills. There is no appearance of wood until we approach close to the shore, and then the cocoa-nut and cabbage-trees, which grow along the strand, show at once that we have reached a new world. The quantity of windmills that are seen in every direction, reminded me of my first view of the city of Lisle, only that in Barbados, they are not so much concentrated as they are in Flanders.

This island was first discovered by a Portuguese ship, on her passage from India, but it is not mentioned in any book or chart previous to 1600. It was called Barbados, either from the Lusitanians having found no inhabitants in the island, or rather, as it is believed, from its being overgrown with the Indian fig-tree, the tendrils from which have the appearance of a "*Barba*," *beard.*

The Portuguese left some pigs, and other animals, on the island, which, when the English came to take possession, were found to have multiplied considerably. The first cargo of British settlers landed at that part, on the west coast, which is now called HOLE TOWN, on Monday, the 17th day of February, 1625; but Poyer's History, Godwin's Slave's Advocate, and Ligon's account of its first settlement, may be consulted as to the early history of these colonists. Their disputes, and even their civil wars, while as yet their numbers scarcely amounted to hundreds, compose the chief portion of that history. But, indeed, from the very commencement, up to the present hour, all the evils with which our colonies have been afflicted, have arisen in a great measure from the persons on whom they were bestowed, or to whom their government was committed, having been chosen, rather on account of their influence and interest with the reigning powers, than for their fitness or ability to discharge the

duties required of them; at least, such would be the inference I should draw from reading the history of Barbados.

The figure of Barbados will at once be perceived, on casting the eye on the little geological map which I have had engraved on the opposite page, to illustrate my remarks on its structure and composition. This island is twenty-one miles in length, and about fourteen at its greatest breadth.

That portion of the coast which looks to the west, and to the south, is in general shelving towards the sea, with a flat shallow beach, while the eastern and northern shores rise almost perpendicularly from the ocean to a height of from thirty to forty feet; and, except in some of the small creeks, where steep sandy reaches occur, under the rocky cliffs, the water is deep close to the shore. The north-eastern coast, to the extent of fifteen or sixteen miles, exhibits a mixed character; the low land sinking very gradually under the sea, and the rugged and conical hills terminating, not in wall-like precipices, but sloping abruptly to a flat extended beach. The island is nearly encircled with rocks, many of them rolled masses, and at a considerable distance from their original position: but the greater part consist of the substance of the dry land, extending under the surface of the water, in

tables, or rising in reefs or insulated rocks, at no great distance from the present shore.

I have said, that on a first view, the surface of the island appeared very irregular. It may, with great propriety, be divided into flat and hilly. The low land occupies the northern, southern, and western parts; and rises by precipitous broken acclivities, running parallel with the coast, in terraces of flat open country, to the highest land, somewhat to the north of the centre of the island. It has the appearance as if the land had emerged from the bosom of the deep, at different, and very distant periods; and from the highest point to the present shore, we can trace each separate appearance of that portion of land, which was either heaved up from below, or left dry by the subsidence of the surrounding ocean.

Every acclivity presents the phenomenon of a shore long acted upon by the ever-turbulent waves; and the occurrence of deep valleys sufficiently certifies, that Barbados did not originally make its appearance as one united whole, but was at first a cluster of islets; and what, as if *par excellence*, is still called *the Valley*, and which divides the RIDGE from the CLIFF, was evidently, and perhaps for ages, a channel between these two elevations, which continued to form two distinct islands, when all the other subdivisions had

already disappeared. The highest portion of this valley is not more than fifty or sixty feet above the present level of the surrounding sea.

The highest point of land in the island is the peak of Mount Hillaby, exactly 1147 feet above high-water mark, and distant about four miles in a direct line from the sea-shore. From this elevated mass of coral rock two ridges branch off, the one north-east, and the other south-east, and evidently act as buttresses and supporters; but forming, at the same time, complete breakwaters, that prevent the force of the current and the fury of the waves from undermining or destroying the foundations of the island. These ridges slope down gradually, and pass under the surface of the sea to some distance from the coast. In the intervening space, which is of considerable extent, we now find a dry land altogether different in its formation and appearance to the rest of the country. The surface consists of a series of steep conical hills, nearly equal in height to the ridges under whose protection they have been formed, and which either project irregularly from the sides of these ridges, or rise in small groups from the plain, where their base is very nearly upon a level with the sea. The deep valleys intersecting these hills are covered with the most luxuriant vegetation, but many of the hills themselves are naked and barren, while others are richly clothed with timber.

This extraordinary district has been denominated Scotland, and the Barbadian from that circumstance considers his isle a Little Britain.

The scenery here is wild, irregular, and picturesque, and the external appearance of nature is not more dissimilar to the rest of the island, than are the different materials of which the soil is composed. The flat country, and shelving tabular land, are entirely calcareous, while the district of Scotland is composed of mineral substances belonging to the clay genus, particularly loam, potters' clay, and slate-clay: a fine-grained friable brown sandstone, and beds of a black sandstone, are also found in this district. Beds of bituminous shale are likewise frequent, and petroleum, or mineral oil, more or less abundant.

The mineral oil, so long known as Barbados tar, exudes from the base of some of these clay hills, and is collected in natural or artificial reservoirs of water. It is called *the green* oil, and is well known in England. In Barbados it is principally used to burn instead of other oils, or for painting the roofs of outhouses; is reckoned a valuable remedy for horses and horned cattle, and applied both externally and internally. As regards the human species, its reputation has greatly fluctuated. It has been found useful in many complaints as an external remedy, and it has been greatly extolled by some writers for its

powerful and beneficial effects in cancer, consumption, and in tetanus (a disease, by the by, which is decidedly epidemic in Barbados), while others have declared that it was totally inert. Externally, it is found to be stimulant; internally, it is said to be aperient, diaphoretic, and diuretic.

The great mass of the island, and all the higher ridges, even in Scotland, are calcareous, consisting of the spoils of the zoophytes, of which several species are strikingly evident. These are so cemented together, that they sometimes form a hard compact limestone, with conchoidal fracture and translucency on the edges, and at other places they exist as a dry, soft, friable chalk, or soft marl, in which are found a great variety of shells, many of them in perfect preservation. In many places the organic remains constitute the principal, and in all a very considerable proportion, of this formation; and it has been observed, that although these remains are intimately blended together in the common structure, they still appear to be arranged in families. In some situations the madreporæ, and in others the milleporæ, are most prevalent.

This calcareous formation, as observed, prevails throughout the whole extent of the island, even at its highest elevation, "Mount Hillaby;" which, as I have remarked, reaches nearly to 1150 feet; and at Hackelton Cliff and Ape's-hill Gully, mural precipices of this

coralline aggregate are found, above 200 feet high. Upon the strata of the coralline mass, beds of a white shelly sandstone are occasionally found, similar to that of Guadaloupe, in which the remains of human bodies have lately been discovered. This sandstone is quarried for building; and the Barbados filtering-stones, so common all over the West Indies, are all made of it. It is very porous.

When the beds of this stone are sufficiently thick, they have some appearance of stratification. Calcareous spar and calc-splinter occur abundantly, and occasionally small specimens of white granular limestone. They are attached to the common rock, and, like the spar, appear to have been deposited in accidental cavities at a comparatively recent period.

This calcareous formation is extremely cavernous, so that dislocations and sinking of the surface occasionally take place, even at the present time; and, from general appearances, I am inclined to believe that they happened very frequently, and to a considerable extent, at former periods. There are immense fissures in almost every part of the island, through which the water lodged on the surface is drawn off and conducted to the ocean by means of subterranean channels. Superficial springs of fresh water are not very numerous, and the inhabitants of the flat country are supplied with this necessary article of life princi-

pally from wells, which are frequently of very considerable depth, sunk entirely through the coralline rock. There is an abundance of running streams in the hilly country, and in the same district are several saline and chalybeate springs.

In Scotland, the BURNING WELL has attracted the greatest notice, and is generally the first object sought after by the traveller. The scenery around, where this bubbling fountain takes its rise, is beautifully romantic. It is placed at the bottom of a deep and rather gloomy sequestered ravine, under a hill clothed in all the richness and luxuriance of a tropical woodland. The water, as it emerges from the earth, is collected, and forms a little basin, which is kept in a constant state of ebullition from the inflammable air passing through it. This air, on the application of a lighted taper, takes fire, and will continue to burn till it is again extinguished. The gas does not rise in sufficient quantity to cause any great flame, but the loveliness of the scenery as you approach the dark and gloomy spot, with the sparkling of the little dancing lights on the surface of the pool, must have contributed to give it more than usual importance when the causes of such phenomena were as yet unknown.

The saline springs make their appearance at an inconsiderable height above the level of the sea, and are generally very near the base of those clay hills where

gypsum abounds. The taste and other qualities of these waters are said to resemble Cheltenham, but I do not find that they have ever been analyzed or much attended to.

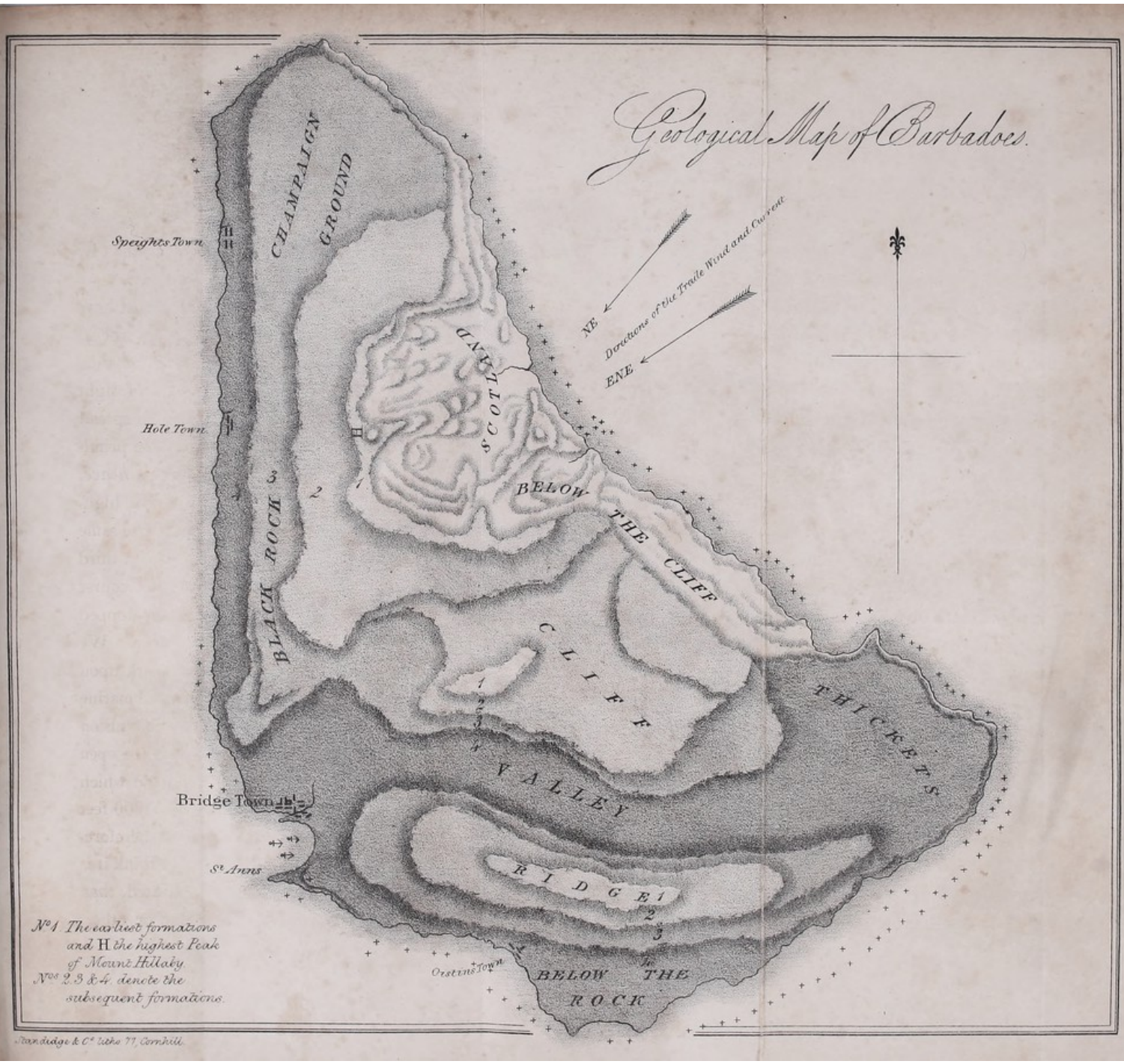
The clay deposit, though now formed into hills and plains, and of considerable extent, along the east coast of Barbados (as is proved to us beyond all doubt), rests on that coralline mass which constitutes the foundation of the whole, and the exterior crust of the greater part, of the island; and which mass, as is equally proved, was the work of the submarine insects belonging to the order of zoophytes, while the various modifications of the carbonate of lime by which these are cemented together, are derived from, or have been formed by the action of the water upon, the corallines themselves.

That the foundations of Barbados were first laid upon the summit of some submarine rock or volcanic cone that had not reached the surface of the ocean, but was within the limits or influences of solar heat and light, appears to me to be in some measure established by the following facts. We know that the Polypes began their labours at a very early period of the earth's formation, as their fossil remains constitute a large proportion of the transition strata; and we know also that they could not exist beyond a certain and very limited depth: I should therefore say that the island of

Barbados might be cited as a proof that the surface of the Carribean sea was at one period more than 1000 feet above its present level, or that subsequent convulsions in the interior of the earth have raised the land, at different and distant periods, to its present elevation. Mount Hillaby, the highest land in the island, rises 1147 feet above the level of Carlisle Bay, and as the polypes cease to labour when they have reached the surface of the water, and the highest point of this hill is a coralline rock, the sea must have covered it at the time of its completion. And again, as showing that the island was cast up from the bottom of the deep, or that the waters have gradually retired from this elevated point, we have the succession of lateral elevations of table-land regularly descending to the level of the present shore, and all showing that they are formations posterior to Mount Hillaby. The lowest range is the most recent, and every preceding elevation was evidently regulated by the height of the surrounding ocean. The myriads of its builders would carry up their structure until it reached the surface of the waters, and as recent geological discoveries have proved that granite masses have been elevated, even to the surface of the earth, after they had acquired a state of solidity, we may fairly suppose that the coralline structure that forms the present surface of Barbados has been raised to its present

position rather by the subsequent elevation (at far distant and distinct periods) of the primitive submarine rocks or mountains on which it is built, than by the sea having subsided and left it thus exposed.

The first foundations of Mount Hillaby must have been laid upon the highest point of these rocks, which, being afterwards heaved up above the tide, brought their next portion within the range of light and heat, so as to enable the insect artificers to spread their labours over fresh surfaces. The whole primitive mass, however, having received another *heave*, these second works would be brought above high-water mark, and further progress stopped. The same upward movement brought within their reach a third and a fourth foundation, which were of course seized upon, and a structure raised, and again stopped by the further rising of the primitive rocks. We know that the same labourers are still at work upon what may be called the fifth series of these submarine foundations, which, possibly, some future convulsion in the earth's centre may suddenly raise into the open day. The summit of the primitive mountain on which Mount Hillaby rests must now be more than 1000 feet above the present level of the ocean, and therefore, taking a just view of the whole phenomena, I think it is more probable that the island has been elevated, than that the waters have been depressed. One or other,


Geological Map of Barbadoes.
Speights Town
Hole Town
Bridge Town
St Anns
Oistins Town
CHAMPAIGN GROUND
SCOTLAND
BLACK ROCK
BELOW THE CLIFF
CLIFF
VALLEY
RIDGE
THICKETS
BELOW THE ROCK
NE
ENE
Directions of the Trade Wind and Current
1
2
3
4
H
No 1 The earliest formations and H the highest Peak of Mount Hillaby
Nos 2 3 & 4 denote the subsequent formations.
Standidge & Co. Lithe 77 Cornhill.

however, must have been the case; for, as we have stated, there is evidence sufficient to prove that the island, as now constituted, did not emerge all at once, but has been exposed by degrees, and after what may be called long ages of time.

It is also evident, that the clay-formations must have been deposited in their present position after the coral rocks had attained their existing elevation, and that the ingredients that now compose the surface of the earth in Scotland, must have been brought by the waters of the ocean at a period subsequent to the formation of the coral. That they were brought by a stream or current setting from a north-east point, and which, meeting with resistance, allowed the argillaceous earths and other materials to accumulate in this protected basin, and in similar situations. It is scarcely necessary to add, that a strong current setting from the north-east still exists, and I believe its influence prevails to a greater extent than is generally supposed.

My readers may all recollect the melancholy accident of the burning of the Kent East India ship in the chops of the British Channel some few years ago. On board of that ship was Lieutenant-colonel M'Gregor, now of the 93d Highlanders, who was going out with the regiment he then commanded to India. When all hope of saving the ship was at an end, and

death seemed inevitable, the Colonel sat down and wrote a short narrative of what had occurred, and the little probability that existed of any person being saved. This paper was put into a bottle, and while he was in the act of corking that bottle, so as to secure the writing, the cry of "a ship in sight" was heard. What became of the bottle after that moment he had no recollection; but about three or four years ago, he went out to Barbados to take the command of his present corps, and shortly after his arrival at St. Ann's he was waited upon by a gentleman connected with one of the newspapers published in Bridgetown, and who, after some little explanation, presented to the Colonel his original manuscript from on board the Kent, which had been found in a bottle picked up by a negro on the northern shore of the island. As it must have been the existing current that brought this bottle from the British Channel to the shores of Barbados, might not the ancient, and, perhaps more powerful, current carry the mud and minerals of Britain to the same spot? Its influence must have been very extensive. We know that, stopped by the isthmus of Darien, the same current is now reflected through the Gulf of Mexico, and, passing between the shores of Florida and the Bahama bank, it constitutes the gulf-stream so well known to mariners, and which so powerfully

affects the navigation of the Atlantic. The reader will excuse this digression; but I return to a consideration of the formation of Barbados.

Supposing the bottom of the ocean to consist of mountains and valleys, as does the present dry land in every country and in every situation, there is nothing more probable, as I have stated, than that the Polypes, when they commenced the building of Barbados, seized upon some lofty hill, and there began their labours. That after the greater portion of the structure had reached the then surface of the ocean, the current just referred to, brought from the north-east the slime and mud which soon filled up that great basin formed by the ridges from Mount Hillaby, and deposited those substances which now constitute the surface of the district called Scotland, and that they were retained in this basin by the banks of coralline with which it was surrounded.

There are upon record many remarkable instances of the superincumbent clay soil becoming detached from its coral bed, and slipping down from nearly the top to the bottom of the ridge, destroying some villages and swallowing up others. The roof (as is supposed) of some large hollow cavern giving way from the additional pressure now brought over it, and allowing the clay earth, and all that was upon it, to pass down into the hollow caverns of the coral rock.

The mountains of the neighbouring islands are almost all formed of primitive rock, and we may therefore fairly conclude that the first coralline formation which constitutes the highest point of Barbados, was begun and completed, as explained, on one of these primitive rocks that did not quite reach the surface, and that the whole island is now merely a crust or excrescence attached to the said primitive rock. Of the thickness of this crust it is impossible to give an opinion, for the walls of the deep ravines which are now exposed and standing almost perpendicular, do not in any way direct us in forming a judgment. They are only to be considered as elevated ridges passing over the surface of the said crust, and the disappearance of houses and fields which I have mentioned, and which has frequently happened, would lead us to imagine that some of the hills at all events were hollow globes.

That the action of the current and of the waves is undermining and encroaching upon the windward coast of the island is beyond a doubt, and that in time they may sweep away the whole of the calcareous incrustation from the summit of the primitive submarine mountain on which it is based, is also possible. If the elevations upon the surface of this incrustation are not solid masses, but merely hollow cones, their destruction will be more rapid, and their disappearance sudden.

I am not aware that any shock of an earthquake has as yet done much damage in Barbados, but the ravages of the hurricane have been great and terrible. When I landed in December, 1833, a great part of Bridgetown was still in ruins, and the whole island bore marks of the destruction produced by the whirlwind and the storm which had raged with such devastating fury during the night of the 10th, or rather morning of the 11th of August, 1831.

These hurricanes are an extraordinary phenomenon in the West Indies. Their violence is confined to certain months, and they are fortunately bounded by very narrow limits: they have commonly been known to occur in the months of August and September, and part of October, though there are many instances of their appearing in July, and, I believe, even so late as November. But what I consider as more extraordinary still, they have never been known to pass a certain limit, whether to the south or north. Their ravages have hitherto been restricted to between the eleventh and twenty-first degrees of northern latitude.

The first colonists had scarcely had time to take root in the island, when Barbados, as appears from its history, was visited (1670) with a tremendous hurricane; another followed in 1674, and in 1675 one, still more terrible, swept the island of every house and tree except the few that were sheltered by some neighbour-

ing cliff: this took place on the 31st of August. In 1700, and 1702, Barbados suffered from storms, and again in 1731; but, from that date till 1780, I do not find that any sad disaster is recorded. On the 10th of October of this year (1780), the heavens at an early hour were overcast with a most dismal darkness, and the unusual aspect of the clouds plainly indicated the devouring storm. At dawn of day the wind, rushing with a mighty force from the north-west, was accompanied with heavy rain, and before mid-day many buildings in different parts of the island were in ruins. Towards evening the storm increased, and at nine o'clock had attained its height, but it continued to rage till four next morning, when there was a temporary lull; but "like a vindictive tyrant (says the writer from whom I quote) who, in his expiring moments, is insatiate with the carnage of his strength, it struggled to complete the work of desolation and death. Before day-break, the castle and forts, the church, every public building, and almost every house in Bridgetown, were levelled with the earth*." This visitation was ever afterwards denominated the Great Hurricane, for it was not till two years ago that a greater occurred. Great, however, as were the ravages of many of the eruptions of nature by which this

* *Account of the Hurricane*, 1831. By the Editor of the "West Indian,"—a well written Barbados paper.

island had suffered, the aggregate destruction produced by them all was probably not equal to that effected by the single storm of August, 1831. Though more than two years had elapsed since the hurricane had taken place, it was still the subject of conversation in all societies, and every person who had been in the island at the time it occurred, had some extraordinary anecdote to relate which had come within their own knowledge. I shall therefore begin a new chapter with some account of this awful tornado.

CHAPTER III.

THE HURRICANE OF 1831.

A FULL ACCOUNT OF ALL THE PHENOMENA PREVIOUS TO, AND DURING THE CONTINUANCE OF, THIS AWFUL VISITATION—ANECDOTES OF PERSONS MIRACULOUSLY PRESERVED, AND OF THE FORCE OF THE WIND—ATTEMPT TO ACCOUNT FOR THE CAUSE OF THESE AWFUL VISITATIONS—REGULARITY OF THE UNDER-CURRENT OF AIR, OR TRADE-WINDS, BLOWING FROM EAST TO WEST—PROOFS THAT AN UPPER-CURRENT BLOWS FROM WEST TO EAST—ACCOUNT OF THE VOLCANO OF ST. VINCENT'S, IN 1812—ALARM CREATED IN BARBADOS—THE EFFECTS IN ST. VINCENT'S.

THE only thing remarkable in the weather for July, 1831, in Barbados, was the unusual quantity of rain; it, indeed, is said to have rained almost incessantly. The trade-winds, however, blew moderately and steadily from the proper quarter, and the atmospheric temperature was uncommonly uniform: the maximum is noted at 86°, and the minimum at 79°.

Towards the end of that month thunder and lightning were of frequent occurrence, and electric clouds hung over the island. In Bridgetown, the 1st of August commenced fine, with light breezes from the north-east, but by nine A.M. the weather had changed, the wind blew strongly, and the remainder of the day

was wet and cloudy, and in some parts of the island the thunder was very severe, particularly in the neighbourhood of Chalky Mount, in the district of Scotland, where the lightning shattered a small house, killed a white child, and wounded the mother.

On the tenth morning of the month, it was remarked that the sun rose without a cloud, and shone resplendently through an atmosphere of the most translucent brightness; at six A.M. the thermometer stood at 80°, at eight it rose to 85°, and at ten, to 86°; at which hour the gentle morning-breeze, which had, up to that moment, fanned the country, died away: occasionally, after this, high winds sprang up from the east-north-east, but soon subsided. Calms generally prevailed, with puffs from between the north and north-east points of the compass. At noon the mercury stood at 87°, and at two P.M., 88°; at four it had sunk to 86°. At five, the writer from whom this account is taken was in the country, about a mile and a half to the northward of Bridgetown. He remarked that the clouds were gathering very fast from the north, and the wind commenced blowing strong from the same point. A shower of rain fell at this time, after which there was a remarkable stillness, which was made more impressive by the dismal darkness of the clouds on the horizon all around. This dark impenetrable body of cloud extended up towards the zenith, leaving there

an obscure circle of light apparently about 35° or 40° of the celestial concave in diameter. This dismal circle remained at rest a few seconds only, when the scud of it was seen to be in a state of ebullition. The dense mass of cloud, all around, was also agitated and separating; bodies of it were dispersed to all points of the compass. From six to seven P.M. the weather was fair and the wind moderate, with only occasional slight puffs from the north; the lower and principal stratum of clouds passing fleetly to the south, while the higher strata and scud seemed driven with almost equal rapidity to every point of the compass.

After seven o'clock the sky was clear, and the air calm, and this continued till after nine, when the wind began again to blow from the north. At half-past nine it freshened, and showers of rain fell at intervals, up to half-past ten o'clock. About this period distant lightning was observed in the north-east and north-west, and squalls of wind, with rain, came from the north-north-east, which continued, with intermediate calms, till midnight.

The thermometer during the whole of the evening had varied with remarkable activity; during the calms it stood at 86°, but at other moments it fluctuated from 83° to 85°. After midnight the continual flashing of the lightning was awfully grand, and a gale blew fiercely from between the north and the north-east.

At one A.M. of the 11th, the tempestuous rage of the wind increased. The storm, which at this moment came from the north-east, suddenly shifted to the north-west. The upper regions of the air were from this time illuminated by incessant lightning, but the quivering sheet of blazing fire was far surpassed in brilliancy by the darts of the electric fluid which were exploded in every direction. It was, however, at a little after two o'clock A.M. that the astounding roar of the hurricane rushed from the north-north-west, and north-west, with a horror and impetuosity that no language can describe, or mind conceive. Some of my friends who heard it, compared it to the agonizing shrieks of millions of human beings in the last agony of despair; and said that there was something most heart-rending and most piercing in the wail or scream, which never ceased. About three, the wind occasionally abated, but only to return in gusts from the south-west, the west, and the north-west, with accumulated fury. Fiery meteors were observed by more than one person to fall from the heavens, and one friend told me, he saw one in particular, of a globular form and deep-red hue, descend perpendicularly from a great height, and he remarked that it fell evidently by its own specific gravity. On approaching the earth its motion was accelerated, and it became of a dazzling whiteness, and elongated in form; and, dashing on the ground

in one of the paved squares of the town, it splashed around in the same manner as melted lead would have done, if thrown out of the furnace, and was instantly extinct, though the brilliancy and spattering of its particles, when it reached the earth, gave it the appearance rather of a globe of quicksilver.

A few minutes after the appearance of this phenomenon, the deafening noise of the wind sank into a solemn murmur, or, more correctly, it resembled a distant roar, and the lightning, which since midnight had played in flashes and forked darts with scarcely any intermission, seemed for half a minute to hover between the clouds and the earth, moving frightfully, and with a novel and surprising action. There seemed a vast body of vapour almost touching the houses, which apparently caught fire from the clouds, and conveyed it, flaming, downwards, while another thousand torches were lighted from the earth, and mounted to the sky.

While this strange phenomenon continued, the earth was felt to vibrate, in a manner and in time answering with the action of the lightning. Twice, or more, when the coruscations were more brilliant and severe, but less rapid in their motions, the earth received corresponding shocks. The moment this singular alternation of the lightning passing to and from the earth ceased, the hurricane again burst from the western

points with a violence exceeding all that had as yet been experienced, and hurling before it the fragments of every unsheltered structure of human industry. The strongest buildings were found to vibrate to the very foundation, and the surface of the very earth trembled as the destroyer passed over it. No thunder was at any time heard, and, as every one concurred in reporting, had the cannon of a million of batteries been discharged, their sound could not have been distinguished, so overpowering were the horrible roar and yelling of the wind, and the noise of the tumultuous ocean, whose frightful waves threatened to sweep into the abyss all that the other elements might spare. Such, indeed, was the appalling scene, that the heart sank in despair, and the mind became altogether bewildered, and with many, their reason for a time was shaken from her throne.

I have heard many of my friends declare that they felt it quite impossible to give any expression of the sensations which then distracted, confounded, and in a manner benumbed, all their faculties. The sight and the hearing were overpowered, and the excess of horror refused admission to fear. One friend told me that, when his senses in some measure returned, he found himself standing up against the wall of the room in which he was sleeping when the hurricane commenced. The roof had been removed from the house,

and every article from the room, except some fragments of the wall that had been blown down: how he had escaped destruction he knew not.

The unparalleled fury of the tempest continued without any interruption till four o'clock. It blew from the west and southward of west, and was attended with what was considered the dashing of heavy rain, but, from what many have told me, that this rain was quite salt, I am inclined to think it was the waves of the sea carried inland by the force of the wind. After five o'clock the storm now and then abated, during which lulls, the falling of substances which had apparently been carried high into the air—the shrieks of suffering victims—the cries of the terrified inhabitants—and the mournful howling of the dogs, were all distinctly heard, and awakened in the mind of the listener a fearful apprehension of the scenes of death and misery with which he was surrounded. At about half-past five the wind suddenly moved round to the east, and though it may be said that the hurricane still raged (sometimes veering to the south) until seven o'clock, it was not with that force which had been previously experienced.

At eight o'clock strong breezes blew from the east-south-east, and about that hour the dense body of cloud that hovered over the island began to break up, and at ten A.M. the sun looked down for a few moments

upon a scene of wretchedness and misery more sickening to the human heart than any, perhaps, that was ever witnessed. The humble cot, and the most costly mansion, had alike been hurled to destruction. Parents beheld their children, and children their parents, husbands their wives, and wives their husbands, buried in the ruins, or strewed around them, disfigured corpses; others, with fractured limbs, and dreadful mutilations, were still alive, and many of them rescued from under the fallen buildings; and it was dreadful to hear their heart-piercing cries of agony. Many streets in the town were totally impassable, from the houses having been lifted up from their foundations, and thrown in one mass of ruins into the roads. Masses of rubbish, broken furniture, ships' spars, packages of merchandise, huge blocks of mahogany, seemed to have been washed up, and carried by the wind or the tide to great distances, so as completely to block up the streets and highways.

The whole face of the country was laid waste, scarcely any sign of vegetation existed, and what did remain was of a sickly green. The surface of the earth appeared as if fire had passed over it, scorching and burning up every thing. The few trees that were still standing were stripped of their boughs and foliage, and appeared as withered trunks.

The garrison of St. Ann's, which is about two miles

distant from Bridgetown, and considered the head-quarters of our West India force, presented a far more deplorable appearance than did the citadel of Antwerp after all the battering which the French could bestow upon it. An officer of the commissariat, his three children, with a female relative, and two servants, were buried in the ruins of their habitation, and perished. The number of non-commissioned officers and soldiers, and of women and children, that were killed, was only forty-three; but about three hundred, including all classes, were very seriously hurt. The total number of persons killed in the island, or who died of their wounds, was about 2500, and the number of wounded exceeded 5000, while the amount of property destroyed was estimated at nearly two millions and a half, island currency. Many extraordinary circumstances, and most extraordinary escapes, are recorded,—none certainly more extraordinary than that related to me by my late excellent friend Colonel Diggens, then barrack-master at St. Ann's.

A mother, a daughter, a female slave, and a child of two years of age, were living together in a cottage near his garden-wall. When the hurricane was at its height, they heard the roof of their cottage going off, and immediately rushed to the door for safety, the daughter carrying the child. At the same instant the door was blown from its hinges and fell down, and, in the

horror of the moment, the young lady dropped or lost the child, and during the night it was no more heard of. Next morning, the mother and daughter were found alive, in an open space of ground near the ruins of their cottage, and conveyed to the residence of Colonel Diggens. The person who had discovered these females, and had conveyed them to a place of shelter, then went to assist the Colonel in extricating his horses from the ruins of their stable: while so employed, they heard the cry of an infant, and, upon examining around, discovered at a little distance from them a child about two and a half years old, perfectly naked, and black with cold. This was the child which had been lost, when the mother and daughter had made their escape from their cottage. A wall, nine feet high, divided that cottage from the garden of Colonel Diggens, and the conjecture was, that the child had fallen from the arms of the young lady, and dropped upon the outer door of the cottage, which had just then been blown down, and that, by some strange swirl of the wind, this door had been lifted up with the child upon it, carried over the nine-feet wall, and deposited in the Colonel's garden, where both it and the child were now found.

I have often seen the hero of this adventure, who was from that moment adopted by the kind-hearted Colonel. Many persons, I was assured, in their endeavours to

escape into the open streets, were cut in two by the shingles blown from the roofs of the houses; and I myself saw, at the residence of the Venerable Archdeacon Eliot, a branch of a tree through which a fragment of a shingle had passed, and which had been retained in its position by a large nail that went across the fissure. If we consider the yielding nature of the branch, and the blunt edge of the shingle, we shall be able to form some idea of the force which could propel it through so hard a substance, so as to split the branch as if a wedge had been driven through it.

At the residence of Thomas G. Bushby, Esq., a piece of soft deal was driven into the branch of a fustic-tree: it was believed that this deal had been blown from the naval hospital, a distance of one-third of a mile. It was a soft fir deal, and the branch through which it had penetrated is one of the species called iron-wood, and with which, for hardness, no European wood can be compared.

To those who were exposed in the open fields, the heavens often appeared as all on fire, with balls of fire flying in all directions, and bursting exactly like shells from a mortar. A piece of lead, weighing about 150 pounds, was carried more than 600 yards; and one, weighing 400 pounds, was lifted by the wind and carried to a distance of 560 yards. I mention these

striking facts, which were fully ascertained, to show the force and strength of the hurricane. There are several instances recorded, of children having been blown from the arms of those who were endeavouring to escape with them, and who were afterwards found alive, and recovered. At Mount Wilton, a negro woman had her head severed from her body by a slate which had been carried from the roof of a dwelling-house at Bloomsbury, nearly a mile from where she stood. I might mention a thousand other accidents and hair-breadth escapes, but I believe I have said enough to give the reader a tolerable idea of the awful nature of this visitation, and the ruin and misery which it entailed upon Barbados, to which island its fury was chiefly confined. The only other island to which it extended, with any great degree of violence, was St. Vincent's, where property to the amount of more than 160,000*l.* was destroyed.

Having now detailed some of the effects of this dreadful hurricane, I am tempted to offer a few words as to what may be the cause of these visitations.

The regularity with which the current of air moves from east to west, upon the surface of the earth and sea, within the tropics, is a fact constantly observed since the period that Columbus first navigated the Western Ocean. The trade-winds, within a certain extent of latitude which never varies above a degree

or two, may be calculated upon with as much certainty by the adventurous mariner, as the revolutions of day and night. But though these winds, as we know, and to a considerable elevation, always blow in this one direction, it is now ascertained, and I believe fully admitted, that a current of air in the still higher regions is as constantly moving or blowing in a direction from west to east. If any theorist had been inclined to dispute this previously, his doubts, I imagine, would have been set at rest by what occurred in the island of St. Vincent's, in 1812.

About midnight, of the 30th of April of that year, the inhabitants of Barbados were roused from their slumbers, and greatly alarmed, by what appeared a heavy cannonading at some little distance, and actually flashes, as from the guns, were observed to leeward. It was, therefore, believed that some part of our fleet had fallen in with an enemy's squadron, and that a naval action was going on. Sir George Beckwith, who commanded, was so perfectly convinced of this, that he ordered the troops under arms; and before two A.M. of the 1st of May, had made arrangements to act as necessity might demand. The sounds of firing increased about three A.M., and afterwards gradually died away. The sky was perfectly clear, and the atmosphere serene, until after the day had dawned. Dense masses of cloud were then

collected over the island, from which, instead of rain, torrents of an earthy dust, finer than sand, were poured down upon the island. The sun rose invisible, and all nature became involved in darkness, more intense than was ever witnessed in the blackest midnight. The alarm of war soon gave place to other thoughts, and all minds were affected with dread and consternation, for the cause of this phenomenon seemed wholly inexplicable.

It was apprehended by many, and not without reason, that the last day had commenced; and many now sought the house of God through fear, groping their way with lanterns in their hands, that, during the whole of their previous lives, had never troubled themselves with any thoughts of God or of religion.

It was not till twenty minutes past noon that a gleam of light afforded some rays of hope to the dismayed Barbadians. After that hour the falling of the dust gradually abated, and the brightness of the afternoon soon dissipated their fears. In Bridgetown the stratum of dust was about an inch in thickness, but in some parts of the island it was more than six inches deep. The captain of the ship Neptune, of Limerick, who was 500 miles to the eastward of Barbados, had the sails and decks of the ship covered with similar dust, and many ships navigating in the open ocean, at

more than 200 miles to the eastward, were covered with it.

The chemists of Bridgetown, as soon as their alarm had subsided, began to analyze this dust. They discovered it to be volcanic, but from whence it had come they could not conjecture. Five days after this event a vessel, with despatches for Sir George Beckwith, resolved the enigma. The Souffrière, or Brimstone Mountain, in St. Vincent's, had burst forth in flames, and laid the whole colony in ashes; and the dust that had fallen in Barbados, and, as was afterwards proved, more than 500 miles to the eastward of that island, had been vomited forth by the volcano in St. Vincent's.

The history of this singular eruption will only occupy a page or two, and, as it is interesting, I shall give it before I go on with my theory as to the cause of West Indian hurricanes.

On Monday, the 27th of April, 1812, while the noontide bells were ringing upon the several plantations in St. Vincent's, a sudden and tremendous explosion of the volcano took place, accompanied by a tremulous motion of the earth. A vast column of smoke was seen to ascend from the crater, from which also were discharged immense quantities of a fine, gritty, calcined earth, and other substances. On Tuesday, the 28th, the column of smoke and ashes appeared

to ascend perpendicularly to a great height; on the following day it seemed to dilate towards the highest portion that could be observed, and the mountain and its neighbourhood were enveloped in a thick mist, which the rays of the sun being unable to penetrate, a shade, as of twilight, was cast over the whole island. Fire was, for the first time, observed this night, about the edge of the crater. The eruption continued increasing, and on Thursday the masses of vapour assumed a ferruginous or blood-stained tint, and ascended with much greater rapidity. In the afternoon of that day the noise became incessant, with a vibration that affected the feelings as much as the hearing; but as yet there was no convulsive shock of the earth. Birds now fell to the ground, covered with ashes; and the cattle (from the pasture and all vegetation being covered with the same ashes,) were perishing for want of food. At four P.M. the noise became louder and more alarming, and as day closed, large sheets of flame were observed to burst through the smoke. Electric flashes quickly succeeded, attended with deafening peals of thunder. Huge spouts of fiery fluid were vomited forth, while the zig-zag lightning seemed to play with the still-increasing column of smoke. Burning masses were thrown up, and exploded like rockets, while others were shot off obliquely like shells. Shortly after seven the mighty caldron seemed in

ebullition, and a stream of lava burst forth on the north-west side, which, in about three or four hours, reached the sea in its liquid burning state. At half past one A.M. another stream was poured out to the eastward. The thundering awful noise of the mountain, mingled with the monstrous roar of the lava flowing over the surface, became so terrible that dismay now yielded to despair.

The first shock of an earthquake was felt about this time, and was followed by a shower of cinders, which continued falling with a hissing noise for upwards of two hours. About 3 A.M. stones of a small size began to fall. The coruscations, roaring and crackling of the mountain, at this time exceeded all that had previously taken place. The eyes were struck with blindness, and the ears were stunned to deafness with the confusion of sounds. The rain of stones continued for about an hour, when it was succeeded by cinders and ashes. During the whole of this time, the island was in a state of continued undulation, not agitated by any shocks, but rather like a solid substance swimming in water kept in motion.

The morning of Friday dawned like the day of doom. A gloomy shadow enveloped the mountain, and a dismal haze, with black sulphureous clouds, hung over the sea. In the afternoon, the voice of the

mountain became silent, but flames continued to issue from its summit for several days. The depth of volcanic matter in some places was fourteen inches, but near the town not above half an inch.

The distress and famine which followed this eruption it is not my intention to enter upon. I have given its history, because it is most interesting, and that I may bring the facts it has furnished to bear upon my theory of hurricanes.

St. Vincent's is seventy miles to the westward of Barbados, and the Limerick ship, Neptune, was 500 miles to the east of Barbados,—consequently we have the dust or ashes from the mountain carried nearly 600 miles, in a direction quite contrary to the undeviating course of the trade-winds; I must therefore assume, that this dust was thrown up with such force as to be carried into the higher regions of the air, where it met with a a current that conveyed it rapidly to the eastward, and, as must evidently have been the case, to a far greater distance than where it was found to fall on the earth's surface; for the moment that its specific gravity brought it within the limits of the lower current, it would again be carried to the westward, and to a considerable distance also, before it could reach the surface of either land or ocean. Here, then, I allege, we have positive proof that there is an upper current

of the atmosphere passing as constantly to the east as the trade-winds blow to the west.

The higher we rise in the atmosphere the more it must be condensed. It is the absorbed heat given off from the surface of the land and sea, and not the solar beams, that rarefies and expands the air in contact with these, so as to fit it for the useful purposes of life. We may therefore suppose, that at a great height, the air which would occupy 10,000 cubic inches of space on the surface of Barbados, will be so condensed as not to occupy more than 100 cubic inches. If this is granted, we may further suppose, that by some combination of the solar influences, or by the abstraction or accumulation of the electric fluid, a vacuum is suddenly formed in the lower strata of the atmosphere through which the upper strata rush down to the earth's surface in their condensed form; and that when stopped by the solid earth, they expand with that force and violence which constitutes the whirlwind and the hurricane.

This vacuum in the lower strata (in whatever way it may be formed) I would liken to the barrel of an air-gun, and the earth's surface to the trigger, that allows a certain portion of the compressed air to escape; and we know, that in proportion as the air has been compressed or condensed within the receiver, so will it

give force to the ball which it propels from the tube. The extraordinary developement of the electric fluid during this hurricane, and the appearances of the sky, so accurately described by the editor of the *West Indian*, immediately before its commencement (from his own personal observations), all lead to the conclusion, that it was the rapid descent of the air from the higher regions, and in a condensed form, that caused, by its sudden expansion on reaching the heated earth, all the horrors and devastations of this West Indian tornado. I also think, that it is owing to some electric influence that the vacuum is created in the lower strata through which the torrent rushes down from the higher regions.

Why, then, it may be asked, are the hurricanes confined to certain months, and restricted to such narrow limits? I believe, that were the natural history, and the formation, of the islands in the "Hurricane Tract" fully understood and explained, we should find enough of physical causes to warrant the assertion, that they are peculiarly adapted to produce the influences that cause the hurricane. This is an investigation, however, which I do not at present enter upon; and, at any rate, it is time to conclude this chapter.

CHAPTER IV.

COLONIZATION.

TAKEN POSSESSION OF BY SETTLERS FROM ENGLAND, IN CONSEQUENCE OF THE ACCOUNT OF IT BROUGHT HOME BY A DUTCH CAPTAIN—HAY, EARL OF CARLISLE, MADE KING OF THE WEST INDIES—RESPECTABILITY OF FIRST SETTLERS—THE HONOURABLE CONDUCT OF THEIR DISTINGUISHED DESCENDANTS CONTRASTED WITH MEN IN OTHER COLONIES—EARLY OPINIONS RESPECTING THE AFRICAN SLAVES—FREE TENANTS—THEIR CHARACTER.

THOUGH the Portuguese first discovered the island, and are said to have given it a name, it was not until after a Dutch ship had visited and examined its capabilities, that it excited any attention in Europe.

The Dutch captain, on his arrival in Holland, gave such a flattering account of his visit, that it attracted the attention of the English ambassador, who secretly transmitted the details to his friends in London, and they without loss of time fitted out two or three ships with adventurers. These went and took possession of Barbados in the name of the king of England, and from that hour (February 17th, 1625), to the present time, it has never acknowledged any other authority. James I., immediately before his death, had granted the sovereignty of Barbados, and of the other British colonies

in the West Indies, to his favourite, HAY, Earl of Carlisle; other courtiers, at subsequent periods, got this grant changed or modified, but it was under the auspices of Hay that Barbados rose into importance, and after him the waters of Bridgetown were called Carlisle Bay. Many of the first planters were connected with the highest families in England. Their descendants have been ennobled, and many gentlemen of Barbados have been created baronets of Great Britain. I am not surprised, therefore, that the Barbadians should assume a proud bearing. The present race may not have inherited either the wit or the wisdom of their great ancestors, but from what I have seen and known of them, I am justified in asserting, that they are still high-minded and honourable men, with less prejudice on many points than men of less pretensions.

While the question of slave emancipation was agitated, and still in doubt, they opposed it in every possible way, seeing in it, or believing they saw, the ruin of themselves and families, and the devastation of their beloved island. But the moment the law was passed, the gentlemen of Barbados, and I believe I may say the same of all the old British colonies, had no other feelings or views, than how to carry it into effect with the greatest benefit to all parties. Ancient prejudices, no doubt, did in many instances bias their

judgments, and prevent their sometimes seeing the proposed regulations in a right point of view on their being first mooted, but there never was any desire to oppose the Government from factious motives, and far less from any petty matters of pounds, shillings, or pence, arising from selfish considerations. There was a noble and disinterested bearing in all the opposition that the Negro-regulation laws met with in the General Assembly of Barbados; and although the language of the speakers was not always as decorous as it might have been, nor as acceptable to the ruling power as some could have wished, still, with the exception of sometimes hinting that Sir Lionel Smith had acquired, from his long residence in the East, feelings not altogether in accordance with those of the more liberal sons of the West, there was nothing that I could see either personal or insulting. It was the measures, not the man, that they attacked; and in so far as their conduct came under my observations, they were always ready to confess their error, and to retract their opinion, when they found that their first impressions were wrong.

I state these circumstances with infinite pleasure, because I think the gentlemen of the Council and House of Assembly, as well as the whole body of proprietors in the colony, deserve to have their conduct put upon record, and the more so, as there was a complete

contrast in another place. It matters not where; but there were men who did smile and seem to assent, as if they fully agreed to, and acquiesced in, all the measures taken to procure the enactment of the Slave Abolition Bill, while it was yet in progress. But when that Bill had actually passed, and had become the law of the empire, and they found their personal interests were secured, they endeavoured to make its enactments prove abortive, and certainly tried to obstruct the happy working of the measure in every possible way. Luckily, however, for the best interests of society, and of the whole community to which they belonged, this feeling was confined to a small number, and they found themselves baffled in all their attempts to work mischief. The conspiracies and revolts which they had so confidently predicted and announced, could not be discovered, or had disappeared when they came to be inquired after. The alarm which they succeeded in creating, they contrived to keep up for a time, and they prevailed upon the timid and the unsuspicious, as well as many that were swayed by early prejudices, to join in their clamour, and so far to abet their wickedness, as to lend the sanction of their names to petitions for the redress of grievances which had no existence but in their own biassed minds. Instead of combating the measures they had objected to by reason and sound argument, as was done in Barba-

dos, these men found it easier to assail with personal invective. They found calumny a readier weapon than truth, and bold assertion far more convincing with their timid followers, than even the plainest facts; and though it can no longer be concealed, even from themselves, that they were wrong and had imagined a vain thing, so far as I know they have not yet come forward to confess their errors.

But I have wandered from my subject too long, and must now return to the colonization and cultivation of Barbados. The gentlemen who first emigrated to this island carried out with them a number of white labourers, and these became the first cultivators of the soil; for as yet the traffic in human flesh had not been much practised by Englishmen. These white labourers were soon found unequal to the fatigues of agriculture in a hot climate, and it therefore became necessary to procure Africans. These, at their first importation, were actually considered an equivocal race, between man and monkey.

Such a doctrine, I believe, was really promulgated, for the purpose of removing somewhat of that disgust which had come to prevail against the traffic of buying and selling our fellow-creatures. There were, at this time, and long afterwards, as is well known, monsters in human shape, who sailed the seas, and made it their chief business to steal the helpless and the unwary from

our own shores,—whole villages were laid desolate, and the inhabitants carried off and sold in the colonies. No animal is so savage as man. But the curse of God was upon these pirates and man-stealers.

The colonists refused to purchase their Christian brethren, or to receive their fellow-creatures into slavery from these kidnappers, and hence it became necessary, as I suppose, for the traders to assert, that the black African was only half-human. The reader may smile at this assertion, but the subject was seriously discussed, both at home and in the colonies, and it was decided at one time, that they were unworthy of receiving baptism, and ought not to be allowed to enter where the word of God was preached. In confirmation of this, I have only to refer to the early history of Barbados, and Godwin's *Slave's Advocate*.

The descendants of the first white labourers had small pieces of land allotted to them for their maintenance, and afterwards formed a class known as the free tenants of Barbados. A remnant still existed when I landed in the island, and were reported to be the most indolent, ignorant, and impudent race of beggars that were ever tolerated in any community.

The population of the colony last year was about 15,000 white, and 87,000 or 88,000 coloured persons, all enjoying the blessings of liberty, under a mild

and a paternal government, and all equally protected by just and wholesome laws. And, what is of still greater importance, all perfectly happy and contented in the several relations in which they stood with regard to each other. The wheels of labour have not been retarded, even for a moment, far less stopped. I have seen Barbados as a slave-colony, and I have seen it free, therefore may venture to offer an opinion.

Every inch of earth that will raise a plant is duly cultivated. The island is overloaded with inhabitants, —labour, therefore, is cheap, in comparison with the other colonies; but so industrious are the lower classes, that provisions are at all times reasonable, and of the best quality. All the wheaten flour consumed in the island is imported, but the bread-corn of the peasantry consists of maize and millet (the Indian and the Guinea corns, *Zea Mays* and *Sorghum vulgaris*). The latter is most commonly cultivated, and the crops are generally abundant and most productive. I observed that this corn was seldom ripe for the sickle before the middle, or rather the end, of January, when the long stalks from which the leaves are withering, and the round bushy brown tops, give the harvest-fields a singular appearance.

The Barbados yams (*Dioscorea sativa*) are excellent; far superior in my opinion to our best potatoes, and far more nourishing as an article of food. All

the fruits and vegetables of a tropical climate are cultivated with great care, but of course the staple articles of produce are sugar and rum; and no other island, of the same extent, has ever produced such quantities of these as Barbados has done. The value of her exports to Great Britain is above half a million annually, and her imports may be calculated at nearly 400,000 pounds sterling, while the shipping employed averages from 17,000 to 18,000 tons. These are matters, however, which are better told in the pages of Montgomery Martin; I must therefore refer the reader to his commercial tables.

CHAPTER V.

NATURAL HISTORY OF BARBADOS.

NOT VERY ABUNDANT IN MINERALS—SHELLS FOUND IN THE CHALK BEDS NOT PETRIFIED—GREAT VARIETY OF SHELLS FOUND ON THE SHORE—FLYING-FISH COMMON HERE—BARRACUTA, A DANGEROUS FISH—CRABS ABUNDANT—DR. MAYCOCK, AUTHOR OF THE FLORA BARBADENSIS—BIRDS AND LIZARDS.

WHEN we contemplate that little spot of earth which forms the Island of Barbados, perched, as it no doubt is, upon the top of a lofty submarine mountain, and consider the ages that must have been consumed in its formation with the myriads of little insects employed in its construction, we may indeed exclaim—"*Great and marvellous are Thy works, O Lord!*"

The mineralogy of the island is in no way interesting, and affords very little variety. In the calcareous formation there are only found a variety of shells preserved, not petrified; but in the clay-deposit, within the district called Scotland, there are several substances, some of which I have already mentioned; —the brown and the black sandstone, the gypsum in fragments and crystals, nodules of flint and iron-flint, with several iron-ores, such as clay iron-stone, compact black iron-stone, and brown ochre iron-stone.

In a hill named "Chalky Mount," from its white appearance, there is a bed of porphyritic slate, or clink-stone porphyry, about eighteen inches in thickness, lying between beds of very loosely-cohering sandstone, and dipping to the north-east at an angle of thirty degrees. Rolled fragments of the calcareous rocks are found in endless variety throughout the clay-deposit, some of them at a considerable distance from their original situation, to which, however, they can generally be traced; indicating that they have been broken off by the violence of the waves, and carried to their present position, before the mud had become sufficiently solid to form the present soil. No remains of animal or vegetable substances have ever been discovered in the minerals found in the clayey deposit.

I have already mentioned the *burning spring*, and recorded the existence of mineral wells; and have only therefore to observe that all the fresh water in the island is strongly impregnated with calcareous earth.

On the shores are found many beautiful, and some rare shells, and a great variety of fish, some of them very excellent as food: the most abundant, however, are the flying-fish, which seem to congregate here as do the herrings in Europe; and indeed, they evidently, from taste, smell, and habits, appear to be a species of

the *Clupea*. Sharks of an enormous size are often seen in Carlisle Bay, and a fish called the Barracuta, it is said, sometimes, plays sad pranks with men when bathing; and, indeed, if we happen to have our hand hanging over the sides of the boat in which we are carried along the shore, one of these gentlemen will very impertinently take a fancy to a finger or two, and carry them off for his dinner: such accidents have actually happened.

The land and the sea crab are very abundant, or rather, I may say, that those most observed are common to both sea and land. When pursued on the sea-shore, they will dart to their holes with the speed of a swallow, and it is neither a straight-forward nor a retrograde, but rather a side-long, movement. They are not large in Barbados, though they do say "they are fond of the church-yards." They are very excellent food, though far inferior to the black crab of Jamaica.

The greater portion of the island has been entirely cleared of wood, though the cocoa-nut and the cab-bage-tree are planted along the shores, and give a beautiful and Indian appearance as you approach the beach. One hundred cocoa-nut trees are said to be a young lady's "*Tocher*" (fortune) in Barbados, as they are considered equal to a rental of one hundred pounds per annum. Many such Dowries of cocoa-nut trees

were destroyed in the last hurricane, for not one tree in a thousand escaped its ravages. The cabbage-tree is planted more for ornament than use, as I do not believe it is turned to any account, except to make a few bottles of pickles for European friends.

With regard to "the beauties which Flora discloses," no soil can be richer than that of Barbados, and the lover of botany will find here almost all the variety of fruits and flowers that exist in the whole Caribbean Archipelago. Sir Hans Sloane may justly be considered as the father of West India natural history. This distinguished physician left England in 1687, in the suite of the Duke of Albemarle, then appointed Governor of Jamaica. He sailed on the 12th of September, and arrived at Jamaica on the 19th of December, having visited Madeira, Barbados, and several others of the islands, particularly Nevis and St. Kitt's. On the death of his patron, Sir Hans returned to England, and published the "Catalogus Plantarum," and the "History of his Voyage, with the Natural History of Jamaica;" and these works have been found most valuable as fertile sources from which botanical knowledge has flowed.

The next person who pursued the same inquiry was Dr. Patrick Browne, one of the correspondents of Linnæus, and held in high estimation by that great philosopher. Swartz, Aublet, Jacquin, Plumier, and

others, have largely contributed to our knowledge of intertropical plants; but it remained for the late Dr. Maycock, alike distinguished as a physician, a man of science, and a gentleman, to give what may be considered a correct and scientific arrangement of the plants indigenous to, or naturalized and cultivated in Barbados.

This distinguished botanist died lately, in the flower of his age. He was a member of His Majesty's honourable Privy-council in Barbados. I received much kindness from him while I remained in the island, and am chiefly indebted to his conversation, and to his valuable work *, for the little knowledge I have gained of the natural history of Barbados. There was a work published in 1750, by the Reverend Griffith Hughes, which is entitled, "The Natural History of Barbados;" but it is not accurate.

The Sandbox-tree (*Hura crepitans*) is a beautiful and picturesque object; but I saw none in Barbados that appeared very old. The Barbados Pride (*Poinchciana pulcherrima*) forms the common hedge-rows, and a beautiful flower-fence it makes. The Trumpet-flower (*Bignonia unguis*) is common as a weed; while the Aloes-plant and the Tamarind-trees

* Flora Barbadensis.

are found in every garden; and before the magnificent Crested Amaranth (*Celosia cristata*) the dwarfs of Europe must hide their diminished heads. The Fan-palm is common, and the Prickly-pear forms a very good fence. Ginger is cultivated to some extent, and is exported both in a dried state and as a sweet preserve.

Barbados is in no way remarkable either for the number or variety of its feathered tribes. I did not see a single vulture or carrion crow in the whole island. There is only one variety of the humming-bird, and that not of the most brilliant plumage. The most frequent visitor in the neighbourhood of Bridgetown, was a jet black bird, with a long tail, considerably larger than the black-bird of England. They fly in flocks, and seem to live upon insects and the small lizards with which the earth here literally swarms. Their sweet plaintive note of "weep-poor-will," when once heard can never be forgotten.

Near to the house in which I resided, there was a large sandbox-tree, and morning after morning I was amused and interested by watching the descent of thousands of lizards, that had evidently passed the night in its lofty branches. As the rays of the rising sun began to play upon these branches, the reptiles commenced their movements; collected upon the trunk,

and gradually, but with great caution, made their way towards the earth. The main body was generally preceded by a column of light troops or scouts; who, if they perceived any enemy approaching, retreated most nimbly, and having given the alarm, the whole retired for a time to their nightly hiding-places. Again the scouts were sent forward; and if the coast was clear, the whole body came down with a rush, and made their way in every direction to the nearest grass and underwood that afforded a cover. Independent of the black birds already mentioned, the domestic fowls seemed also to have a great relish for these lizards; and the cunning way in which the chickens would conceal themselves until the whole column had reached the ground, and the alertness with which they would then fly to the spot and pick up the stragglers, was not a little amusing.

These lizards are seldom more than two or three inches in length; generally of a green colour, but some are of all colours, with a most piercing and lively eye, and a short and rather well-shaped head. They, in their turn, were equally alert in hunting for flies, and other small insects; and the singular devices they had recourse to, in order to deceive and entrap their prey, showed a wonderful degree of instinct. Sometimes they would be as dead upon the stone or pavement, until the fly came within their reach; at

other times, one would get behind a leaf, and push it forward as if moved by the wind, and when within a proper distance, a sudden spring made captive the victim.

A large species of hornet, called here "*the Jack Spaniard*," was very troublesome, and its sting most painful. When I took possession of my residence in the country, one or two water-courses near it had become choked up with briars and brush-wood. They formed an arch over the rocky ravines, leaving a passage under for the water to run through in the rainy season. In December these ravines were quite dry, and there it was that the *Jack Spaniards* had established their hives. Their nests were like a piece of honey-comb, of two or three inches square, attached to the twigs and under branches of the brush-wood, and in countless numbers, but all in separate pieces. To attempt to dislodge them by cutting down this brush-wood was out of the question; for the moment we approached their retreat, we were instantly assailed by thousands. I therefore got collected a large quantity of dried grass and straw; this was made into bundles, and thrown into the water-way. Burning wood was thrown in also, and the straw being ignited, the flame and the smoke soon routed the whole horde, which rising high into the atmosphere, disappeared; and left us to clear away the

rubbish at our leisure. The "*Marabunting*," a small wasp, builds its nest after the manner of the wasp in this country; but, instead of seeking out a crevice, or hollow tree, it generally hangs the nest in the form of a pouch or bag, to a depending branch, and is attached to it with such firmness, and the outer covering so strong, that neither wind nor rain can affect it. I do not find in my diary, any remark with regard to the Mason Bee; another very singular insect, resembling the wasp tribe, but not very common in Barbados. This last I shall have to treat more at large in the natural history of the other colonies.

CHAPTER VI.

DISEASES IN BARBADOS.

THE BARBADOS LEG—TETANUS EPIDEMIC—INTERMITTENT AND REMITTENT FEVERS NOT CONTAGIOUS—SOON GENERATE A CONTAGIOUS FEVER—NUMBERS OF SICK AND OF DEATHS IN OUR MILITARY HOSPITALS—BAD EFFECTS OF A SALT-MEAT DIET—IMPORTANCE AS TO HEALTH OF FREQUENTLY CHANGING REGIMENTS IN THE COLONIES.

THE most common diseases in Barbados are chest-complaints, and dysentery, with inflammation of the eyes, from the reflected glare of the sun, and the quantity of finely-pulverized chalk always floating in the atmosphere. There is a horrid and loathsome species of the Elephantiasis, vulgarly known as the Barbados leg: it was formerly far more severe and common amongst the negro and coloured population than it is now; still we cannot walk half a mile without seeing some cases of it,—some poor wretch trailing a limb larger than the body, and covered with excrescences and ulcers. Dr. Stewart, a physician, resident in Bridgetown, while I was in Barbados, found quick-lime, mixed with warm sea-water, a valuable remedy; but I suspect that if the disorganization of the tissues has gone to any extent, the disease is incurable.

Dr. Maycock assured me that tetanus was epidemic in the island; but, except the bilious remittent fever, the scourge of all our colonies, I am not aware that there is any malignant disease peculiar to Barbados.

The island may be said to have been healthy for some years past; but when the epidemic does make its appearance, it is very fatal, and very soon assumes a contagious or virulent character. The last visitation was a very severe one, and many of the inhabitants, as well as of the military, were carried off.

I spent a good deal of my leisure time in Barbados in searching the medical records of the military hospitals, and I may as well give a few of the results here, as I consider them both interesting and instructive, as medical statistics.

I have perfectly satisfied myself that the purely remittent and intermittent fevers of the West Indies are, as in Europe, the genuine offspring of a subtile something which the medical writers have called the "Marsh-poison," and are not contagious. But that in any country, and more especially within the tropics, if the wards of an hospital, the rooms of a barrack, or even the quarters of a garrison, become crowded with cases of these fevers, another disease is speedily generated, and is so highly contagious, that it will carry destruction throughout a whole colony; hence the propriety of inculcating separation, and dispersion,

whenever agues, or remittent fevers become prevalent or epidemic amongst a body of troops, or in a crowded community.

In five years, from 1823 to 1827 inclusive, the total number of sick admitted into all the military hospitals in the Windward and Leeward Island command, was 47,005, and of these 15,344 were cases of fever. The total number of deaths during the same period was 1783, and of these 697 were from fever.

In four years, from 1829 to 1832 inclusive, the total of admissions was 39,122, and of that number 16,704 are marked cases of fever, of whom 418 died. I state these facts, to show the comparative frequency and great mortality of febrile in comparison with other diseases in the West Indies. The diseases which are next in number, in the medical returns, are dysentery and diarrhœas, arising, in almost every instance, from the coarse indigestible and unnatural food with which the poor soldier is compelled to fill his stomach; but, at the same time, I am convinced that many of the cases marked dysentery in the registers, were cases of what I would call scorbutic hæmorrhage from the bowels, and ought to have been classed as such.

It would be both wisdom and humanity, as well as great economy, to throw aside all the English and Irish contracts for salt beef and pork, and allow the

commissariat on the spot to procure those supplies of fresh meat and vegetables which are required for the proper nourishment of the troops, and are so important as regards their health and efficiency. I state it from authentic documents, and the fullest information collected on the spot, that there is not a colony, or corner of a colony, where British troops are quartered in the West Indies, that is not capable of supplying these troops, whether few or many, with fresh beef of the best quality, and at a cheaper rate than what the salt provisions cost the country before they are delivered out to the soldiers' messes.

This of itself, one would imagine, was sufficient to cause inquiry; but when I add, that more than a third of that mortality which is so dark a feature in our colonial military service, is occasioned by that rottenness of the constitution which is produced by improper and unwholesome diet, (and I do not state this upon slight or untenable grounds,) it is a question that ought seriously to engage the attention of our civil as well as our military rulers.

The salted meats, I readily admit, are the best that can be procured, and are most excellent of their kind; but to the soldiers in the West Indies they are doubly pernicious. In the first place, they do not furnish a sufficient quantity of nourishment to the body, while the superabundance of the muriate of

soda, as every physician knows, produces that unnatural and unhealthy state of the blood which is so characteristic of a scorbutic tendency; and, in the second place, this diet excites such a craving for liquids, that no resolution or strength of mind can overcome it. Hunger is a severe suffering, but thirst is far more distressing; and were death in the cup it could not be resisted. Why, then, I would ask, persist in measures, neither called for by necessity, nor recommended by economy, and which are so conducive to the irregularities of the soldier, and so fatal to his health.

If I should succeed, at last, in drawing the attention of the country to this subject, important under every consideration, as a religious, a moral, and a political question, I shall feel more than rewarded for all the misery I have been made to suffer for having mooted the question, in opposition to the frowns, and almost direct commands of those, who at the time had the power to annoy, and who did not fail to use that power, though they could not convince the world "*that salted meats were preferable to fresh, as an article of diet in the West Indies.*"

No truth can be more firmly established, than that in some of the islands of the Caribbean sea, and in some districts of particular islands, the annual loss of human life is much greater than in other islands

or districts. No doubt some casual circumstance or atmospheric change may and will alter the character of any island or district, and produce an epidemic, frightful in its ravages, and of some duration ; yet still these are only a temporary visitation, and are not to be considered in the light of such places as where it may be said the destroying angel never sleeps, and where the inhabitants as well as our troops are always unhealthy. I had, therefore, always considered, before I went to the West Indies, that the more frequently our troops were moved from one island or colony to another, or that a change of quarters took place within the same colony, the more healthy the troops would become. Others, however, of my profession, and men of experience, too, held a different doctrine, and maintained, that it was just as fatal for a regiment to be moved from Barbados to St. Kitt's, or from St. Kitt's to Trinidad, as it was to be moved from England to either of these colonies.

This was a question which I felt most desirous of establishing, by facts that should be free from all suspicion, and which must carry with them perfect conviction. On my arrival, therefore, at Barbados, I commenced my inquiries, and carefully pursued the history of several regiments, through a series of years and at different periods ; and without troubling the reader with details which are only important in a

professional point of view, I can assert, without fear of contradiction, that those regiments which have been the most frequently moved from island to island have always been the healthiest; and that the deaths in a regiment that has been kept stationary, have always greatly exceeded those of the regiments that have occasionally changed their quarters. This is a subject that I recommend to the consideration of those who have the power of turning it to account.

The 25th regiment, kept stationary, lost 258 men in six years. The 93d, kept moving, lost only 294 in nearly eleven years, or during the whole time they remained in the West Indies.

The climate of the West Indies is neither favourable to mental energy, nor conducive to moral habits; and more especially, if the monotony of the same pursuits and indulgences be superadded. It is often by change and activity alone that disease is prevented. The general reader is, no doubt, tired of the doctor, and thinks he has got a sufficient dose of *medicine*. I shall, therefore, stop here, and begin Chapter VII. with Religion.

CHAPTER VI.

RELIGION.

GREAT EXERTION MADE AT A VERY EARLY PERIOD TO CONVERT THE NEGROES—OPPOSITION OF THE PLANTERS—PRESENT IMPROVED CONDITION OF THE COLONIES AS REGARDS RELIGIOUS INSTRUCTION—BISHOP OF BARBADOS. HIS ZEAL AND SUCCESS IN PROPAGATING THE GOSPEL—EXCELLENT CONDUCT OF THE CLERGY—DR. COLERIDGE'S CONDUCT ABOVE ALL PRAISE.

I HAVE said, that in the early publications respecting Barbados, it is stated, that it was made a matter of debate even in England, and was asserted boldly in several instances, that the African was not a human being, but a gradation between man and monkey, without any rational soul, and therefore to be classed with the beasts that perish. Such assertions, however, did not hinder some pious men from proceeding to Barbados at a very early period of its settlement; and who accounted it no dishonour to preach to, and instruct the black slaves, and zealously to labour amongst them to promote their welfare in this world, and more especially in the next. These men were ministers of the Church of England, and their labours were not altogether in vain. Every means, however,

were had recourse to (even to persecution,) to banish such missionaries from the colony.

Though they could no longer deny their humanity, the early planters were soon satisfied that the less their slaves knew of the Gospel of Christ, they would be the better fitted for the duties they had to require of them; and although the island was divided into parishes, and churches were built for the accommodation of the white population, the clergymen were strictly prohibited from preaching to the blacks. On no account could a person of colour be allowed to enter any of these churches; and it was not even permitted that their bodies should be buried within the same enclosure where that of the white man was committed to the earth. Until a very late date, indeed, this marked distinction was kept up, though in many other respects the slaves were indulged and kindly treated.

Clergymen, as we find, were regularly appointed to the parish churches as they became vacant, the patronage being in the governor of the island; but I regret that I am compelled to add, that few indeed of these incumbents (however well-intentioned in the first instance,) remained steady in their conduct, or showed much zeal for the great cause which they had undertaken to defend. The young and thoughtless

proprietors of the soil took a delight in making the Parson as miserable as possible, until he became as one of themselves, and was blind to their faults and follies. The pious and faithful Christian minister was, therefore, obliged to take his departure from the island, and leave the field to some more complying brother. True and vital religion, in as far as the Established Church was concerned, was long at a dreadfully low ebb. And so little anxiety did our bishops in England show for the interests of religion abroad, that almost any man during the last century could get ordination for the colonies. Under such circumstances, I am, therefore, not at all surprised, that these colonies were overrun by all descriptions of sectaries; some, no doubt, moved by a sincere desire to spread the truth of the Gospel, while many were more calculated to excite discontent and rebellion amongst an ignorant and superstitious heathen population, than to sow the seeds of peace and good-will. Their language and demeanour were more likely to confirm error than to explain and establish the great truths of the Christian dispensation. Indeed, it may be said, without much exaggeration, that for nearly two centuries, there was little of religion and nothing of discipline in the West India Church. She seemed abandoned by the mother country as unworthy of

even the slightest consideration, while the sectaries were allowed to prosper in their career, doing little good and much mischief.

Whether the planters themselves began to dread the effects of unrestrained enthusiasm, or the Church began to rouse herself from her criminal slumber, I cannot at this moment positively affirm; but certain it is, that about thirteen years ago a change came over the spirit of the times. These distant corners of the empire were regarded with more complacency, and the erring shepherds, and their careless flocks, were at last considered worthy of being received into the great fold of our Protestant Establishment. Two eminent men were selected, and, after due consecration, sent out in 1825 as bishops to the West Indies. The Windward Islands were made the first See, and Jamaica and its dependencies the second. It is of the former I am now to speak, and that from personal observation, for of the latter I know nothing except from hearsay, and that in a court of justice is no evidence.

Of the excellent and pious Bishop of Barbados and the Islands I know not well how to write,—for whether we regard him as a man, a minister of the Gospel, or as the guide and guardian of a Christian Church, he is in all respects above praise. With patience, and much forbearance, but at the same time with firmness, he has overcome many difficulties. He has nearly succeeded

in removing from the churches every minister of the old leaven, and has filled up their places with men of sound learning and sound doctrine, men of whom it may truly be said, that they are well calculated to adorn the doctrine of Christ our Saviour, and well qualified to minister in holy things.

Churches and chapels are now arising in every colony, and from the attention which the Bishop has given to the characters and qualifications of the candidates for livings, such only have been selected as are distinguished for zeal in the good cause, and whose learning and sound piety are certain of securing to them that respect and consideration which their sacred character so necessarily demands. Already the pastors of the Barbados bishopric will bear a comparison with those of England itself, and more able or pious labourers are not to be found in any corner of the Christian world. Dr. Coleridge's see is divided into two archdeaconries, the Windward, and the Leeward. Archdeacon Eliot resides in Barbados, and Archdeacon Parry at Antigua.

The hurricane, of which I have endeavoured to give some account, destroyed and levelled almost every church and chapel in Barbados; but such has been the indefatigable exertions of the Bishop and his excellent clergy, that not only all that previously existed have been rebuilt, but several new charges have been esta-

blished. The want of church accommodation has been long felt, and loudly complained of, in Great Britain and Ireland; but it was nothing in comparison with what the colonies suffered when Dr. Coleridge was appointed to the see; in fact, it had never entered into the imagination of those who first planted the churches in our colonies, and divided these colonies into parishes, that the black population were of any account in such an arrangement. They were looked upon, as I have shown, as altogether without the pale of the Church; consequently, provision was only made for the few planters and their families, that resided in the district, together with their white overseers and servants.

No black or coloured persons were allowed to enter the consecrated temples of the Living God. The good Bishop, however, soon made it known, that he should consider every class, and all colours, of professing Christians (equal as they were in the sight of God) equally entitled to share in the blessings and benefits of Christ's Holy Gospel;—that the house of God was open to all, and that every one was invited, nay, commanded, to come and hear that Gospel preached. The clergy throughout the diocese were peremptorily commanded to make these sentiments fully known to all classes of their communities, and to take care that no authority whatever might

contravene them without its being reported. A few, and I believe but a very few, felt alarmed, at what they considered worse than high treason itself, or even a hurricane; but after a very short time, when they found that the canes still continued to grow, and that sugar and rum might still be made from them, their terrors seemed to subside, and even some of these alarmists are not ashamed now to occupy a pew with their black servants.

More crowded or more devout congregations I never witnessed in any country than in Barbados, and in others of the colonies; and it is gratifying to observe the progress which many grown-up people have made in the knowledge of the great truths of religion. As to the rising generation, they will be as well, if not better, educated than the children of the lower classes in England. The ministers of all denominations of Christians are not less improved in their manners and conduct, than are the members of the Establishment; and indiscreet zeal, and inflammatory mysticism, have given place to a pure devotion, and the steady inculcation and plain explanation of the great and practical truths of Christianity. There is a rivalry, no doubt, kept up, but it is a rivalry of love; and that mutual harmony, that peace and good-will, which now exist amongst all the Christian ministers in the West Indies, clearly indicate that the

Spirit of all Grace is with them, and that their labours are blessed.

If it was formerly the duty of the planters (from worldly motives and personal interests) to prevent the spread of religion amongst their black slaves, it is now much more their duty and their interest to promote it amongst their free negroes, and, indeed, God, I hope, has opened their eyes and their understandings to see this, for every assistance and encouragement is given to the building of churches and schools, and every pains taken to provide the people with proper ministers and teachers.

There may be individuals, and I regret to say there are some in the West Indies, as in every country, who, destitute of all religious feeling and belief themselves, can see no advantage in teaching it to their people; but even these have latterly found the tide of popular opinion so strong against them, that they have been compelled to remain silent, or forced to sail with the stream; and I should scarcely be credited, were I able—which I really am not—to detail the progress that has been made in moral and religious improvement in the short space of eight or ten years.

Writing, as I do, with a view to instruct the ignorant of these kingdoms in some few matters that may be interesting as regards our colonial policy, I regret

that I am compelled to notice, and that, perhaps, in rather strong terms, the cold indifference which seems to exist somewhere, with respect to the religious and moral instruction of our soldiers, and their families, on colonial service. With whom this neglect originates, or why it exists, I have not yet been able to ascertain, but that it does exist I have now to show.

While a regiment remains at home, that is, in any part of the United Empire, the soldier is most carefully attended to, and all his wants are supplied. His food is of the best quality, and abundant in quantity. His barrack-rooms are clean, and his bed is comfortable; and, whether Catholic or Protestant, he is compelled to attend a place of worship every Sunday; and, whether he may profit or not, he is at any rate enabled to hear the Gospel preached. The moment, however, it becomes that regiment's turn of duty to proceed on service to our West India colonies (I shall speak only of what I know, and to what I can testify,) the men are frequently so crowded together, as to be deprived of every comfort, and have their health much injured. Their diet is such as many of them have never before tasted; and when landed under the burning heat of a tropical sun, they are fed on salted meats for five days in the seven. This quantity of hard salted meat would produce an agony of thirst

even in Europe; in the West Indies it is intolerable, and leads to irregularities that are, alas! too often fatal to the individual.

In some of the colonies, the bedding is still composed of materials unfit, and unwholesome; though I must do the Board of Ordnance the justice to say, that they have ordered that every man should have a hair mattress, and, consequently, neglect is not attributable to them.

While, therefore, many circumstances are calculated, as it were, to demoralize, and to draw him from the path of duty and of moral rectitude, there is not, I believe, a single church or chapel throughout the whole of the Windward and Leeward command, into which a British soldier *has a right to enter*,—certainly not one to which a regiment can be marched to hear the Gospel preached. There is only one regular military chaplain in the whole command, and he is stationed in Trinidad, where there is no chapel or any convenience whatever for preaching to the military, and where he is compelled to read the morning prayers, or *a part of them*, in the open gallery of the barracks, or in the barrack-yard.

In Barbados, where there are seldom fewer than 1200 men, and two or three hundred women and children, a clergyman *is hired at seven-and-sixpence a day*, whose chief duty it is to bury the dead, to

christen such as may be born, and now and then to marry an officer or a soldier. He does, indeed, make every effort to read the morning prayers to the different regiments from the steps in front of their several barracks, but where, though the men are formed in as close order as they can stand together, not one in fifty can hear a word of what is read, while the powerful rays of the rising sun are drawing up around them the noxious vapours, that enter their empty stomachs and lungs, and pollute the stream of life.

The short time that is passed in this dumb show of what is called religious duty, (and fortunately it is short,) is generally productive of several cases of fevers, of one description or another, or of dysenteries, from the men standing on the grass, still wet with dew. These church-parades, as they are called, are the most fertile sources of the worst hospital cases.

If the same money had been laid out in building a church, at St. Ann's, where the garrison could attend divine service regularly, that has been spent in building a high wall to separate the barracks on the east from a few grog-shops in their rear, it would have been much more advantageous to the poor soldier's well-being in this world, to say nothing whatever of his peace of mind, and of his soul's salvation in the next.

It may truly be said, that, during the whole of the ten or eleven years that the soldier is absent in the

colonies, he is compelled to live without God in the world. No measures whatever are taken to procure for him either the conveniences or the consolations of hearing the word of God preached, or of attending to any one religious duty; how then, I ask, can we expect that his moral conduct will be correct? In the good old times, every regiment had its chaplain, and even during the war, the Duke of Wellington had a clergyman attached to every division and brigade of his army; I therefore recommend it seriously to the notice of the authorities at the Horse Guards, to consider, whether it would not be better to provide for the spiritual wants of our soldiers on service, and more especially in the West Indies, with a little more care and anxiety, and to direct their attention to the procuring of a more nutritive and congenial food, and to the means of securing greater personal comfort, than it would be to have recourse always to the terrors of the law, and this more especially when it has been so fully proved that no species of punishment, however severe or varied in its nature, can deter soldiers from the commission of crime.

Our speculative and political philanthropists would do well to look into this matter. It is of far more importance than the abstract questions of flogging or solitary confinement, or of any other mode of punishment; for if the soldier found that he was treated as a

human being, and that his feelings as a man, and his duties as a Christian, were respected and encouraged, there would be less occasion for either the lash or the halter. If necessary, I could appeal to the character and conduct of more than one regiment, in corroboration of this opinion.

In so large a body as 500 or 600 men, levied as our soldiers too generally are from the most dissipated classes of our community, there will always be some characters that can never be reformed; but this I can affirm, from long and strict observation, that a humane and kind commanding officer, who shows that he respects the feelings, and perhaps the innocent prejudices of his men, and shows a proper respect for both; one who interests himself in their temporal comforts, and tries to secure for them religious instruction; in fact, one who leads them, by all means within his power, to indulge in the feelings and aspirings of men and of Christians, will always have a well-conducted regiment; and punishments, as a general measure, will soon cease to be necessary, and only to be called for on most extraordinary occasions.

Whenever we can bring a man to have a proper respect for himself, that moment we have secured him against the commission of any heinous crime. But while our present colonial system remains in force, we do nothing to elevate the soldier's character, but much

to debase and brutify it. If the country is too poor to build a chapel for each of the garrisons of our several islands and colonies, the regiments are quite competent to do this, if allowed, for themselves; and the very occupation would greatly improve their health as men, and secure their efficiency as soldiers. There is no regiment without a considerable number of artificers capable of raising such a structure as may be made a church, in the West Indies. And to what more eligible purpose can the stoppages made from the soldier's pay, on account of his misconduct, be applied, than to pay for a clergyman to labour regularly amongst them in holy things? But why hint at such a paltry economy as this? The British people are still able, and, if called upon, willing, to grant such a trifling addition to our military expenditure, as will cover the addition of a chaplain to each regiment, or at least to every garrison, in our West India and other colonies.

I now appeal to such of our senators as have taken an interest in the abolition of corporal punishment, and I call upon them to accomplish what I have recommended, and I will then assure them that they may cause all the "cats" in the army to be thrown into the fire, as they will never more be required as an instrument of discipline. But until they do accomplish such a reformation, I avow and maintain, after

nearly thirty years' experience, and a most intimate acquaintance with the opinions and feelings of soldiers themselves, both while smarting under the punishment, and when all recollection of it might be supposed to have passed away from their minds, THAT FLOGGING IS A FAR MORE HUMANE AND EFFICIENT PUNISHMENT THAN ANY THAT THE INGENUITY OF THEORISING PHILOSOPHERS HAVE AS YET DISCOVERED OR RECOMMENDED. In the British army, and it cannot be too often repeated, IT IS THE CRIME AND NOT THE PUNISHMENT THAT DEGRADES THE SOLDIER. I could mention some melancholy instances of the mischief done by the agitation of this question,—the effects it has produced upon the sentences of courts martial, and the conduct of commanding officers, who are too often at a loss how to act, and hesitate when the most firm and prompt decision is perhaps required to secure the safety of a whole regiment. I shall, however, only intrude upon the reader's notice one history, which strongly bears upon the point in question.

Not long ago, a regiment arrived in the West Indies, and as fine a body of men as perhaps ever left the shores of Britain. The officers, all men of education, and gentlemen. The regiment had been recruited and organized after its return from the East Indies within the last few years, and when the circulars and declamations of itinerant orators,

and the voice of the FOURTH ESTATE, were loudly proclaiming flogging as unlawful, and banishment for life a more than sufficient punishment for every military crime. Soldiers soon come to know the tone and bearing of public opinion; and the wicked and incorrigible will conduct themselves accordingly. In the regiment I have referred to, there was a fine young man, who finding the Indian-corn husk palliasse, and the myriads of bugs with which the barrack-beds were swarming, no great luxury by night, and that eight ounces of hard salt beef, or four ounces of salted pork, were no very nourishing or palatable food by day; and that his military duties and restraint were sufficiently irksome; concluded, and with some reason, that he would be much more comfortable, and far better provided for, as a convict in New South Wales, than he could ever expect to be as a private in His Majesty's —— Regiment, in the West Indies. To accomplish such a change, he resolved to do something that would ensure his being transported, either by the sentence of a court-martial, or by a commutation of punishment; and accordingly, he seized the first opportunity he could meet with to insult, and I believe strike, his officer. He was tried by a general court-martial; and in order to make sure of his object, was, as I was told, most insulting even to the court. There was no difficulty in proving his crime, and the sentence was that he should be shot. I have no doubt he

knew perfectly that he had incurred this awful penalty, but am also quite certain, that he supposed, from what he had seen and known of the effects of popular clamour in England, that no general officer would venture to carry such a sentence into execution. He was, however, mistaken in this. It was declared that he must die; and, after being allowed some days for preparation, he was led through the ranks of nearly 2000 men, made to kneel upon his coffin, and in a moment had his body pierced by a dozen balls, fired by his late boon companions and comrades. Owing to that uncertainty which for some time has prevailed, we have here a young man of twenty-one years of age sent to an untimely grave. Had he believed for a moment that the sentence of the court would have been allowed to take effect, he would never have been guilty of the crime for which he suffered*.

This is a proper subject for senatorial declamation; and one that calls for the attention of every man in whose bosom there is one spark of philanthropy. All the prospective rewards for good conduct, and all the appeals that can be made to the feelings of the soldier, will never overcome his physical wants, or quench that craving for drink, which is far more distressing and overpowering than hunger itself, and as has been found, when not satisfied, has always ended in the most furious delirium and madness, and finally in death.

* The soldier's own confession.

The climate, of itself so exhausting, naturally induces a craving for liquids, but when we aggravate that craving a thousand-fold by the salted and dry food which we compel the soldier to live upon; and when also, as in some of the colonies, we aggravate his sufferings still further by giving him a palliasse to lie upon, filled with the crude husks of the Indian corn-stalk, and swarming with vermin,—can we wonder that he should become irregular in his habits, and quite indifferent as to the consequences of his actions? I have conversed with many respectable non-commissioned officers on this subject, and they have assured me, that when they had no opportunity of exchanging their salt provisions for fresh, and were from circumstances compelled to live upon their rations, their lives were so miserable that self-destruction was often contemplated. They could only mitigate their sufferings by drinking gallons of water during the day; and then when the time arrived for going to bed, they tried to procure sleep or forgetfulness, by swallowing an enormous quantity of brandy or rum, or of whatever spirit they could procure.

The common soldier, who has no character at stake, will drink the spirits, when they can be procured, with water or without it, at all times, by day or night, and hence the constant scenes of irregularity and drunkenness that are exhibited in every West India

garrison. But give the soldier fresh meat, and green succulent vegetables, instead of rice, and let him have tea instead of coffee or cocoa; let him, in all situations, be provided with comfortable and clean beds; let him have the consolations of religion in the house of God, and in his barrack-room; let industry and even amusements be encouraged, nay enforced and provided;—and then we may rest assured, that even the very worst characters in a regiment will become comparatively regular. There will seldom be occasion for any punishments whatever; and, what is of far greater importance, sickness and death will less frequently make their appearance, even in colonies that have for time immemorial been considered as the certain grave of Europeans.

In conclusion, I assert, and am ready to prove, that by acting as common sense and common humanity point out, not less than 50,000*l.* of money might be saved annually in our colonial expenditure. I have been induced to express myself very fully and very freely on this subject, because it is one of paramount importance. It is one to which I have given my attention for many years, and no one has a better opportunity of judging of the opinions and sentiments of soldiers than the attentive medical officer. But the time has arrived that I must take my departure from Barbados.

CHAPTER VII.

BRITISH GUIANA.

DEPARTURE FROM BARBADOS—ARRIVAL AT GEORGETOWN—EXTENT AND IMPORTANCE OF THE COLONY OF BRITISH GUIANA.

On Monday, the 17th of March, 1834, I left the island of Barbados, and on Friday, the 21st of the same month, landed at Georgetown, in the colony of British Guiana. When the trade-winds blow from the north of east the passage has been made in sixty hours, or in less time, but in general it occupies three or four days.

The colony or province now called "British Guiana," comprehends the whole of that territory on the coast of the South American continent which was originally colonized by the Dutch; and what is rather singular, the Dutch now possess the only small portion of the same continent that was first colonized by the English, viz. Surinam.

Under its new and now recognised appellation of "British Guiana," are comprehended the three distinct Dutch settlements or colonies, upon the banks of the rivers Berbice, Demerary, and Essequibo; a tract of country extending from the equator to nearly ten

degrees north, and stretching along the Atlantic Ocean for 200 and 300 miles; from the banks of the Great Oronoko on the west, to the borders of the before-mentioned river or colony of Surinam on the east.

The eastern boundary is the most southerly; and at the extreme west, the soil deposited from the waters of the Oronoko causes the land to trend considerably to the north. Georgetown, the capital city of the province, stands on the banks of the river Demerary, near its mouth, and is as nearly as possible in the centre, between the two extreme points. British Guiana, therefore, forms a part of that extensive tract of country, stretching from the sea to the river Amazon, which was first discovered by Columbus, and then designated Guyana, or Guiana, by the native Indians. This coast was afterwards visited by Sir Walter Raleigh, when in search of the El Dorado; and, subsequently, the banks of its great rivers were taken possession of by European colonists,—Surinam, as already mentioned, by the English; Berbice, Demerary, and Essequibo, by the Dutch; the Oronoko, the Amazon, the Rio Negro, and others, by the Spaniards and Portuguese. A long line of coast, still more to the south than British or Dutch Guiana, belongs to the French.

England, very soon after its settlement, exchanged the colony of Surinam for the Dutch settlement on the


Position and supposed Extent of British Guiana
50
55
60
65
5
0
10
B R A Z I L
RIVER AMAZON
Barra or Manoas
Rio Negro
Obidos
PARA
JOANNES I.
R. Para
Beyond the Mountains
R. Branco
R. Orinoco
Cayenne
R. Oyapok
FRENCH GUIANA
R. Amanibo
R. Maroni
R. Surinam
DUTCH GUIANA
R. Suramaca
Paramaribo
R. Coranti
R. Berbice
Georgetown
R. Demerara
R. Essequibo
BRITISH GUIANA
COLUMBIA
R. ORINOCO
ATLANTIC OCEAN
Trinidad
PARIA
Standidge & Co. Litho London

Hudson; and after a lapse of nearly two centuries, the first remains still in the hands of the Dutch as a colony, struggling with poverty, while the last (the capital province of the American Union), flourishes as the state and city of New York.

During the late revolutionary war, and when the French had converted Holland into a province of their mighty empire, Great Britain took possession of the Dutch West India colonies. But at the peace of Paris, in 1815, they were all restored to the King of the Netherlands, with the exception of the three which now constitute the province of "British Guiana." These were retained by Britain, and a price actually paid for them, notwithstanding that they had been conquered during the war. The coast-line of this rich and important colony, may, as I have stated, extend to a little more than 200 miles; but its depth, or length inland, has not (so far as I am aware,) been as yet determined. One or two travellers do say, that they had penetrated so far to the south, that from the summit of the Cordilleras they could discern the South Atlantic Ocean; and that from the said heights the waters parted north and south. Hence, some have conjectured that this is the southern boundary of British Guiana; though its true latitude has neither been ascertained, nor is it at all stated in any work that I am aware of. My own opinion is, that our

territory extends to the banks of the Amazon, some degrees south of the equator. I may, however, safely affirm, that this country embraces many more acres of land than are contained in Great Britain and Ireland combined; and is a far more valuable possession than either Mexico or Peru, with their gold and silver mines, or even the Brazils, with all its diamonds to boot. Here we have a very different soil from that of Barbados,—a rich alluvial compost, 147 feet in depth; and quite inexhaustible, both as regards quantity and quality; and which, as to cultivation and colonization, has limits that I may truly say are boundless.

As yet a few patches only along the sea-coast, and on the banks of its three great rivers, have been subjected to cultivation; and such are their productiveness, that the exports of this colony are already nearly on a par with those of the large island of Jamaica, with its labouring population of more than 300,000. If cultivation and population proceed and advance in any thing like the ratio they have lately done, it would be a matter of little import (in as far as sugar, rum, molasses, and coffee, and even cotton, are concerned), a few years hence, though all the islands in the Caribbean sea were returned to the bottom of that great deep. British Guiana could furnish a supply of these articles for the whole world, and for

10,000 years, and still have fresh soil to bring into cultivation.

It is of the utmost importance to Great Britain that the attention of government, and of the whole community, and more especially of our merchant-kings and adventurers, should be drawn to and fixed upon this rich and invaluable colony; for, were its resources truly known, its advantages duly appreciated, and its capabilities fully examined and explained, it would indeed soon become a wealthy state; and Georgetown, already a crowded and flourishing sea-port, would rival, if not surpass, New York. Great capital is not even necessary,—it only requires labourers to till the ground; and I am happy to have to state, that since the galling fetters of slavery have been removed, and the negro is allowed to bring his free services to the best market, many are flocking to this land of promise, where not only more comfort, but even wealth, may be speedily acquired, and where already free labour has raised in the last year more produce than slavery could ever obtain, by very nearly a million of pounds sterling in value.

CHAPTER VIII.

HISTORY OF THE COLONY.

BERBICE THE FIRST SETTLEMENT—THEN ESSEQUIBO AND DEMERARA—CONSOLIDATION OF THE THREE COLONIES IN BRITISH GUIANA—THIS COLONY FORTUNATE IN ITS GOVERNORS.

It was about the year 1626 that a Mr. Van Peire, a wealthy merchant of Flushing, first sent ships to sail up the Berbice river, and began to establish a trade with the native Indians. But as early as 1580, the Zealanders had attempted to fix themselves on the banks of the Oronoko and Pomeroon rivers; and the same enterprising merchant, who began to explore the Berbice in 1626, had obtained permission to establish factories, and to traffic with the natives on these coasts in 1602. The Spaniards, however, becoming jealous of the Hollander, drove Van Peire and his factories from their immediate neighbourhood, and it was while in quest of a more quiet settlement that they sailed up the Berbice.

Van Peire's ships landed a number of adventurers, at a considerable distance from the mouth of the river, where they built a small fort for their security, while conducting their trade with the Indians.

These adventurers were no doubt considered by Van Peire as his servants, or factors, as they received all their support and supplies from his ships. It was much about the same time (1626) that some English ships sailed up the Surinam River, took possession of its banks, and there established themselves; and it is evident that this colony must have been in great favour at home, for so early as 1675, not fifty years from the first settlement, when it was transferred to the Dutch, more than 2000 British colonists left it, and proceeded to Jamaica, then esteemed the true Land of Promise, and the most important of all the foreign possessions which England had ever acquired.

By a grant from the States General, the Dutch West India Company became proprietors of all the American colonies that had either been conquered, or had been established by Holland in the New World. But as an inducement for others to imitate the liberal and enterprising conduct of Van Peire, of Flushing, this company conferred upon him all the rights, privileges, and powers, which they themselves had acquired over the colony of Berbice, a colony that had originated with his factories on the coast. This grant took place in 1678.

Surinam (which the said company had taken in exchange for New York), when it was deserted by the English, was found to be a losing concern. It was

therefore sold to the States General for 260,000 guilders, and became national property.

In 1669, the first permanent Dutch settlement was established on the banks of the Essequibo; for though the Zealanders reported that they had a flourishing colony near the mouth of that river, before 1613, it appears that all their factories and establishments had been destroyed by the English in 1665.

In forming their first permanent colonies, the Dutch were compelled to take up their position at a considerable distance from the sea-coast, in consequence of the numerous Buccaneers, or pirates, that infested these seas; and we always find, that the lands first cultivated were further inland than those now under crop, and that the first forts built for their protection have long been abandoned by their successors in these colonies. Colonization must have proceeded very slowly on the banks of the Essequibo, for we have no notice whatever of its having advanced to the Demerary River (Rio de Mirara) till 1745, when the directors of the chamber of commerce of Zealand granted permission for one "Andrew Peiters" to lay out plantations upon its uninhabited banks.

In 1747, more than a century from the first settlement on the Essequibo, the whole of the produce exported from that colony and from Demerara was only 559 half-hogsheads of sugar, which were carried

to Europe in two small schooners. About this date there must have been a great influx of labourers from the coast of Africa, as the cultivation on the Demerara coast increased rapidly. In 1748, 2292 hogsheads of sugar were exported. In 1752, cotton and coffee first began to be cultivated; but in that year only one bag of the latter, and one bale of the former, were shipped. For the next nine years, the cultivation of the sugar-cane was neglected, and the cotton and coffee-plants attended to. In 1761, the sugar exported was only 878 hogsheads, while the cotton had increased to 28 bales, and the coffee to 45 tierces. After this date, the planters began to acquire wealth and enlarge their estates, and a very large increase took place in the number of slaves brought into the colony.

In 1764, the total number of estates under cultivation on the banks of the Essequibo and Demerary Rivers was 130, and very few exceeded the original grant, which with the Dutch was always limited to about 250 acres, English measure. These 130 estates produced this year 2956½ hogsheads of sugar, 211 bags of coffee, and two bales of cotton, and required eight ships for their transport to Europe. In 1768, the quantity of coffee exported was 2510 bags, and of cotton 66 bales. After 1770, cotton rose in value, and was chiefly cultivated. In 1773, not less than

8613 bags and 181 bales were sent to Europe, while the sugars amounted only to 3775 hogsheads, and the coffee to 1001 tierces.

It was in 1773 that the Courts of Policy, and of Civil and Criminal Justice, were first established in Demerara, and their meetings appointed to be held on an island about twenty miles up the river from the present capital.

In 1775, the cotton raised in the colony was 19,090 bags and 189 bales, the coffee 2317 tierces, and the sugar 4939 hogsheads. In 1777, coffee predominated, and not less than 1866 tierces, and 20,309 bags, of the berry were sent to Europe; but it is not a matter of sufficient interest to the general reader to continue these statistics with the same minuteness.

In 1781, Sir George Rodney, with the British fleet, took possession of all the Dutch West India colonies, and Demerara and Essequibo were considered the richest prizes of the whole. Berbice was not in so flourishing a condition as the other two. The planters had never recovered from the effects of the debt which they had been compelled to incur to prevent their estates from being totally destroyed by the French fleet in 1712, and, subsequently, of a revolt of their slaves in 1763, by which the whole colony was laid desolate, and the safety of the other colonies greatly endangered. These rebels could not

be subdued until a large reinforcement of troops arrived from Europe, and when, as is related, a general massacre ensued, so great and general, that, for many years afterwards, four or five small vessels were sufficient for the whole trade of Berbice.

At the peace of 1783, the whole of these colonies were again restored to Holland, when they were almost immediately taken possession of by the French, who built forts on both shores of the River Demerary at its mouth, for the future protection, as they said, of the colony. In 1785, the Legislative and Judicial Courts of Demerara and Essequibo were united, and their meetings were directed to be held in future at Staarbröek, now Georgetown, the capital of Demerara.

In 1787, a very serious conspiracy was organized amongst the negroes, which, fortunately, was discovered, and its fatal effects in a great measure prevented.

Early in 1796, three British regiments of infantry were sent from Barbados to take possession of Demerara and Essequibo. The Dutch governor had very few European troops under his command, and his militia were by no means effective; he therefore did not hesitate to capitulate on the first summons. General Whyte, with his little band, took possession of the two colonies without firing a shot.

The troops, on landing, were for the most part

quartered in the Fort William Frederick, one of those built by the French; but the British officers preferred building cottages or huts for themselves without the walls of the fort; and here they laid the foundation of that crowded, and now fashionable, district of Georgetown, still known as Kingstown.

Under the protection of Great Britain, agriculture and commerce made rapid progress. British capital became united with Dutch industry, and fortunes were accumulated in less time than it would have taken to coin the amount in silver before the invention of steam. At the peace of Amiens, these valuable possessions were surrendered for a few months to what was then called the Batavian Republic; but were again, in 1804, retaken, as were also the other West India possessions belonging to Holland. From this period, to the present hour, the colonies of Berbice, Demerara, and Essequibo, have remained with us; and their possession having been secured by treaty and purchase, as well as by conquest, they have now been incorporated with the British Empire, as "THE PROVINCE OF BRITISH GUIANA."

During our first occupancy of these colonies, in 1781, it is evident that several natives of the British Isles had been induced to try their fortunes in South America. From 1796, and during the continuance of the war, the influx of adventurers from Scotland, and

from Ireland, must have been very great. The resources and the riches of this important province began for the first time to be fairly developed and appreciated; and such was the effect of British capital and British enterprise, that, before we surrendered up possession to the Batavians, in 1802, we had raised the exports, in the short space of six years, to 19,638 hogsheads of sugar and 213 tierces—to 4887 puncheons of rum, 46,435 bales of cotton, and 9,954,610 pounds of coffee, and 520 casks of molasses, requiring more than 400 vessels for their transport.

The old Dutch laws, and the customs of Holland, were preserved to the colony by the terms of its capitulation, and in my opinion they have been very unnecessarily retained since it has become a British province *de jure*, as well as *de facto*. The circumstance of its being, on the last occasion, taken possession of avowedly for the purpose of saving it for the House of Orange, may have led our commander to guarantee these laws and customs, in all their original absurdity; but as they have long ceased to be the laws of the mother country, why should they still be allowed to interfere with the progress of improvement? It is owing to many of the obsolete customs still preserved here, that the governors of the colony have been defeated in some of their best measures for its improvement. It is, however, most fortunate for the con-

tinued prosperity of British Guiana, that in every apparent crisis of its fate, since it became subject to the British crown, it has been under the management of able, experienced, and honourable men.

During the last and most important period of its history, and, indeed, of the history of all our slave colonies, the prudence, firmness, and sound discretion of one man, not only saved this state from utter ruin, or from being deluged with human blood, but by his straight-forward and upright conduct produced such an impression throughout the colonies generally, that (though they may be loth to acknowledge it) had a most beneficial effect in restraining the over-heated zeal, calming the turbulent passions, and in removing the alarms, of less temperate and vacillating governors.

If Sir James Carmichael Smyth had wavered for one moment in his plans, or allowed the clamour of the frightened proprietors of the soil, or the remonstrances of his council (not always very courteously offered), to sway his decision in a single instance, British Guiana, at this hour would have been in a very different condition. That industrious, sober, and religious coloured population, which we now see daily increasing in comforts and in numbers, would either have been destroyed by the sword and famine, or sent, wandering, in their original savage condition, to the far inland forests. It was stated at the time, and while

yet party spirit and the clamour of the timid, the ignorant, and of the interested, would have overpowered the reason and good sense of almost any other man, and have forced him to adopt their measures,—that the inhabitants of British Guiana would many of them live to bless him, who could act so wisely, and so well, under such trying circumstances: and already I can affirm, that almost all the liberal-minded proprietors of the soil are of the same opinion.

CHAPTER IX.

THE PRESENT STATE OF BRITISH GUIANA.

THE DUTCH PEOPLE SEVERE TASK-MASTERS—CONDITION OF THE FIRST BRITISH COLONISTS INFLUENCED THEIR CHARACTER—PREJUDICES OF THE PLANTERS—THEIR OPPOSITION TO THE MEASURES OF GOVERNMENT—PRESENT IMPROVED CONDITION OF ALL PARTIES—GREAT INCREASE OF PRODUCE FROM FREE LABOUR.

It is uttering no calumny against the people of Holland (I speak not of them as individuals, but as a nation), to say that they have ever been considered and proved the most cruel and severe task-masters: if we look, however, beyond the mere surface of things, we shall probably find that their conduct in this respect has arisen from qualities highly estimable and praiseworthy in themselves,—that, most persevering, industrious, and punctual in all his duties, his dealings, and private transactions in business, the Hollander has no sympathy with the idle, the indolent, or dissipated, portion of his fellow-creatures. The Dutchman's system is to compel obedience to his orders and regulations, more by the severity of his punishments, than by any marks of his kindness, or any promises of reward. He was taught in youth that the very utmost stretch of human exertion, to accomplish what he was ordered to perform, was a right or duty which he owed to his

parents and superiors; and when he grew up, he felt that he had a claim to demand the same obedience from all his inferiors. Nature, therefore, had made him a very Jew in demanding the entire of his pound of flesh, and it is no difficult matter to account for the greater prevalence of Dutch feeling and Dutch practice amongst the British colonists in Guiana than in any other of our conquered possessions.

The first generation of British adventurers had come to the country in the humble capacity of overseers, or book-keepers, to the Dutch planters; they were therefore trained up in the very worst system of the Dutch school, and commenced their labours and their instruction, at a period of life when impressions, once made, generally prove lasting. They knew of no other system, and had no experience of any other practice, than that of the most abject and passive obedience, or the utmost rigour and severity of punishment. If, under this discipline themselves, they had become not only reconciled to it, but actually believed (as many still continue to believe) that it is the very best and the only system that ought to be followed in the management of slaves, or of any other description of the labouring population,—for with such men habit has become second nature,—we must not be surprised then that these men, now possessed of great wealth and of great influence in the community (acquired, we must recol-

lect also, under their favourite system,) were most determined in their opposition to the new measures, or that their opinions were considered as oracular by all that were wishing to tread in their footsteps, or had hopes of succeeding to their estates. Had an angel from heaven announced to them, what plain common sense seemed to dictate to all others, that humanity and kind treatment were far better calculated to make the now freed slave a good and industrious citizen, than could ever be accomplished by the cart-whip or the cat-o'-nine-tails, these *Patres conscripti* would have sworn that the assertion was false, and they would have denounced the heavenly messenger as an enemy to the colony, and a calumniator of the colonists. The whole of their enmity and prejudice against the governor and his measures arose from their acquired Dutch feeling, and their limited knowledge of human nature.

From the first moment that Sir James Carmichael Smyth took the command of the colony, he made it evident, that his determination was, to consider and to treat the negro as a fellow-creature, endowed with all the feelings and attributes of humanity. That how much soever these qualities might be obscured by ignorance, or perverted or destroyed by the galling chains of slavery, it was his duty as a Christian man, and the representative of the king of England, to endeavour to

restore and supply what was deficient, and to recover what had been lost, by that long continuance of a system as barbarous as it is unchristian, and certainly, as regarded personal interests, most impolitic. He made it known, officially and publicly, that he was firmly resolved to treat every individual, of whatever colour or capacity, as all equal in the eye of the law. He stated that the best way of convincing the negro, that on the removal of that chain which was about to take place, (and which had so long galled him as a slave,) he would in every respect be treated as a free-born British subject, was to commence at as early a period as possible, to treat him with kindness and some consideration.

Immediately on his arrival in the colony, Sir James Carmichael Smyth issued a proclamation (No. I.*), which he caused to be read and fully explained to the slaves. This was followed by a second (No. II.*), but on the propriety of dealing thus openly with the negro population, the Governor and some of the leading members of his council were completely at issue.

As members of the Court of Policy, and as planters in British Guiana, they pretended to argue, from their long and intimate acquaintance with the negro character, and their perfect knowledge of the habits

* These documents are printed at the end of the present chapter.

and dispositions of the black and coloured population of their own colony, and they maintained, that nothing but the dread of the most severe corporal punishment could ever make them industrious or dutiful. The Governor, on the contrary, relied upon a more extensive acquaintance with human nature than the colonists possessed, and his greater intercourse with men of all nations and of all colours; and referred to the opinions of the most enlightened men, of every age, to prove, that though the terrors of the law ought never to be lost sight of, and that the infliction of physical pain might sometimes prove a salutary remedy, yet neither the one nor the other was much calculated to humanize the species, or improve the moral qualities of the sufferers.

In proportion to the limited space in which a man moves, so will his narrow-mindedness and prejudices obtain strength; and when we consider, that the civilized, or white population of Demerara, till of late, never exceeded 1000 or 1200 souls, and that many of these were of a rank in life not likely to add much to the enlightenment of society, it may easily be believed, that such circumscribed intercourse was more likely to confirm bad habits, and strengthen long-cherished prejudices, than to improve and enlarge the human understanding. If we consider, also, the relative condition of the employer and the employed,

—the one the uncontrolled owner and disposer of the body of the other; and that other compelled to submit, both in body and mind, to the whims, caprices, as well as reasonable commands, of his master or tyrant,—I use the latter term is no bad sense, and without reference to any class of men; I only consider slave-owner and tyrant as synonymous terms. A man cannot be the one without becoming the other; and from what I have seen of slavery and its consequences, I am satisfied that it has proved far more degrading and debasing, and far more prejudicial to the white master, than it has ever been to the black slave. If, therefore, we duly consider these several matters in detail, we cannot be surprised at the opposition which the governor met with, when his general measures were first made known. Faction might aggravate that opposition, but undoubtedly, many excellent and worthy men believed, most conscientiously, that Sir James Carmichael Smyth was wrong in showing so much consideration and regard for the interests of the negro population, and so much respect for their feelings. These men acted upon principle, and were guided by their fixed opinions; opinions, however, arising entirely from the very circumstances of their situation.

The extraordinary facility with which the human mind becomes hardened under certain circumstances,

and from the constant witnessing of scenes debasing and cruel, is one of those anomalies which philosophy may find it difficult to explain in theory, but which is nevertheless true in practice. It is an old remark, that by the constant repetition of a falsehood, the soundest mind will, in process of time, come to regard it as a truth; so, by constantly witnessing the same system continued, we very soon come to consider the slightest deviation from that system as certainly leading to utter ruin. I therefore, in charity, would attribute to their prejudices, rather than their principles, the violence and the opposition which the Governor met with in Demerara,—so perseveringly carried on; and which, at one time, was sufficient to have turned the firmest mind from its purposes. I am, therefore, most happy to be enabled to add, that it has nearly ceased. Already, the great body of the planters, and every honest man in the colony, are becoming convinced that they were mistaken in many things and misled in others. Tranquillity has long been fully established; indeed, I might say, it was never interrupted. The *gathering* in the Essequibo, of which such horrible accounts were transmitted to England, and which succeeded for a short time in creating some alarm, and in *raising the price of sugars*, was a very ill-concocted and clumsily got-up affair, altogether ridi-

culous; and only tended to show, that those who did contrive it, were as weak as they were worthless, and quite unequal to the task of exciting a rebellion, even amongst ignorant and prejudiced negroes. It did, however, frighten a planter or two, and alarm their female relatives.

The aristocracy of British Guiana are kind and hospitable in their houses, and most friendly and obliging, so long as the stranger does not disregard their prejudices, or question the correctness of their judgment and conduct as regards their sable brethren; but let him attempt to do either, and he will find the land of mud no fit soil for him to inhabit.

The great majority of the colonists are Scotchmen, or the descendants of Scotchmen. The Dutch planters have nearly all disappeared. There are a few wealthy and respectable proprietors from Ireland, as well as England; but by far the largest proportion of the wealth and influence of the colony is vested in Scotchmen. Most enormous fortunes have been realised in British Guiana, and with a facility scarcely credible; but I regret to have to add, that there are not many instances in which estates as yet have come down entire to the third generation. I have heard it remarked in the colony, by more than one, that all who came to it with wealth, and had purchased estates on their arrival, were reduced to poverty;

while those who came in poverty, had acquired, many of them, unbounded wealth. Some of the richest proprietors of the present day, came to the colony within the last thirty years, as merchants' clerks, or overseers, and with no other property than the clothes they wore. Scotch economy, and Scotch industry, were never more successfully exerted than in Demerara; and being in manners and feelings already half-Dutch, they easily amalgamated with the original settlers, and appear very quietly to have stept into their places.

The great drawback upon colonial property for many years past, has arisen from the power of dictation which the mercantile houses in Europe had acquired over almost all the West India proprietors, and the actual possession which they had obtained of many of their estates. These acquired properties were superintended by agents, who had none but a personal interest in the amount of their produce; and provided that could be pushed to the greatest extent from year to year, without reference to any future improvements or future advantages, they cared but little for the interests of either proprietors or slaves. Buildings were allowed to go into decay; cultivation was forced, but not improved; and at the present time, there are a great many valuable properties that have been abandoned, or turned into grazing-farms.

But in addition to the evils to be expected, where absent masters have to trust, as in this case, entirely to fallible servants, another great check upon the prosperity of the colonies arose from the fear created by ignorance, and strengthened by intrigue. The merchants were made to believe, that the sword of destruction was always hanging over their heads. If any resident proprietor, of education and experience, ventured in a single instance to deviate from the common routine of his ignorant ancestors (however certain and beneficial the result might be in the improvement of his property, and increase of his income), the moment such a proceeding reached the ears of his creditors,—and almost every estate latterly had become more or less mortgaged, and there was always some agent on the spot to communicate this information to the mortgagee,—that moment a most peremptory order was sent out to stop all innovation, or take the consequences; which implied, that he must be prepared to pay up the mortgage, or have it foreclosed, and his property brought to the hammer. There are some instances, even in this province, where matters have been carried to that extremity; and properties have been sold for one-third or one-half of their real value.

It is not, however, to record transactions that do so little credit to human nature, that I have thus alluded

to them; but merely to point out one of the chief difficulties which the colonists have had to struggle with for many years past, and which effectually put a stop to every species of improvement; and that it may stand as a contrast to the present state of matters; when, most happily for all parties, such proceedings can no longer take place. The late blessed change in the condition of the labouring population, and the sum which Great Britain has paid to accomplish that change, and as a measure of justice to those who, taking the most favourable view of the case, were temporary sufferers, have enabled almost all the proprietors to pay off the whole or the greater part of their debt. They have now recovered their free agency, and may manage and improve their estates in accordance with the progress of sound knowledge, and the greater facilities afforded by free labour. They have the power of increasing or diminishing the number of their labourers, according to circumstances, and to pay only for that which is productive; and such is already the flourishing state of British Guiana under this system, that the exports in 1835-6, exceed those of 1834-5, by 11,356 hogsheads, 883 tierces, and 530 barrels, of sugar; 7108 puncheons, 966 hogsheads, and 27 barrels, of rum; and 747,234 pounds of coffee. The following is the return for three years, as certified by the Collector of his Majesty's Customs.

Copy of Returns received from the Collector and Comptroller of the Demerary and Essequibo District, and from the Acting Collector and Comptroller of Berbice District.

	Sugar.			Rum.		
	Hhds.	Trs.	Brls.	Puns.	Hhds.	Brls.
1836	63,900	4,059	4,496	23,659	6,230	1,491
1835	52,544	3,176	3,956	16,551	5,264	1,464
Increase	11,356	883	540	7,108	966	27
Decrease						

	Molasses.	Cotton.	Coffee.
	Casks.	Bales.	Pounds.
1836	27,160	2,319	3,278,930
1835	33,398	3,376	2,531,700
Increase	.....	.....	747,230
Decrease	6,238	1,057	

British Guiana,
29th January, 1836.

H. E. F. Young,
Gov. Sec.

It is also of importance to state, that while industry has increased, crime has diminished; and that, in a population of nearly 73,000 individuals, not more than twenty-one were sentenced to receive corporal punishment in the month of December, 1835; and I venture to add, that not one-half of that number will be found to have suffered such chastisement in December, 1836.

This very favourable and satisfactory result of the great measure of slave emancipation, has not been accomplished without great exertions, and some anxiety, on the part of all concerned in the working of the details. One of the first preliminary arrangements adopted by Sir James Carmichael Smyth, (and some time before the Act should come into operation,) was, to direct a committee of the most experienced Planters of the colony to draw up a scale of work, which, according to their judgment, every able-bodied labourer, of either sex, might be capable of performing in the number of hours they were bound to work for the benefit of their employers. This was done with great care, and made to comprise every kind of labour to be done on an estate.

The number of hours, as limited by the Act, which the apprentice is bound to work for his master, is seven and a half per diem, or forty-five hours in six days. It was, however, thought prudent to leave it open for the master and the apprentice to arrange by mutual agreement, whether these forty-five hours should be completed by working nine hours daily for five days, or that they should conform to the letter of the law, and work regularly for the whole six days. But from this discretionary power having been left to the parties themselves, there have arisen more quarrels, complaints, and disagreeable interferences,

than it is possible to imagine. Some managers would not condescend to enter into any terms with their labourers, far less agree to those which the labourers wished;—they would adhere to the letter of the law; but, in order to harass and annoy, they would not allow the seven hours and a half to be consumed in regular succession, as had always been the custom, with the short intermissions for meals; but when the people had completed one-half of their time in the forenoon, they were dismissed, and not called together again until late in the afternoon. Instead, therefore, of having a couple of hours to dispose of, or to work for their own benefit, the people were in this way kept unsettled for the whole day. Such conduct, of course, led to discontent. The labourers, in their turn, combined to oppose the managers. The work was either not done at all, or slovenly and ill-performed; and, had there not been a watchful and strict master over all, this very omission of regulating by ordinance the hours of labour, would often have led to serious disturbances.

The silly and ridiculous methods resorted to, by a few weak-minded and ignorant managers, to punish, or rather to irritate, their negro labourers, were sometimes the most childish and absurd, but, at the same time, they were calculated to excite feelings of discontent and revenge. It was only the perfect confidence which they already had in the impartial

justice of the Governor, that kept the irritated population from breaking out into acts of serious insubordination. Such, however, was their confidence in the humanity and just dealing of the King's Representative, that in no one instance did they attempt to redress their own wrongs. They carried their complaints to the Governor, where they were listened to and carefully investigated, and equal justice dealt to all parties.

If the negro was wrong, he was made sensible of his error, by explanations which he could fully understand. If the master was in fault, he was punished in such a way as to give complete satisfaction to the complaining party. This was a manner of dealing with the labouring population which a few of the planters either could not or would not understand. But their opposition, though backed by all the invective and personal abuse of their party press, was found to be unavailing. Sir James Carmichael Smyth pursued the even tenor of his straight-forward course, and in the end was victorious.

Long previous to the 1st of August, 1834, he had prepared a well-digested and comprehensive code of regulations and directions, for the guidance of the stipendiary magistrates expected from England. The province was divided into well-defined districts, and, as the magistrates arrived, they were allowed to select their districts from the number that remained unfilled

up. Thus, the first that arrived had his choice of the whole, and the next in succession, of all but that which the first had chosen. If, however, any one got into confusion afterwards, or any unusual irritation or excitement was found to exist in his district, that magistrate was instantly removed, and another, more energetic, or more conciliating, was sent to take his place.

The quantity and the quality of the food which the planter was bound to provide for the daily sustenance of his labourers, had been regulated by ordinance during the government of Sir Benjamin D'Urban, and upon a scale recommended by Doctor M'Turk, a gentleman well acquainted with the subject, both as a planter and physician, and whose humane and good feelings had led him to make it so sufficiently liberal for a slave population, that little alteration,—indeed, I believe, none,—was found necessary, when it was adopted as the ration of the apprenticed labourer.

When the special justices got into error, or appeared remiss in the discharge of their duty, they were privately admonished; and whenever a difficulty or a doubt occurred, they were instructed by private circulars, or authorized by public orders; and whatever required to be regulated by ordinance, was instantly brought before the Court of Policy, and

received their consideration and sanction. Throughout the whole struggle, and the confusion which, notwithstanding every precaution, so great a change was certain of producing, the Governor has continued to possess the most perfect confidence of the coloured population. He acquired that confidence, as I have shown, by dealing openly and honestly with them from the very commencement, and continuing to do so up to the present hour. No complaint, however trivial, has ever been left unattended to;—no grievance, however exaggerated, or statement, however absurd, that has not been listened to, and the complainant made sensible that he was in error, or that he would receive justice; and so promptly was that justice rendered, that at last the most suspicious, and even the most prejudiced, can no longer doubt of the impartial proceedings of their good and humane Governor.

Sir James Smyth's firmness and impartiality were such, that he not only dismissed from the commission of the peace some of the most wealthy and influential men in the colony, but caused their dismissal to be published in the Gazette, and merely because they had taken upon themselves to sanction measures which savoured of injustice, and of that bias and party feeling which was so openly shown in former times, when the interests of the white man came into collision with those of the negro.

No. I.

By his Excellency Major-General Sir James Carmichael Smyth, Bart., Companion of the Most Honourable the Military Order of the Bath, Knight Commander of the Royal Order of Hanover, Knight of the Austrian Imperial Order of Maria Theresa, Knight of the Russian Order of St. Waldimir, Lieutenant-Governor and Commander-in-Chief in and over the Colony of British Guiana, Vice-Admiral and Ordinary of the same, &c., &c., &c.

I was only sworn yesterday into the high and important office which His Majesty has thought proper to entrust into my hands, and you may judge yourselves, by my losing so little time in addressing you after my arrival, of the value I attach to your welfare and happiness.

You are all of you aware, that it is the intention of the King, and of the People of England, that your situations shall be improved. What those improvements may be, are as yet under consideration. You may rely upon my word, that whatever orders concerning you are received by me, they shall forthwith be made known to you; and it will be my duty to carry those orders punctually into execution. I wish to warn you, however, against all impatience, disobedience to your masters, absence from your duties, insubordination, rioting, or illegally assembling. The peace and tranquillity of the country must be maintained; and if you adopt any other conduct than that which becomes peaceable and obedient subjects, you will compel me, however unwillingly, to employ force to uphold the existing laws. Remain quietly and peaceably, therefore, at your several employments, and you may rely with confidence upon my communicating to you whatever changes may be ordered from England for your advantage.

I have been told, that some foolish people among you imagine that they are to be made free altogether; by which

they understand that they are not to be required to perform any more work. Be assured, my friends, that this is a very great mistake, and which can only lead to discontent and disappointment. Every man in this world is required to work in some way or other; and, by the command of the Almighty Father of us all, we must all and each of us acquire our bread with the sweat of our brow. In what manner it may be decided that your situations shall be improved, no person in this colony can, at present, truly tell you. Be assured, however, that moderate labour will be expected and exacted from every one.

I trust that you will seriously consider and reflect on what I have said, and conduct yourselves accordingly. Your old people must see the great changes and improvements which have been effected within a few years in the state of the slaves. Do not you, by impatience and improper conduct, force his Majesty's Government to go backwards instead of forwards, in regulating the connexion and the nature of the duties to be severally performed by your masters and yourselves.

It is my intention, as soon as I can find sufficient leisure, to visit every part of the colony; and it will afford me the greatest pleasure to find you all happily and busily employed at the different estates, and to hear from your own lips, that whatever improvements you, in your several situations, may be desirous to obtain, yet that you are convinced that it is only by your good conduct that you can expect to induce the King, and the People of England, to take further interest in your welfare.

Given under my Hand and Seal, at the King's House, in Georgetown, Demerary, this 27th day of June, 1833, and in the fourth year of His Majesty's reign.

GOD SAVE THE KING.

By his Excellency's command,

T. C. HAMMILL,
Assist. Gov. Sec.

No. II.

In a Proclamation which I addressed to you about three months ago, I told you that whatever orders I received from the King about you I would immediately communicate to you, and that you might depend upon my carrying them punctually into execution. I warned you of the necessity of your continuing to conduct yourselves quietly; of steadily performing your work; and of yielding to your Masters a cheerful and a ready obedience. I am happy to say that you have followed my advice; you have conducted yourselves as well as could have been wished. This country never was happier or quieter. You have shown to the world that you are worthy of the great sacrifice of money the people of England have agreed to give your Masters for your freedom. I thank you for your good conduct. Listen now to the orders which our great and good King has sent to me about you. You will find that every thing that could be thought of to render you happy and industrious has been attended to.

1. You are to continue as you are until the 1st of August next. This delay is necessary to enable the Justices of the Peace (under whose care and superintendence you are to be more particularly placed) to be selected, and to be sent here from England. On the 1st of August next you are to be no longer Slaves, but Apprenticed Labourers. The difference between a Slave and an Apprenticed Labourer is very much in your favour. A Master is, by Law, entitled to require his Slave to work nine hours per day, fifty-four hours per week: an Apprenticed Labourer can only be called upon to work at the rate of seven and a half hours per day, or forty-five hours per week. You gain, consequently, as soon as you are Apprenticed Labourers at once nine hours per week, in which you can work or do anything for yourself. The Master of a Slave can order his Slave to be punished. The Master of an Apprenticed Labourer will have no such power over his

Apprentice; but if he has any fault to find, he will have to complain to a Justice of the Peace, whose duty it will be to listen patiently, to examine witnesses, and to write down carefully all the particulars of the story, as related both by the Master and the Apprenticed Labourer before he gives judgment. These judgments must, moreover, be laid from time to time before me; and if any Justice of the Peace abuses his authority, or acts with partiality, or under the influence of passion, or in any way shows himself unworthy of the high trust committed to his charge, you may depend upon his being immediately removed. You see, therefore, the great advantages you will derive from being Apprenticed Labourers instead of Slaves.

2. However much your situations will be improved, and your happiness and comforts augmented, by being made Apprenticed Labourers instead of Slaves, yet it is further intended that in a few years you shall be perfectly Free, and at liberty to engage yourselves with any Master, or gain your livelihood in any way you may think proper. The King has ordered that you are to be Apprenticed Labourers only from the 1st of next August until the 1st of August of the year 1840, which is but six years of Apprenticeship. On the 1st of August, 1840, you will be as free as any white man.

3. I have said to you that the Master is by Law entitled to fifty-four hours per week of labour from his Slave, and that from the Apprenticed Labourer he will only be entitled to forty-five hours per week. There are, however, many domestic Slaves employed about a house, and many mechanics and artificers, who do not work in the field, but who are required to give up more of their time to their Master. A list of these people will be carefully made; and it is the King's orders that, as they give up a greater portion of their time for the use and advantage of their Master than the Slave who merely works at his lawful hours in the field, so they should receive a recompense, by being entitled to their freedom at an earlier period. A list of all Slaves employed as I have

described will be made out, and on the 1st of August next they are to be called Non-Prædial Apprenticed Labourers; and they can receive their complete freedom on the 1st of August, 1838, that is, two years before their comrades.

4. You are now fully acquainted with the King's orders, and with everything that is to be done with respect to you. I trust you will return to your work quietly, happily, and cheerfully; and that in your prayers you will not fail to return your humble and sincere thanks to Almighty God, in whose hands are the hearts of Kings, for having thus opened the door, and prepared to lead you from the House of Bondage. The wisest and ablest of men never anticipated that such a great and a blessed change could have been effected in your favour but at a remote period, and even then accompanied with bloodshed. Let me urge you for your own sakes, now that you are aware of all the good that is intended for you, to prove yourselves worthy of the blessings of freedom; and in all matters, and upon all occasions, to show yourselves loyal and obedient subjects of that truly paternal Government to which you owe so much.

Given under my Hand and Seal of office, at the King's House in Georgetown, Demerary, this 2d day of October, 1833, and in the fourth year of His Majesty's reign.

GOD SAVE THE KING.

By his Excellency's command,

T. C. HAMMILL,
Act. Gov. Sec.

CHAPTER X.

CIVIL CONSTITUTION, COURTS OF JUSTICE, &c.

UNION OF THE COLONIES DURING THE PRESENT REIGN—SIR B. D'URBAN, FIRST GOVERNOR-GENERAL—DUTCH LAWS AND DUTCH FORMS STILL PREVAIL—CIVIL GOVERNMENT—COURT OF POLICY—HOW FORMED—COMBINED COURT—HIGH COURTS OF CIVIL AND CRIMINAL JUSTICE—INFERIOR COURTS.

PREVIOUS to 1832, Berbice continued to be a separate and distinct colony from the previously united colonies of Demerara and Essequibo. It had its own chief magistrate (a Lieutenant-Governor), its Civil and Criminal Courts, its own peculiar laws and customs, and its own current money.

His present Majesty,—who understands our colonial affairs better than most men,—has a perfect and personal knowledge of the whole of our West India possessions, and has given much consideration to the measures upon which, in a great degree, the prosperity of these possessions must ever depend,—was pleased, soon after his accession, to direct the consolidation of the whole provinces, and to order that in all acts and deeds they should in future be known and recognised as BRITISH GUIANA. Major-General Sir Benjamin

D'Urban, a most able and excellent man, and long known as a brave and gallant soldier, was the first Governor-General of these united provinces.

I am anxious to put on record this fact, because the future history of these colonies will become a matter of far greater importance than their past has been; and the men who have contributed to lay the foundation of their boundless prosperity upon so sure a basis, will have their memories honoured and revered, as are the Washingtons and Franklins of a more northern division of the same continent.

The Dutch laws and customs, as they existed in 1803, were maintained in all their integrity till three or four years ago. They were more curious as a specimen of the folly, absurdity, and corruption, of the Continental lawyers of the middle ages, than beneficial to the colonists. Some of the forms of proceeding in the high courts of Civil and Criminal Justice had been ruled so early as 1570, by the then States of Holland and West Friesland. Measures, however, have since been adopted, and others are in progress, for establishing the full exercise of the British laws, and British practice; and when these are completed, little more will be required to consolidate the union, or increase the prosperity, of these colonies.

The idea of maintaining, as Dutch law, in this remote colony, that which is no longer acknowledged

as the law in Holland, is too absurd to merit a moment's consideration; and yet there are men in Demerara who think that any change, even in these matters, ought to be deprecated.

At the present moment, the civil government of the province is vested in the Governor and Court of Policy, according to forms established by the States-General of Holland, long previous to our acquiring the possession; and these have full power and authority to enact, ordain, and establish, such laws and ordinances as they may deem proper for the preservation of the peace and good government of the whole community. This supreme court, or parliament, of the province, as at present constituted, consists of the Governor, the Chief-Justice, the High-sheriff, the Attorney-general, and the Sheriff of Essequibo, *ex officiis*, and five gentlemen elected, who are denominated the colonial members. It would appear the Dutch were anxious to have it believed that there was some mystery or confusion, even in a matter so very simple as the election of five men to sit in this Court of Policy. It was declared by the original statute, that every proprietor of twenty-five slaves should have a vote in the election,—not of the colonial members, mark me,—but of seven gentlemen, who, in the Dutch language, were called Keisers—now styled electors, with whom the choice of the colonial

representatives remained,—that is, they could nominate two candidates, from which the Court must select one as the sitting member.

This is a matter requiring the attention of the Home Government, for, since the 1st of August, 1834, and according to my reading of the law, not one election of Keiser, or colonial representative, can be considered valid. As slavery then ceased to exist, and as the only qualification to vote was, the person declaring upon oath that he was in possession of *twenty-five slaves*, some other qualification of property must be established; and when that qualification is fixed, why have recourse to a complication of machinery, when a more simple process may be adopted? Instead of the qualified voters choosing seven electors, who in their turn are to select two candidates to be returned to the Court of Pólicy, who again are to elect one of these to fill the vacancy, they ought at once to return the members of the Court.

In the progress of improvement, and of better legislation, there has lately been added to the Court of Policy, a court or college, consisting of six individuals, called FINANCIAL *Representatives*, and who, in the discussion of all matters of taxation, sit with, and seem to have a concurrent jurisdiction with the Supreme Court: this is called the Combined Court. These financial representatives were chosen also by

the proprietors of twenty-five slaves, the only qualification of property. Many reforms, however, are still absolutely necessary, and must soon be effected; for at present it is difficult to understand what is the law, and what is not.

In some matters the proclamation of the Governor has the force of law:—thus, the Governor had the power of ordering the 1st of August, 1834, to be kept as a day of thanksgiving throughout the whole extent of the colony, and could command the ministers of religion to perform Divine service in all their churches and chapels; but it was only with the advice and consent of the Court of Policy that he could pass an Act to release the labourers from toil on that day, or that they could be permitted to attend their churches.

Independent of his having a casting vote in the decision of all matters under discussion in the Court of Policy, the Governor has an absolute veto on all laws and ordinances that may be passed by a majority of the members. No ordinance can have the effect of law until it has his approval. The Court of Policy decide on all financial as well as fiscal regulations; but when they have examined the charges, and decided on the sum total to be raised by taxation, the accounts are handed over to the financial representatives, who are to fix upon the articles to be taxed, and the

amount to be raised on each article, whether of export or import. When their regulations are approved of and sanctioned, by what is called the Combined Court, they are passed into a law.

The financial representatives are chosen for two years: the members of the college of electors are chosen for life; but the colonial members of the Court of Policy go out by rotation, and sit only for three years. Though one or more must vacate his seat every year, they may be re-elected immediately. They are therefore, to all intents and purposes, fixtures, if they have interest enough to carry their elections, and would wish to be considered as the actual and legitimate rulers of the state.

A British governor, with an enlightened mind, and a good heart, who does not confine his views to selfish or partial measures, but, while endeavouring to carry into effect the orders of the King, is desirous, at the same time, of being really useful to the colony over which he presides,—who takes a larger or more comprehensive view of the prospective interests of the whole community than the narrow-minded prejudices of many of the colonists will allow them to do,—and who is anxious to institute measures and ordinances, and to procure laws, likely to promote such views, has, almost always, (I am sorry to say,) been opposed, and, in as far as they could carry matters, thwarted and

annoyed, by some of the colonial members of this Court of Policy. Under their local influence, the community have too frequently been encouraged to condemn all government measures as imbecile, and most ruinous to the colony. It requires, therefore, no ordinary firmness of mind, with integrity of purpose, to bear up against such attacks, carried on as they are in so limited a population, and with all the rancour of political enmity; and (where personal vanity has been touched) with all the bitterness of wounded pride and personal hatred.

In consulting the history of the colony, ever since it became a British possession, I find that the moment any governor showed a determination to think and act for himself, the contest against him became personal, rather than political, and the cry was, "He must be got rid of." There was therefore nothing new or extraordinary in the conduct of the present colonial representatives towards their able and most excellent Governor, or in their opposition to his humane regulations, except, perhaps, the perseverance and malignity of their personal attacks.

The Supreme Court of Civil Justice in British Guiana is composed of a chief-justice, formerly called the President, and two puisne judges,—a secretary of the chief-justice, a registrar, and a sworn accountant. All causes for civil actions, and for debt, are heard, in

the first instance, before one of the judges, in what is called the ROLLS' COURT, and are decided upon by him in a report to the whole court. That court either confirms or rejects this judge's decision, or rather, I should say, his report; for the proceedings in this Rolls' Court partake more of the nature of what, in Scotch law, is called a precognition, or a preparation for the cause to be heard and decided upon by the whole court, than they do of any actual interlocator, or legal decision. From the decision of the Supreme Court an appeal lies to the King in Council, provided the cause of action shall exceed the value of five hundred pounds sterling.

All the laws of Holland, particularly all the laws, statutes, and resolutions (says the constitution), of the States-General, and especially all the ordinances of their High Mightinesses, or the Committee of TEN, with the approbation of the States-General, are to be followed by the judges of the court in giving judgment. This order is still allowed to remain upon the statute-books. In my opinion, the laws of England, without any further delay, ought to be declared the law of the colony. If this is necessary in civil matters, it is much more so as regards the constitution and practice of the supreme court of Criminal Justice.

This court is composed of the three judges of the Civil Court, and of three gentlemen, drawn by

ballot from the box, in which the names of all the gentlemen of the colony who may have been summoned previous to the opening of the session to serve as Assessors, are deposited by the clerk of the court. These Assessors, or assistant judges, sit on the bench, and the six decide, by the majority of their votes, on the guilt or innocence of the party accused.

All the gentlemen of the colony qualified to serve as *Assessors*, are registered, as in England in the case of jurymen ; and, previous to the commencement of each session of the Supreme Criminal Court, a certain number are summoned to be in attendance, under heavy penalties, and nothing but certified sickness can be admitted as an excuse. At the opening of the court the list is called over, and those who are in attendance have their names written each on a separate slip of paper, which, as I have said, are thrown into a ballot-box. When the first trial is ready to commence, three of these slips are drawn from the box by the clerk of the court, who reads the names aloud, and if the prisoner has no challenge against any of the three gentlemen first drawn, they are immediately sworn, and take their seats with the judges, as assessors for that trial, and for that trial only. Every accused person has the right of peremptory challenge to a certain extent, and cannot be called upon to assign

any reason: afterwards, he may challenge for reasons to be assigned.

The Order in Council by which this court was instituted after the present form, states expressly, "that the assessors shall be liable to be challenged on such and the like grounds as may be alleged as lawful grounds of challenge against any petit juror impanelled for the trial of any indictment in England, and that the validity of every such challenge shall be decided by the judges presiding at any such trial, without the concurrence or interference of such assessors, or any of them."

When sentence is pronounced, the opinion of each individual upon the bench, whether judge or assessor, must be given in open court; and his vote of guilty or not guilty publicly recorded. When the court is equally divided, the casting vote rests with the chief-justice. In times of public excitement, and in cases where matters of great importance are involved and mixed up with political feelings, it is perfectly impossible for any accused party (if obnoxious to the ruling faction of the moment,) to get a fair or impartial trial, or have a just sentence. Men depending upon the good opinion and support of their fellow-citizens, are not always of that firmness of nerve which will enable them to say, "Fiat justitia ruat cœlum!" They will find many excuses for coinciding with what they know

to be the opinion of the majority; if, indeed, they did not, they would find the colony no longer a place for them to reside in. It might happen, also, that men in very dependant situations, such as merchants' clerks, and others of that class, would be called upon to award the punishment of death to persons of the highest respectability in the colony, and against whom the employers and patrons of these humble classes might have publicly expressed their enmity and hatred. If ever radical reform was necessary in any public institution, it is in this court; and nothing but the establishment of trial by jury, as in England, can cure the rottenness and corruption of its whole constitution.

There are many men of great talents, and sound learning, now practising at the bar of the Supreme Courts in British Guiana; but when we consider the still narrow bounds of society, and that bitterness of party feeling, which brings every man and woman of that society within its vortex, we cannot be surprised that there is seldom any scope given for a display of forensic eloquence, or that any cases occur requiring a very extended developement of their legal or general knowledge. Most of the cases that do occur are taken up as party squabbles, rather than causes of public importance; and yet there are men at the Demerara bar who would do honour to any bar in Europe, and it would perhaps have been well for the colony, if the

bench had been always as distinguished for talent and discretion as the bar.

Inferior criminal courts are held by the high-sheriff of the province at Georgetown, the capital, and in Essequibo and Berbice by the sheriffs of these districts. These courts consist of the sheriffs, as chairmen, and a certain number of magistrates, and they can decide on all cases of petty larceny and misdemeanors; but in many instances the sheriff, as in Scotland, is the sole judge.

In this, as in all the other colonies, certain tribunals have been erected by the Act which dissolved slavery, and over which special magistrates were appointed to preside. It is entirely owing to the strict and impartial manner in which the law has been administered in British Guiana by these magistrates, under the ever-watchful eye of the Governor, that the great change has been made to pass over them as a matter of little or no importance, and only felt in the greater happiness and industry which it has produced.

CHAPTER XI.

RELIGION, AND THE CHURCH ESTABLISHMENT.

COLONY REMAINED LONG WITHOUT A CHURCH—ST. GEORGE'S FIRST BUILT—ST. ANDREW'S NEXT—COLONY DIVIDED INTO PARISHES—INADEQUACY OF THE PRESENT ESTABLISHMENT—RESPECTABILITY AND USEFULNESS OF THE MISSIONARIES—EXERTIONS OF THE PLANTERS—GREAT BRITAIN URGENTLY CALLED UPON TO ASSIST IN THE GOOD CAUSE.

NOTWITHSTANDING the enormous wealth acquired by thousands, and the uninterrupted prosperity of the colonies now united as British Guiana, for a long series of years, they afford a striking proof of the utter impossibility of our being able to serve God and Mammon. It was not till the year of our redemption 1810, that a regular temple was built, in which the people could meet to worship the living God, or that any provision was made for the performance of Divine service at Georgetown. Even then, the building that was consecrated and set apart for religious worship, according to the ritual of the Church of England, had more the resemblance of a barn than a church. It was, however, named St. George's church.

I have already stated, that a large proportion of

the white inhabitants of British Guiana are natives, or descendants of natives, of North Britain; yet it was not till 1819, that they bethought themselves of building a Kirk, wherein they might praise the Lord after the manner of their pious forefathers. When, however, this was resolved upon, they raised a very splendid and commodious building.

It was not till the first day of May, 1826, that an ordinance was passed for the encouragement of religious instruction, and the preservation of the pure and holy faith of the Gospel in this land; for so I consider that ordinance, which enacts, that "Whereas his Excellency the Lieutenant-Governor, and Court of Policy, have deemed it expedient to divide the united colony of Demerara and Essequibo into ten separate and distinct parishes, they are henceforward to be so divided and named accordingly." There are now twelve parishes; I shall, therefore, endeavour to give the reader some account of each.

No. 1, St. George's parish. This is the mother-church of the colony; and comprehends within its bounds the whole of Georgetown, and several large estates in its immediate neighbourhood. It contains a population of nearly 14,000 souls; and there is only one clergyman, and scarcely accommodation for 500 persons in the church.

No. 2, called St. Andrew's parish, is supposed to

comprehend all those of the Presbyterian faith who reside within the bounds of St. George's parish. In fact, these two parishes are confined to the same district, and are bounded by the same limits. St. Andrew's church will accommodate 1200 persons. There is only one officiating minister; and therefore, all the provision that has as yet been made by the Government for the religious and moral instruction of from 14,000 to 15,000 souls, is two churches, with accommodation for 1700 persons; and two ministers, who have other important and onerous duties to attend o. Great, therefore, would have been the desolation of this fruitful land, had not good men, of various denominations, stepped in, and taken upon themselves in some measure the instruction of the Africans.

Men, not only of great piety, but of sound learning, have latterly been sent out to this colony as missionaries; and the benefits which they have already conferred upon the whole community are great indeed, and will prove lasting.

Lord Stanley carried the great measure through Parliament in a most able and statesmanlike manner, and many wished that he might continue to watch over the arrangements it was supposed he had had so large a share in preparing. But party politics are more powerful than ever were the waters of Lethe. He no sooner left the cabinet, than he apparently lost

sight of all that concerned the future interests of his coloured brethren,—interests, both civil and religious, which had previously occupied so much of his attention. Fortunately for the happiness of the colonies, Mr. Spring Rice, endowed with equal energy, and certainly not less talent, succeeded his lordship; and the good sense, and sound judgment, with which he explained doubts, and overcame difficulties, made the first movements of the machine more safe and steady than they would otherwise have been. Lord Aberdeen, too, brought his amiable and powerful mind to bear upon the subject with great effect. He confirmed all, and improved and extended many, of Mr. Spring Rice's arrangements; and it is most gratifying to have to state, that Lord Glenelg, who succeeded Lord Aberdeen, has carried on, in the same spirit of justice and humanity, the system established by his able predecessors; and in all his decisions and directions on colonial arrangements, has shown a most intimate knowledge of human nature, and acquaintance with the circumstances which generally influence the conduct and characters of men. He has been indefatigable in promoting the religious and moral instruction of the people throughout all the colonies, as well as in this, and has afforded every facility for the settlement of preachers and teachers among the labouring population.

The emancipation, or liberty, which was granted to

the negroes, by the Act of the British Legislature, was a blessing which their limited understandings could neither appreciate nor enjoy. It is, therefore, our first duty, as Christian men, to have them properly and carefully instructed in the precepts of that Gospel which teaches them their duty to God as well as to man, and which alone can free their souls from the slavery of sin and death. Slavery, as we know, is incompatible with the lights of reason and religion; and had the sum which was paid for the fast-decaying fetters that lately bound the body of the African negro in our western colonies, been given to remove the dark cloud of ignorance from his soul, by the establishment of ministers and teachers amongst them, we might, without much anxiety, have left the rusty fragments to their natural decay. I am quite satisfied, however, that things are better as they are; for while the slave was allowed to exist, it was the duty of the master, by every means in his power, to prevent his being instructed; but now it is equally his duty, that he should be well and properly instructed. It is highly creditable to the Planters of British Guiana, and I record the fact with more pleasure than I can express, that almost every respectable proprietor has endowed and established a school upon his own property, and shown the utmost liberality and zeal in furthering the good work of the missionaries, and in encouraging

the spread of the Gospel. But no wise government will ever leave the education of a whole people to the casual charity of missionary societies, or even to the enlightened and generous feelings of the wealthy members of the community. No state, however well established, can long prosper, where the rulers are so ignorant of, or indifferent to, that solid foundation, upon which alone society can be firmly established.

The legislators of British Guiana have shown great wisdom in the arrangements they have made with regard to the Church Establishment of the colony. They have placed the Episcopal and Presbyterian forms of church government upon a perfect equality; and have shown by their conduct, that they considered the state bound, also, to provide for the spiritual instruction of their Roman Catholic brethren.

In addition to St.George's and St.Andrew's churches, there has been also built a Roman Catholic chapel in Georgetown; whose minister is placed upon the same footing, as to salary, as the ministers of the Protestant establishments. He has the same allowance from the Court of Policy.

No. 3, the parish of St. Paul, which forms the suburbs of the capital, stretches along the east coast to a distance of twenty-five miles. It has a population of more than 8000 apprenticed labourers, with 1000 whites and free persons of colour. Yet the spiritual

wants of this extensive district and large population are supplied by one church and one clergyman, as nothing further has been provided by the state. Private charity has, however, in some measure, made up for the deficiency.

No. 4, is called St. Mary's parish. It is the most easterly of the colony of Demerary; and extends from the village of "*Mahaica*," to the "*Abary Creek*," including all the plantations on the Mahaica and Mahaicony rivers. In this parish are comprehended 120 estates, with a population of 6000 or 7000 apprenticed labourers, and about 500 whites and free people of colour. The proprietors of this district being for the most part Presbyterians, it was declared by the ordinance, that the incumbent should always be a member of the Church of Scotland.

No. 5, is the parish of St. Matthew. This parish adjoins the capital, on the west side; and comprehends all the estates on the east bank of the Demerara river; extending as far as the cultivation reaches, and including the settlements on the great canal marked No. 3 in the colonial plans. There are between 5000 and 6000 apprenticed labourers in this parish, and between 1200 and 1500 Europeans and free persons of colour. There is only one parish church, and one established clergyman.

No. 6, is the parish of St. Mark. This parish

comprehends all the estates on the western branch of the Demerary river, from Plantation Windenburg, to the farthest extent of cultivation, with the settlements on the canals marked 1 and 2 on the plan. *There are upwards of ninety separate estates*, with 4000 apprenticed labourers, and nearly 300 white and coloured persons. The great extent of this district would require six parish churches, instead of one. The incumbent of this parish must always be a member of the Scotch Church.

No. 7, is named the parish of St. Swithin; and extends from the west bank of the Demerary river, along the sea coast, towards the Essequibo. It is not of so great an extent of surface as the last, but the negro population exceeds 4000, and the white and coloured inhabitants are above 500. The established clergyman is of the Church of England.

No. 8, is the parish of St. Luke; and extends along the sea coast, from the boundary of St. Swithin, to the eastern bank of the Essequibo. It comprehends forty separate estates; with a population of 5000 apprenticed labourers, and about 300 Europeans and free persons of colour. This is a Scotch parish.

No. 9, parish of St. Peter. This parish comprehends the two islands of Leguan and Hog Island, near the mouth of the Essequibo river; is one of the most fertile districts in the colony; divided into thirty

separate estates, and containing a population of nearly 6000 apprenticed labourers, and perhaps 300 Europeans and free persons of colour. This parish belongs to the Church of England.

No. 10, parish of St. James. This is a parish of the Church of Scotland. It comprehends the islands of Wakenam and Troolie, on the Essequibo river; is divided into twenty-nine separate estates, and has a population of about 4000 apprenticed labourers, and perhaps 200 whites and free people of colour.

No. 11, parish of St. John. This parish extends from the Supenam creek to Capouey, on the west bank of the Essequibo river, and includes Tiger Island. There are within its boundaries thirty eight separate plantations, with a population of about 3500 apprenticed labourers, and perhaps 100 whites and free persons of colour.

No. 12, parish of the Trinity. This parish extends from Capouey creek to the Pomeroon river; and includes all the settlements on the west of the Essequibo. It comprises thirty-five cultivated estates, and a population of nearly 8000 apprenticed labourers, with 300 or 400 whites and free people of colour.

When it was only considered necessary to provide for the spiritual wants of the white inhabitants of a colony, and the negroes were thought too degraded a race to be admitted to a knowledge of the Gospel, as

was actually avowed, as I have stated, when Barbados was first settled, it might be all very well to throw such large districts of country into a parish. But the wise men of British Guiana can never, I am sure, reconcile it to their consciences, or think that, in 1826, they had provided for the religious instruction of 100,000 souls, by building twelve churches, and endowing twelve clergymen; yet, in this respect, they have done more than any other colony in the West Indies. They complain, and with justice, of the bad faith of the mother-country in this respect.

There is in existence a despatch from the late Lord Bathurst, and a vote of Parliament stands also recorded, "that whatever sum might be raised by the colony for the building of churches, an equal sum would be granted by the House of Commons." All the churches that have hitherto been built, have been at the sole charge of the colony; for as yet, not one sixpence has the Parliament granted. Something, however, must be done; and if a sum, equal to what has already been expended by the colony,—as the Government, upon the promise of Lord Bathurst, is bound to give,—is remitted to British Guiana, there will be very little difficulty in raising a sum in addition, sufficient to build all the churches, numerous as they may appear, which I shall venture to recommend. And besides, when the parishes

are restricted to a reasonable size, the inhabitants will be found both able and willing to contribute to whatever allowance may be granted from the public funds, a sum sufficient to make the annual stipend of their ministers respectable, and such as the expenses of the colony demand.

The free labourer, when he finds he can have accommodation in his parish church, and meets with that respect which good conduct and rational piety will always merit, will cease to contribute to the support of the missionaries, and will gladly give his mite to support his regularly-constituted minister. Were a large body of educated and pious men introduced into the colony, as ministers of the Gospel, and were established schoolmasters fixed in every parish, a powerful and sufficient check would be formed against either illegal or tyrannical proceedings on the part of the planters towards their labourers, or of disrespect on the part of the labourers towards their masters. A tone would be given to the manners and feelings of the community at large which they never yet have had, or, indeed, can have, without that civilization which religion and piety bring with them. These ministers of the Gospel would be a sure pledge that the labourer did his duty to his employer; for where they found only eye-service towards the master, they might be certain there was little regard for their duty

to God. I, therefore, implore all in authority, and all who have the power of remonstrating against procrastination, or of representing the true state of the case, to be up and doing, for now is the appointed time; now are we called upon to regulate, and that effectually, matters which so essentially concern the temporal, not less than the eternal, welfare of all that dwell in the British colonies in the West Indies.

There is only one church for the whole district of Berbice, but a second is now in progress, and I hope will soon be finished. A very elegant and commodious church has just been built in Georgetown, by private subscription, and there are several chapels belonging to the Church of England, that have been built, and are supported, by private contributions; but I must again say, that unless the missionary societies had lent their powerful aid, this colony would, indeed, have been a barren land. The good and excellent Bishop of Barbados has not neglected this corner of his vineyard. His zealous and unwearied exertions and representations having succeeded in getting a liberal grant, from the present government, for the support of schools in the colonies, British Guiana has received its due proportion of that grant.

The clergymen of the Church of England are, for the most part, men of sound learning and true piety; zealous and faithful ministers of the Gospel.

The example and the exhortations of the good Bishop have produced a wonderful change in the characters and conduct of the regular clergy; not only in Demerara, but, as I have already stated, throughout the whole of his diocese. It is deeply to be regretted, that the General Assembly of the Church of Scotland has not given or procured for those members of her body that are scattered throughout the Caribbean archipelago, some regular form or system of government, analagous to that of the national establishment; a government which would enable that body to scrutinise the characters and capabilities of those who may acquire livings in the West Indies. Even in British Guiana, where they have been placed upon a perfect equality with the Church of England, there is no regularly-constituted ecclesiastical court, to take cognisance of any irregularity or misbehaviour on the part of any of the ministers. They are altogether independent of each other, and subject to no church-censure whatever; and, notwithstanding the great respectability and superior attainments of many of the Presbyterian clergymen, they are, as a body, inferior in some respects to those of the Church of England; and I would say, less zealous, until of late, in the discharge of their spiritual duties. But it is to the strong mind, the good heart, and the sound religious principles of Sir James Carmichael Smyth that British Guiana owes all that she

now enjoys of quiet, prosperity, happiness, and of religious improvement; and with respect to all of these, few countries are now so blessed.

By giving his countenance and support to the ministers and teachers of religion, by punishing the evil-doer and praising them that did well, by a judicious distribution of prizes, medals, and rewards, amongst the children in the schools, and by large advances of money from his own pocket for the support of these schools and of their teachers, he has created a spirit of emulation, which already has produced the most beneficial effects, and must eventually secure the permanent prosperity and happiness of all classes of the community. Already the marriage state has been made honourable, and desired by all. That promiscuous intercourse of the sexes, and the debasing system of concubinage, which were so contrary to the laws of God and man, have almost entirely disappeared; and he who now countenances either, is scarcely tolerated in respectable society.

Nothing can be more satisfactory than the progress which the negro population have made in religious and moral improvement, and if their wants were fully supplied, they would soon become an enlightened and a moral people. But in order to supply these wants, the capital, Georgetown, ought to be divided into eight parishes, and have at least a dozen established schools.

St. Paul's would form five or six parishes, St. Mary's affords scope for four additional churches, St. Matthew's for five, and St. Mark's for not less than six. Three additional churches are required for the district of St. Swithin, and not less than five for the parish of St. Luke; St. Peter demands four, St. James three, and St. John four, while the parish or district of Trinity would require six churches and twelve schools to supply the necessary wants of the population. If, as I have already stated, Great Britain will only build the churches and school-houses, the colonists will find little difficulty in raising the money for the support of the clergy and schoolmasters. This, before I have finished, will be a long chapter; but the subject-matter is of the most vital importance, not only to British Guiana, but to all the British colonies.

The total population of British Guiana does not as yet exceed 100,000 souls, and of that number scarcely 4,000 are white; and not more than one-third of these are females. In the coloured and free black population, amounting to nearly 8,000, the females are as two-thirds and the males only one-third; while, in the class of apprenticed labourers, the males exceed the females by about one-tenth.

One of the first measures recommended by the present Governor was to abrogate the old law of marriage, which made it almost impossible for either slave or

freedman to enter into the bonds of wedlock, unless he had acquired an independence. The fees were calculated at so high a rate that it was quite impossible for a slave to think of marrying. I find that, so early as the 16th of May, 1834, directions were given to the Attorney-general to prepare a bill or ordinance for regulating the law of marriage, and reducing the fees to a mere trifle. This wise and truly Christian measure was passed by the Court of Policy, and became the law long previous to the 1st of August of that year, when slavery ceased. With the amendments which the first ordinance has since received, it is now calculated to produce both virtuous and honourable feelings amongst the labouring population ;—to lead them to become regular and industrious citizens, and faithful and attached husbands and wives, and affectionate parents.

In corroboration of what I have said with regard to the progress already made in the religious and moral improvement of the labouring population in this important colony, I add here a copy of the ordinance for the more strict and religious observance of the Sabbath-day, and of official returns for the quarters ending 30th June, and 30th September, 1836.

AN ORDINANCE

TO ENSURE A BETTER OBSERVANCE OF THE SABBATH-DAY, AND OTHERWISE TO PROMOTE HABITS OF MORALITY AND DECENCY.

To all to whom these Presents do, may, or shall come, Greeting; be it known :—

WHEREAS it is necessary that provision should be made by law for the more strict and religious observance of the Sabbath-day than has hitherto prevailed in the Province of British Guiana :

1. Be it therefore enacted, by His Excellency the Lieutenant-Governor, Major-General SIR JAMES CARMICHAEL SMYTH, Baronet, by and with the advice and consent of the Court of Policy of British Guiana, that, from and after the publication of this Ordinance, it shall not be lawful for any person or persons to hire, engage, or employ in his, her, or their service any mechanic, labourer, or other working person to perform any work or labour in his, her, or their service, between the hours of twelve o'clock upon the Saturday night and twelve o'clock at night upon the following Sunday; and any person or persons committing a breach or violation of this regulation shall, for every such person so hired or employed, become liable to a penalty of not more than five pounds, or seventy guilders, and not less than five shillings, or three guilders ten stivers: Provided nevertheless, that nothing herein contained shall extend, or be construed to extend, to any domestic work or labour which may be performed on any Sunday by any person or persons employed as a domestic or menial servant.

2. And be it further enacted, that any mechanic or tradesman publicly working in Georgetown, or New Amsterdam, on the Sabbath-day, whether upon his own account or for any other person or persons, shall become liable to a penalty of not

more than one pound sterling, or fourteen guilders, nor less than five shillings sterling, or three guilders ten stivers, to be recovered in the manner hereinafter prescribed.

3. And be it, and it is hereby enacted, that nothing herein contained shall prevent the employment of any labourer or other person upon the Sabbath-day in any work of necessity, to prevent or correct, or remedy the effects of any fire, flood, hurricane, or tempest, or other such like casualty; and provided, that nothing herein contained shall extend, or be construed to extend, to prevent the picking of cotton or coffee on Sunday, in cases where the crop is likely to be lost if not immediately secured, nor the turning thereof on the droghery to prevent the same being heated or spoiled, nor to persons employed in boats, punts, or other colony-craft of any description, nor to the shipping of any produce, nor to persons employed in tending cattle or other live-stock, nor to watchmen.

4. And be it enacted, that nothing herein contained shall extend, or be construed to extend, to interfere with an Act passed by the Lieutenant-Governor and Court of Policy of Demerary and Essequibo, on the 20th of August, 1828, for the regulation of the Ferry of the River Demerary, and the Steam-boat thereof, or with the regulations in force for the other Ferries throughout British Guiana.

5. And be it further enacted, that it shall not be lawful to open upon the Sabbath-day, in any part of British Guiana, any store, shop, or warehouse, for the sale of any goods, commodities, or merchandise; nor shall it be lawful for any person or persons to expose for sale or to barter upon the Sabbath-day any goods of any description in any part of the colony; and any person or persons committing a breach or violation of this regulation shall become liable, for every such breach, to a penalty of not more than five pounds sterling, or seventy guilders, nor less than two pounds sterling, or twenty-eight guilders: Provided nevertheless, that nothing herein contained shall extend, or be construed to extend, to prevent the

sale of medicines in any store or shop, or of provisions for consumption in any inns, taverns, or victualling-houses on Sunday, nor to prevent the sale of bread, meat, fish, fruit, or vegetables, at any time before or after the hours set apart for the celebration of Divine service.

6. And be it further enacted, that wherever there is, at the date of publication of this Ordinance, or shall be hereafter, in British Guiana, any market, established by competent authority, there shall be, at half-past nine o'clock on the morning of each and every Sunday, a bell rung by the clerk of the market, or by some person to be for that special duty appointed by the sheriff of the respective districts, which ringing of the bell shall be considered as a warning, calling upon all persons assembled at any such market to disperse; and any person who shall continue present at such market after such warning as aforesaid, or shall return thither for the purpose of traffic of any kind or description, shall, upon conviction of any such offence, become liable to a penalty of not more than two pounds, or twenty-eight guilders, nor less than five shillings sterling, or three guilders ten stivers.

7. And be it further enacted, that if any person or persons shall publicly curse or swear, or make use of violent, indecent, or obscene language, or shall publicly expose their person in any indecent manner, or use any indecent gestures, such person shall, upon conviction, be liable to a penalty not exceeding three pounds sterling, or forty-two guilders, and not less than five shillings, or three guilders ten stivers.

8. And be it further enacted, that henceforth it shall not be lawful for any male or female, other than infants under the age of five years, to appear in public without being sufficiently and decently clothed; and no male or female above the age of five years shall be considered to be sufficiently and decently clothed, unless the female be habited at the least in a shift and petticoat, and the male in a shirt and pair of trowsers, or other clothing, to the satisfaction of the sheriff; and any person or persons offending against this enactment shall, upon convic-

tion thereof, be liable to a penalty of not more than one pound ten shillings sterling, or twenty-one guilders, nor less than five shillings, or three guilders ten stivers; which penalty shall be recoverable and enforced against the parent or parents of all persons above five and under sixteen years of age committing a violation of this Ordinance, unless such parent or parents make it appear to the satisfaction of the sheriff before whom the offence is tried, that the offender or offenders are of themselves of sufficient ability to provide the necessary wearing apparel hereinbefore required and described: Provided that, wherever the person or persons required to be clothed in the manner aforesaid shall be an apprenticed labourer or labourers, or other person or persons entitled by law to be clothed by his, her, or their employer or employers, such penalty shall not be enforced against any such apprenticed labourer or labourers, or other person or persons entitled to be clthed as aforesaid, if he, she, or they shall make it appear to the satistion of the sheriff before whom the offender shall be tried, that the wearing apparel to which he, she, or they are by law entitled, has not been supplied.

9. And be it further enacted, that the regulations relative to clothing in this Ordinance contained, shall not extend, or be construed to extend, to any labourer or labourers upon any estates working in the trenches, while actually so employed, nor whilst going to and returning from the field, nor whilst engaged in labour in the field.

10. And be it further enacted, that any person or persons committing a breach or violation of any of the regulations contained in this Ordinance, shall and may be prosecuted before the sheriffs of the respective districts in British Guiana; and in case of conviction of any offender before any such sheriff, one-half of the penalty incurred by any such offender shall, if recovered, be disposed of at the discretion of the sheriff in such proportion, between the colonial chest and the informer, as the high-sheriff shall consider expedient; and in case of non-payment, it shall and may be lawful for the sheriffs

aforesaid to adjudge any such convicted offender to imprisonment, with or without hard labour, for any number of days not exceeding six days, unless the penalty be sooner paid.

11. And be it enacted, that all prosecutions under this Ordinance shall be commenced within fourteen days after the offence committed, and not otherwise.

12. And be it enacted, that this Ordinance shall be in force from and after the 1st day of September dext.

And that no ignorance shall be pretended of this our Ordinance, these Presents shall be printed and published in the customary manner.

Thus done and enacted at our Ordinary Assembly, held at the Guiana Public Buildings, Georgetown, Demerary, this Fourth Day of August, 1836, and published on the Ninth following.

(Signed) J. CARMICHAEL SMYTH.

By command of the Court,

H. E. F. YOUNG,
Secretary.

GOVERNMENT NOTICE.

MAJOR-GENERAL SIR JAMES CARMICHAEL SMYTH has directed that the following Returns for the Quarter ending on the 30th June last, shall be published in the *Royal Gazette*, for general information; and his Excellency has been pleased further to order, that similar Returns shall, in future, be communicated to the public as soon after the expiration of each Quarter as they can be prepared.

The important and interesting progress of religion and of morality; the industry and good conduct of all classes of this community; the increased value and amount of the exports and imports; are all so clearly shown by the documents themselves, that the Lieutenant-Governor has given

orders that they should be published without any further comment than the expression of the very great pleasure His Excellency derives at being able to communicate such gratifying intelligence to all those interested in the prosperity of British Guiana.

By command of His Excellency,

H. E. F. YOUNG,

Guiana Public Buildings, *Gov. Sec.*
8th August, 1836.

(A.)

RETURN of MARRIAGES in British Guiana, during the June Quarter of the Year 1836.

1. Marriages by Special Licence . .	28
2. Ditto by Publication of Banns . .	276
Total - - -	304

(B.)

RETURN of COMMUNICANTS at the Holy Sacrament in British Guiana, during the June Quarter of the Year 1836.

1. Church of England	1508
2. Church of Scotland	489
3. Reformed Church of Holland . .	38
4. Lutheran Church	
5. Roman Catholic Church	
6. Wesleyan Missionaries	1303
7. London Missionary Society . . .	1172
Total - - - -	4510

(C.)

RETURN of Young People who have attended SCHOOLS in British Guiana during the June Quarter of the Year 1836.

1. Daily Schools	1046
2. Afternoon ditto	593
3. Sunday ditto	3190
4. Infant ditto	430
Total - - - - -	5259

N.B. This Return is not so complete as could be wished, owing to the Returns from several Schools not having been received.

(D.)

RETURN of CONVICTIONS before the Supreme Courts of Criminal Justice in British Guiana, in the June Quarter of the Year 1836.

1. In the District of Demerary and Essequebo .	8
2. In the District of Berbice . . .	2
Total - - - -	10

(E.)

RETURN of CONVICTIONS before the Inferior Courts of Criminal Justice of British Guiana, in the June Quarter of the Year 1836.

	Males.	Females.
1. Demerary	52	11
2. Essequebo	18	1
3. Berbice	13	0
Total - -	83	12

MAJOR-GENERAL SIR JAMES CARMICHAEL SMYTH has directed that the following Returns for the Quarter ending on the 30th September last, shall be published in the *Royal Gazette*, for general information; and His Excellency has been pleased further to order, that similar Returns shall, in future, be communicated to the public, as soon after the expiration of each Quarter as they can be prepared.

The important and interesting progress of religion and of morality; the industry and good conduct of all classes of this community; the increased value and amount of the exports and imports; are all so clearly shown by the documents themselves, that the Lieutenant-Governor has given orders that they should be published without any further comment, than the expression of the very great pleasure His Excellency derives at being able to communicate such gratifying intelligence to all those interested in the prosperity of British Guiana.

By command of His Excellency,
H. E. F. YOUNG,
Gov. Sec.

Guiana Public Buildings,
8th November, 1836.

(A.)

RETURN of COMMUNICANTS at the Holy Sacrament in British Guiana, during the September Quarter.

1.	Church of England	1885
2.	Church of Scotland	391
3.	Reformed Church of Holland	
4.	Lutheran Church	
5.	Roman Catholic Church	203
6.	Wesleyan Missionaries	1384
7.	London Missionary Society	1144
8.	Moravian Missionaries	
	Total	5007

(B.)

RETURN of MARRIAGES in British Guiana, during the September Quarter.

1. Marriages by Special Licence . .	19
2. Ditto by Publication of Banns . .	372
Total - - - -	391

(C.)

RETURN of YOUNG PEOPLE who have attended SCHOOLS in British Guiana, during the September Quarter.

1. Daily Schools	1943
2. Afternoon ditto	2560
3. Sunday ditto	5967
4. Infant ditto	734
Total - - -	11,204

(D.)

RETURN of CONVICTIONS before the Supreme Courts of Criminal Justice in British Guiana, during the September Quarter.

	Males.	Females.
1. In the District of Demerary and Essequebo	12	0
2. In the District of Berbice (no Court held)	0	0
Total - -	12	0

(E.)

RETURN of CONVICTIONS before the Inferior Courts of Criminal Justice in British Guiana, during the September Quarter.

	Males.	Females.
1. Demerary	135	16
2. Essequebo	32	3
3. Berbice	12	2
Total - -	179	21

CHAPTER XII.

COMMERCE AND FINANCE.

WANT OF LABOURERS STILL FELT—MISSION TO CUBA—ITS FAILURE—ADVANTAGES OF THE PORT OF DEMERARA—RETURNS, SHOWING THE EXTENT OF COMMERCE—INCREASE OF LABOURERS—IMPORTANCE OF THE TIMBER TRADE—FINANCIAL ARRANGEMENTS AND AMOUNT OF CURRENCY.

NOTWITHSTANDING the agitation that was kept up, and the excitement caused by the misrepresentations of a disappointed and now humbled opposition, the Governor has contrived, with the assistance of the many honourable and good men in the colony, to promote a thorough reform in most of the regulations that affected the commercial and financial prosperity of the province, and to place both upon a more liberal and a better foundation.

That British Guiana is perhaps the most important colony under the British crown, and will soon be the most valuable, is neither an improper nor an unwarranted assertion. With a body of labourers not more than one-fifth of the number employed in Jamaica, she was able, even in the days of the greatest depression, to raise produce nearly equal to three-fourths of all that Jamaica has ever exported. If such, then, was actually the case, during the existence of slavery, what may we not expect

from the better regulated and improving arrangements of free labour? Besides, we must recollect that, in the course of the 300 and more years that the land in Jamaica has been under cultivation, the most productive soil has been greatly exhausted, and there is no new country to commence upon, whereas British Guiana may be pronounced as almost in its virgin state. The few patches of cultivation that exist on the sea-coast, and for a short distance up the banks of her largest rivers, are a mere nothing in comparison with the millions of acres still in a state of nature, and all composed of the same rich vegetable mould as that which has already rewarded so abundantly the industrious cultivator.

If labourers could be obtained, cultivation, as I have said, might be pushed to any extent; and so anxious was the present Governor to secure the prosperity of the colony in this respect, that at the very moment the colonial malcontents were loading him with every species of personal abuse, he was interceding with the Home Government for permission to send to the Havannah to engage some of the captured negroes, which, it was reported, had accumulated there to such an extent, that the Spanish authorities had become seriously alarmed. This permission was at last obtained; and, after a very humane and well-considered ordinance had been

passed for regulating the terms on which these labourers were to be engaged, and the treatment and encouragement they were to receive on their arrival in the province, Henry E. Fox Young, Esq. the government secretary, a gentleman of sound judgment, great discretion, and well acquainted with the subject in all its bearings, was despatched to Cuba. It was impossible to have made a better choice. Mr. Young possessed the most perfect confidence of the Governor, and, like every well-judging man in the colony, had long appreciated the zeal and anxiety with which he had studied its best interests; he therefore entered upon his mission with every desire and a determination to accomplish the utmost good that could possibly be obtained for the colonists in British Guiana. The result of this mission, and all the circumstances connected with it, and the falsehoods that had gone forth respecting the captured negroes, are so fully explained by Mr. Young, in the following letter, which he addressed to Sir James Carmichael Smyth on his return, that it is not necessary for me to add any comments.

27th July, 1836.

SIR,

His Majesty's Government having signified its permission that British Guiana should participate in the benefit of a supply of free labour from the Island of Cuba, I have, in pursuance of the instructions with which your Excellency honoured me, to report the result of a mission to the capital of that colony, undertaken—

First,—For the purpose of obtaining information upon the actual disposable number of labourers.

Secondly,—Of the probable extent of immigration for the future, and,

Lastly,—In order to make the necessary arrangements for ensuring its continuance, under such rules as regarded the selection of the persons, and of their transport, as should be alike advantageous to the labourers, and to the community of which they were to become members.

On the 27th April, which was the day following that of my arrival, the British Commissioner at the Havannah under the Treaty between England and Spain for the suppression of the Slave-trade, was put in possession of the several official documents which establish the legal existence in your Excellency's Government of the conditions on which His Majesty's Secretary of State had sanctioned the introduction into Guiana of a proportion of the liberated Africans. At an appointed audience on the same evening, His Excellency the Governor and Captain-General of Cuba received from me your Excellency's despatch, a reply to which I have now the honour of laying before you.

With respect to the first point of this report, it is but natural to advert to the prevalence of a very general impression that the number of Africans captured during a succession of years by the British cruizers, and liberated in the Havannah, at present constituted no inconsiderable portion of the lower orders of society, and that its continued augmentation, as well from natural causes as from the same adventitious circumstances to which it owed its origin, had excited an apprehension, not uncommon in Slave States, that the permanency of the servile condition of the remaining classes of the working population might be shaken by any further accession of emancipated labourers. On whatever foundation may rest the impression to which allusion has been made, whether it arise from the desire of the Colonial Spanish Government to acquire merit or indemnification for recognising, in the letter

of the law, the liberated African to be a denizen of Cuba, or to whatever other source it may be traced, no long residence at the Havannah is necessary to ascertain that scarcely any idea can be more egregiously erroneous than that of supposing the local Spanish Government to experience inconvenience from the residence of the black freedman, or to entertain any real desire that he should be removed from its jurisdiction. Of the thousands rescued by the British cruizers from the destiny to which individual slave-dealers would have allotted them, but few, if any, in the enjoyment of freedom, remain to afford even a colourable pretext for the alarm alleged to be felt by the colonial authorities, and if credence is to be given to the common report at the Havannah, of the very great facility with which the captured African has hitherto been made by his employer to succeed to any vacancy which death may occasion in the list of prædial slaves, such a nefarious system of recruiting would sufficiently account for his disappearance as a freedman, without resorting to the difficult alternative of attributing more than the usual malignity to the cholera, or a more fearful mortality than has been said inevitably to attend the deportation of the African from his native climate. It is right, however, distinctly to state, that these causes are supposed by official authority in Cuba satisfactorily to account for the extinction of a class in society, which, from the lapse of time since its formation, should now comprise a very numerous body of human beings. Be the cause what it may, by very much the greatest portion, if not all, those whom humanity and policy conjoined to re-invest with the rights of nature, are unhappily not found exercising them, as it was benevolently planned, for the mutual advantage of themselves and their adopted country. I am therefore, with great regret, to report, that there is not any actual disposable number of labourers in Cuba transferrable to Demerary.

II. The despatch which I have had the honour to present from Captain-General Don Miguel Tacon will, doubtless, have communicated to your Excellency the intentions of the

Cuba Government, respecting the transfer to Guiana, of any *future* captures which may be at the disposal of the Spanish Authorities. It is my duty, however, to report, that, as in the case of the most recent seizure which, up to the period of my visit, had been brought into the port of Havannah by a British vessel of war, the application of the Commissioner to have the Africans located in a British colony was unsuccessful; and that as, moreover, it proved so at a time when the recent treaty (by which the disposal of captures under the above circumstances devolved exclusively upon the Commissioner,) was a matter of notoriety, the local Spanish Authorities, in profiting by the then absence of the receipt from their Home Government of the formal ratification of the Treaty, indicated, in the most intelligible manner, their real determination upon the future destination of the Africans over whom they may chance to obtain a right of assigning a location.

The probability of obtaining labourers from the Spanish Government being thus slight, it remains for me to mention the proposed distribution of those Africans who may hereafter, in consequence of the recent Treaty, be at the disposal of the British Functionaries; and I am to state that, being apprised by the Commissioner of the eager desire which exists amongst other colonies to obtain a share of these labourers, and perceiving that no trifling weight was attached to the priority of their applications, as well as to the lessened expense of transport which would result from a preference being given to such colonies as were nearest to Cuba, the annexed note, marked (A), was addressed in corroboration of the plea which the social condition and the legislative enactments of British Guiana authorised me to urge for the attainment of a monopoly, or at all events a major proportion, of any future supplies. Your Excellency is respectfully referred to the Commissioner's Letter, herewith forwarded, for information as to the course which, after repeated communications with me, he has alone, for the present, felt justified in pledging

himself to adopt with respect to future captures by the British cruizers.

III. In closing this statement it is scarcely requisite to add, that rules of selection were contemplated to be necessary rather in reference to the numbers who were supposed to be congregated at the Havannah, ready to be shipped to the claimant colonies, than to such as might from time to time be brought there in comparatively small bodies; the non-existence of any such large depôt being already reported, I have only to observe, that the remaining part of the subject which belonged to this point of the report has been, as your Excellency is aware, most judiciously provided for by His Majesty's Government, in the appointment of a resident Superintendent.

Permit me, in conclusion, to say that, although the object which your Excellency had in view, viz., an importation of free labourers, is not likely to be gained from Cuba to as great an extent as could be wished, should your Excellency deem no zeal to have been wanting on my part to secure (as I would fain hope I have secured,) all that circumstances rendered attainable, the satisfaction of having been employed to further a measure of your projection, the motives to which I cordially recognise to be, as your Excellency has truly described them, "a desire to contribute towards the sum total of human happiness, and, in so much, to diminish the amount of human misery," will more than amply compensate me for the not infrequent fatigues and inconveniences which were necessarily attendant on my journey.

(Signed) H. E. F. YOUNG, *Gov. Sec.*

(NOTE A.)

Havannah, 1st May, 1836.

DEAR SIR,

Referring to the several conversations which we have had respecting my mission from Guiana, to obtain the transfer to that colony of such liberated Africans as might be at your disposal, it appears desirable that you should be in

possession of a memorandum of the circumstances which render Guiana a more eligible location for the labourers in question than any other colony.

1st. The fund provided for the medical care and general maintenance of the labourer, before the execution of the indenture, is higher in Guiana than elsewhere.

2nd. The scale of food and allowances is more advantageous.

3rd. The indenture is more easily cancelled in case of ill-treatment.

4th. The wages during the indenture are higher.

5th. The demand for labour, and consequently its remuneration, will, in every probability, even after the expiration of the indenture, be higher in Guiana than elsewhere.

Having thus adverted to the excess of positive benefit which Guiana holds out to the labourer, over and above those offered elsewhere, I do not feel myself precluded from observing, that as philanthropic motives actuated the British Government to obtain by treaty the right of disposing of the captured and liberated Africans, there can be little doubt of the like benevolence being expected to be exercised in the selection of the place of their destination.

The application of a colony like Hondnras, the sole or principal resources of which are the woods in the remote interior, whose population is thin and scattered, and whose prospects are described by the wood-cutters themselves to be ruinous unless supported by an accession of labourers from hence, will surely not be deemed preferable to that of Guiana, the present state and future prospects of which afford and promise those means of advancement in civilization which are seldom found to be permanent or extensive, if, indeed, existing at all, in any community that is not, like it, at once prosperous as well as free. In the absence, then, of any precise instructions from the Colonial Department or Foreign Office, the best course, as, with all deference, I beg to urge, is, to do that for the African which, were he capable of exercising a sound judgment, he would do for himself,—that is, give a preference to

the colony offering the highest terms of positive and relative benefit.

I do not think it irrelevant to observe, that, subordinate to the welfare of the African, a high and permanent advantage may result from his *judicious* location, under the humane regulations which his Majesty's Government have exacted from the colonies desirous of obtaining his services; since it will show that there are modes of rendering this description of labourer a useful member of society, other than by the physical coercion which has long prevailed. The incitements to labour which are with these people to be substituted for the whip, are as yet more abundant in Guiana than elsewhere. It is therefore anxiously to be wished, that any doubts which may possibly be still entertained of the success of the proposed experiment, should be resolved in that colony.

In conclusion, I must not omit to add, that, whatever reason the colonists may at present have to expect these labourers free of cost of transport, it is to be hoped that the question of expense will not be suffered to interfere with the substantial humanity of locating them in a colony like Guiana, offering the greatest facility for their industrious occupation and moral improvement.

(Signed) H. E. F. YOUNG, *Gov. Sec.*

Havannah, 2nd May, 1836.

SIR,

I have had the honour to receive from the hands of H. E. F. Young, Esq., Secretary to the Government under your command, your letter addressed to His Majesty's Commissioners, dated 13th March.

Agreeably with the instructions already transmitted by Viscount Palmerston for the guidance of this Commission, I entered into immediate communication with Mr. Young, who gave me a very lucid detail upon the subject of his mission; and furnished me with a copy of the ordinance, and government notice, enacted by the colony, "To provide for the

subsistence, location, and settlement, of Africans to be transferred to British Guiana, and to promote their industry and good conduct."

The permission to remove the Africans liberated under the sentence of the Mixed Commission being a matter of comparatively recent occurrence, and confined until lately to the colony of Trinidad, His Majesty's Government have not yet furnished the Commissioners with any numerical scale, or definitive line of conduct thereupon, the absence of which would seem to vest in them a power over the fate of these unfortunate people, which it obviously cannot be the intention of the Government to place in their hands.

With reference, however, to the subject of your letter, and the representations made by Mr. Young, I find that, on recurring to the instructions from the Foreign Office, relative to a demand made by the colony of Honduras, for a portion of the emancipated negroes, the Duke of Wellington consented to an arrangement to that effect; his grace desiring at the same time, that the proposals should be in conformity with the spirit, and upon the principles, laid down in a letter written, under the directions of the Earl of Aberdeen, by Mr. Gladstone to Viscount Mahon, dated the 6th April, 1835, an extract from which I beg leave to make, as bearing upon the present case:—" Recommending them (His Majesty's Commissioners) to transfer the Africans to Honduras, in preference to Trinidad, should the terms offered be more advantageous to them than those which are held out in the colony of Trinidad; and in case no such superior advantages be proffered, to make the distribution with due regard for the demand for labour, and the probability of advancement in their moral and social as well as physical condition in each."

Having accordingly compared the ordinance " to provide for the subsistence of the emancipated negroes," enacted by the Government of British Guiana, with the terms now in force at Trinidad, and those offered by Honduras, I find the former so infinitely more advantageous to the Africans than

either of the others, that I feel I shall best execute the humane wishes of His Majesty's Government, as well as my own duty towards these unfortunate people, by transferring to Demerara any cargoes which may be emancipated by this Commission between the present period and that of the receipt of fuller and more particular instructions upon the subject from the Foreign Office.

I must not omit to mention, that I am much influenced in this determination in consequence of the assurance given to me by Mr. Young, that there does not exist, upon the part of the Government of Guiana, any intention to expose these poor people to the laborious and unhealthy occupation of cutting mahogany,—a fate inevitable to them if sent to Honduras.

The line of conduct heretofore pursued by the Commissioners, and fully approved by His Majesty's Government, respecting the mode of transfer to be adopted for the liberated Africans, will of course be observed in the case of British Guiana; and I have only further to assure you, that if it has been in my power to assist Mr. Young in the praiseworthy zeal which he has exhibited, or to impart to him any information likely to confer future benefit upon the colony under your command, it will be to me a source of sincere gratification.

(Signed) EDWARD W. H. SCHENLEG.

The cultivation of sugar in this province is much less laborious than in the island colonies, and the cane is equally, if not more productive. It does not require to be planted annually, or at stated periods; for when the field is once prepared, and the cuttings or slips are deposited in the earth, they will grow and flourish for a quarter of a century, and every successive crop produce a stronger shoot, and a more juicy cane, than the

last. This is called *ratooning*, and all that is necessary is, to replace any plant that may have become rotten or decayed, and to destroy the weeds that spring up with such rankness and luxuriance after the periodical rains. As there is no proper seed-time, neither is there any appointed period for the harvest. On most estates, the planting has been so regulated, that certain divisions, or fields, are in a state of maturity every month of the year, and, except from some extraordinary state of the weather, the sugar-boiler would not be unemployed for a single hour, from the 1st of January to the 31st of December. My excellent friend, Dr. M'Turk, has so arranged upon his estate Felicity (and it is a small property), that he can ship twenty-five hogsheads of sugar every month in the year, with other produce in proportion.

There are here no hurricane-months, and no dangerous roadsteads; therefore ships can arrive, load, and depart, whenever it suits their convenience. The only drawback formerly, was the depth of water on the bar, which prevented ships of a large size from entering the river; but even in such cases, it was found not more troublesome to load a ship outside the bar, than it was in almost every other colony to bring the produce from the interior to the water's edge. For many years past, however, it has been found that the river at its mouth has been gradually deepening, the bar is greatly

lessened, and at spring-tides vessels of 500 or 600 tons can now pass over it without risk. The colour of the water gives sufficient warning of an approach to the coast long before any danger can be incurred, and the excellent regulations that have been adopted with respect to the pilotage, render Demerara one of the safest ports that a ship can make for.

In 1833, the slave labour of this colony sent to Great Britain and Ireland produce which rendered to the Exchequer no less a sum than 2,728,661*l.* sterling, in duties alone, and there were imported of British manufactures to the value of above 700,000*l.* The number of vessels that entered her ports was about 900, and their tonnage 117,261 tons. The number of seamen employed in the trade with British Guiana, taken on an average of the last five years, is about 6000. I have already shown how much free labour has increased the quantities produced in the present year, as compared with the last; but in order to show them more distinctly, I have added severa official returns, with the government notices that accompanied them, which not only show the actual increase, but also the extent of the commerce of this colony. Though the mission to Cuba failed, it will be seen that the advantage held out to industrious labourers has already produced a considerable influx from other colonies; and as soon as these advantages

are better known, and the present restrictions are removed, that prosperity of which the foundation has been laid with so much wisdom, will increase with a rapidity that has never yet been equalled in the progress of any state. The exported products of the soil have already increased a third, and the value of British manufactures imported into and consumed in the colony, is a third more than what it ever was in times of slavery.

GOVERNMENT NOTICE.

MAJOR-GENERAL SIR JAMES CARMICHAEL SMYTH has directed that the following documents be published in the *Royal Gazette* for the information of all concerned.

[A.]—A return of the quantity of colonial produce shipped from the ports of Georgetown and New Amsterdam during the first quarter of the present year, as compared with the corresponding periods of the three last years of slavery, namely, 1831, 1832, and 1833.

[B.]—A return of colonial produce manufactured in British Guiana during the year 1835, according to the returns given in, upon oath, from the respective estates to the Financial Accountant, and contrasted with the returns for 1833 and 1834.

II.

His Excellency is desirous of offering his sincere congratulations to every person interested in the welfare of British Guiana, at the irrefragable proofs which the foregoing documents afford of the continued prosperous, happy, and flourishing state of this province. There have been already exported, during the first quarter of the present year, 18,789 hogsheads,

1223 tierces, and 1500 barrels of sugar; being 4203 hogsheads and 300 tierces more than passed through the Custom-house during the same period, upon the average of the three last years of slavery. The additional quantities of rum, molasses, and of cotton, exported during the last quarter, have also been very considerable. Of coffee alone, the additional amount has been 450,562 pounds. Satisfactory as the Custom-house returns are, those of the Financial Accountant are even still more so, showing an immense steady increase of the staple article of produce manufactured during the year 1835.

III.

The Lieutenant-Governor requests of the Special Justices to take every opportunity of explaining to the Apprenticed Labourers how much he is pleased and gratified at their good conduct. His Excellency will not fail to lay before the Right Honourable the Lord Glenelg, in order that the same may be submitted to the King, a full report of the manner in which the Apprenticed Labourers discharge their duties; of the anxiety they evince to obtain instruction and information; and of the respect which they pay to the laws, and to those placed in authority over them. The Lieutenant-Governor feels confident the Apprenticed Labourers will continue to conduct themselves in the same meritorious and praiseworthy manner; and that, after the expiration of their apprenticeship (on the 1st August, 1840), they will feel an honest pride in showing to the world that they are, in every respect, worthy of being classed with the best of their free fellow-subjects of the British empire.

PORTS OF DEMERARY AND BERBICE, BRITISH GUIANA.

RETURN of COLONIAL PRODUCE Shipped from the Ports of this Colony in the first Quarter of 1836, (*viz.* from the 5th of January to the 5th of April,) as compared with the Average Quantity of the corresponding Quarters of 1831, 1832, 1833.

	Sugar.			Rum.			Molasses.		Coffee.	Cotton.
	Hhds.	Trs.	Brls.	Puns.	Hhds.	Brls.	Hhds.	Trs.	Pounds.	Bales.
FROM THE PORT OF GEORGETOWN.										
Average quantity of Produce exported in the first Quarter of the three years preceding Emancipation - - - -	12248	688	1379	5716	1136	301	8036	. .	436,838	805
Quantity exported first Quarter of 1836 -	14742	779	1099	5510	1408	358	8786	. .	602,700	718
Increase	2494	91	. .	. .	272	57	750	. .	165,862	. .
FROM THE PORT OF BERBICE.										
Average quantity of Produce exported in the first Quarter of the three years preceding Emancipation - - - -	2638	200	160	1069	152	5	797	. .	286,500	334
Quantity exported first Quarter of 1836 -	4347	444	401	1579	246	17	1308	. .	596,400	374
Increase	1709	244	241	510	94	12	511	. .	309,900	40
TOTAL Increase	4203	355	. .	304	366	69	1261	. .	450,562	. .
TOTAL Decrease	. .	. .	39	. .	. .	. .	. .	. .	. .	47

BRITISH GUIANA.

A STATEMENT of the QUANTITY of PRODUCE made in the Years 1833, 1834, 1835.

	1833.	1834.	1835.
SUGAR	99,106,827 lbs.	81,085,483 lbs.	107,586,405 lbs.
RUM, Prf. 24 . . .	1,757,546 gls.	1,903,775 gls.	2,650,942 gls.
—— 23 . . .	694 —	1,972 —	9,107 —
—— 22 . . .	1,300 —	27,717 —	85,606 —
—— 21 . . .	26,305 —	45,520 —	5,108 —
—— 20 . . .	102,612 —	86,621 —	119,030 —
—— 19 . . .	490,381 —	442,443 —	704,943 —
—— 18 . . .	137,300 —	123,582 —	169,131 —
MOLASSES	5,121,301 —	3,288,586 —	3,105,421 —
COFFEE	4,459,596 lbs.	3,035,556 lbs.	3,065,742 lbs.
COTTON	954,857 —	926,944 —	867,942 —
VALUE of PLANTAINS and CATTLE sold . . .	*f* 796716 19 4	*f* 531,757 19 0	*f* 577,212 19

A True Copy,
HENRY JOHN BAIRD, *Assist. Gov. Sec.*

(Signed) M. VIRET, *Financial Accountant.*

RETURN of SHIPPING, TONNAGE, and SEAMEN, entered the Ports of British Guiana in the June Quarter of the Year 1836.

	Vessels.	Seamen.	Tons.
1. Demerary and Essequibo . . .	103	1,091	10,876
2. Berbice	20	270	3,935
Total - - - -	123	1,361	14,811

RETURN of ARTICLED SERVANTS Imported into British Guiana in the June Quarter of the Year 1836.

1. Males	170
2. Females	44
Total - - -	214

RETURN of COLONIAL PRODUCE Shipped from the Ports of British Guiana in the June Quarter of the Year 1836.

	Sugar.			Rum.		
	Hhds.	Trcs.	Brls.	Puns.	Trcs.	Brls.
1. Demerary .	11,085	622	788	4,321	1,054	409
2. Berbice . .	2,313	385	402	1,080	124	5
Total - -	13,398	1,007	1,190	5,401	1,178	414

	Molasses.			Coffee.	Cotton.
	Hhds	Trs.	Brls.	Pounds.	Bales
1. Demerary	5,611	. .	. .	627,150	856
2. Berbice	472	2	. .	15,300	136
Total -	6,083	2	. .	642,450	992

RETURN of the VALUE of GOODS Imported into British Guiana in the June Quarter of the Year 1836.

	£	s.	d.
1. Into the Port of Demerary	155,111	17	0
2. Into the Port of Berbice	21,555	0	11
Total Sterling - - -	£176,665	17	11

RETURN of BALANCE in the COLONIAL CHESTS on the 30th June, 1836.

	£	s.	d.
1. In the Chest at Georgetown . . .	21,336	14	4
2. In the Chest at New Amsterdam . .	5,255	12	0
Total Sterling - - -	£26,592	6	4

Compiled from the Official Returns.

H. E. F. YOUNG,
Gov. Sec.

RETURN of SHIPPING, TONNAGE, and SEAMEN, entered the Ports of British Guiana during the September Quarter.

	Vessels.	Seamen.	Tons.
1. Demerary and Essequibo . . .	123	1,094	22,405
2. Berbice	23	220	3,771
Total - - - - -	146	1,314	26,176

RETURN of LABOURERS and ARTIFICERS Imported into British Guiana during the September Quarter.

1. Males	483
2. Females	190
Total - - - -	673

RETURN of COLONIAL PRODUCE Shipped from the Ports of British Guiana during the September Quarter.

	SUGAR.			RUM.		
	Hhds.	Trcs.	Brls.	Puns.	Hhds.	Brls.
1. Demerary . .	11,754	887	454	3,266	1,135	348
2. Berbice . .	2,680	377	64	1,142	148	. .
Total - -	14,434	1,264	518	4,408	1,283	348

	MOLASSES.			COFFEE.	COTTON.
	Hhds.	Trs.	Brls.	Pounds.	Bales.
1. Demerary	5,616	. .	. .	272,250	322
2. Berbice	1,157	52	. .	121,650	30
Total - - -	6,773	52	. .	393,900	352

RETURN of the VALUE of GOODS Imported into British Guiana during the September Quarter.

	£	s.	d.
1. Into the Port of Demerary . . .	225,690	0	4
2. Into the Port of Berbice	35,288	0	0
Total Sterling - - -	£260,978	0	4

RETURN of BALANCE in the COLONIAL CHESTS, on 30th September, 1836.

	£	s.	d.
1. In the Chest at Georgetown . .	21,879	14	0
2. In the Chest at New Amsterdam . .	11,401	12	10
Total Sterling - - - -	33,281	6	10

Compiled from the Official Returns.

H. E. F. YOUNG,
Gov. Sec.

Independent of the profits to be derived from cultivation, there is another source of wealth, almost inexhaustible, in this colony, which has scarcely as yet excited any attention,—this is, the valuable timber which is found in its forests. These forests, indeed, afford not only an abundance of the most useful and valuable timber, of size and substance fit for any purpose to which timber has ever been applied, but are also prolific in all the varieties of close-grained, hard ornamental woods, that are sought after by the upholsterer and the cabinet-maker, and in as great beauty and perfection as any that have yet been manufactured for ornamental furniture. Several wood-cutting establishments have already been formed, but none with any great extent of capital. THERE IS HERE A LEGITIMATE OBJECT FOR A JOINT-STOCK COMPANY.

If a sufficient capital were embarked in this trade, it would soon become a very important and lucrative concern; more especially since the valuable discovery of Mr. Hugh Rodie. A tree very common in almost every district of the province, as that gentlemen has proved, affords a bark more valuable as a remedy, and much richer in all its ascertained specific ingredients, than the best Spanish or Jesuits' bark.

The Green-heart tree of British Guiana is equal to any teak or African oak in hardness and durability, and might be imported at as cheap a rate as the

pine deals of Norway or North America, while the ornamental woods require only to be seen to become fashionable.

Much of the prosperity of every state, whether great or small, will always depend upon the healthy or unhealthy condition of her monetary system; and in a community like British Guiana, it was of the very utmost importance to have her financial arrangements fixed upon a sound and durable basis. No subject has occupied the attention of the present Governor more than this, and few were so capable of understanding it properly in all its bearings. So late as the beginning of the present year, Demerara and Essequibo had one circulating medium, and Berbice another. In Demerara and Essequibo this consisted partly of paper money, and partly of silver coined in England into the fractional parts of the Dutch currency.

At the time when slavery was abolished, there was in circulation exactly 157,000*l.* of paper money, consisting of JOE notes, which for the sake of convenience are sometimes cut into halves. The silver coin in circulation amounted to 36,000*l.*, and consisted of three-guilder and guilder pieces, with all their fractional divisions. The money, therefore, actually circulating in the colony on the 1st of August, 1834, was about 200,000*l.* sterling; but accounts

are still kept, and all moneys calculated, in Dutch currency.

In 1808, the attention of the Court of Policy was called to the condition of the then circulating medium, which consisted of gold Joes, or Johannes, in almost every instance mutilated, and plugged up with copper or brass, gilt over, so that in many pieces the gold they contained was not of more value than half the amount they represented. The Court of Policy caused all this money to be withdrawn from circulation, replacing it by a paper circulation of equal value. The quantity of those plugged Joes that was withdrawn, according to their current value, was about 50,000*l.*, but the intrinsic value, when sold to the Bank of England, was only 34,744*l.* 8*s.* 8*d.* A great part of the above sum was vested in the British funds as a security for the Government paper money; but several thousand pounds were also coined into fractional silver money, and immediately sent out to the colony.

From the moment the first money was invested in Government securities, the surplus revenue of the taxes was carefully remitted to the trustees appointed by the Governor and the Court of Policy, and at present the annual interest of that funded property is more than 5000*l.*, and the capital exceeds the value of all the colony paper in circulation.

It was declared, when this paper money was made to

supply the place of the gold withdrawn, that none but the perfect and standard coins of Spain and of Holland should be allowed to pass current, and that the perfect standard coins of England, and other countries, would only be taken at their relative values, or according to the rates of exchange.

Before the abolition of slavery, the merchant in Georgetown has been known to pay as high as eighteen guilders for the pound sterling, in good bills on London, while in January last he would scarcely give twelve guilders for the best bills in the market. Fourteen guilders, however, are reckoned the par for a pound sterling.

The surplus revenue, as I have stated, was vested in the funds, in the names of certain trustees, for the regulation of which it was at one time recommended to have an Act of Parliament. The quantity of paper money issued and circulated within the colony has never exceeded the amount of that property,—so that if any crisis did occur, the holder of such paper knew where he could find its value. It is in consequence of this perfect security, that the Government paper is rather at a premium than a discount in all internal transactions. Berbice had also her paper money, amounting to upwards of 30,000*l.*, with a very limited and ill-regulated silver currency; but there existed no other guarantee for this paper than the

promissory notes of the Berbice Association, a chartered company in Holland, to which this colony belonged, as private property, when we took possession of it. These promissory notes were originally issued by the company in payment of their colonial officers and servants; and the whole of their property, whether as a company or as individuals, was made liable for the amount of all such notes.

When Great Britain captured Berbice, the conquerors not only acknowledged the validity of the notes already in circulation, but, as a present resource, greatly increased their amount. The private property of the Dutch association, as well as its public funds, were all confiscated; consequently the British Government became responsible for the payment of the paper money then in circulation; but as this was a question not quite understood, and might be questioned, the Berbice paper currency has never fetched its nominal value in gold or silver coin, and has been a great drawback upon the internal commerce and trade of the two districts. Sir James Carmichael Smyth, among other matters, lent his powerful mind to the consideration of this subject, and by a proper application of the public funds, and a little exertion and management in realising them, he has been able to cancel the whole of the "association notes," and to place the circulating medium of the entire province upon the

same footing, so as greatly to increase the amount of coined money. Knowing also the great importance of having a sufficiency of small money in the colony when the free labour of the negro would be brought into the market, he prevailed upon the Court of Policy, in January, 1834, to pass a resolution that the interest of their funded property (about 5000*l.* annually) should be remitted in silver coin; and, had that resolution been carried into immediate effect, the currency would sooner have been placed upon a sound basis, and many of the difficulties that were experienced in the first months of the transition from slavery to freedom would have been altogether obviated.

The Governor's arrangements were so simple, and founded upon such certain data, that it was evident from the first they must be adopted eventually, though, in consequence of the difficulties thrown in the way of establishing a permanent efficient civil list, the final adjustment of the finance of the colony was greatly retarded. Time and perseverance, however, have overcome all opposition, and the colonists already begin to experience the good effects of the wisdom and prudence, and good common-sense notions of their chief ruler.

The civil list has been established upon a fixed principle, the currency of the colony increased and regulated, the taxes have been consolidated, and the

revenue greatly improved, industry encouraged, and tranquillity secured; *and not a single additional soldier, or even a police officer, was required during the whole progress of this change.*

Let the reader cast his eye once more to the official returns;—exports, to the amount of more than a million, and imports of nearly three hundred thousand pounds value PER QUARTER! with a clear balance of more than thirty thousand pounds in the colonial exchequer, and say, if tolerably well governed for the future, can the prosperity of British Guiana have any limit? One other great source of the increasing prosperity has arisen from the removal, in a great measure, of that ruinous monopoly of almost the whole trade of the port by two or three great mercantile houses in England.

In 1833, as above observed, there was scarcely a planter in the whole province whose estate was free from debt, and a great many properties were mortgaged for their whole value; consequently, the produce of these estates was consigned to the mortgagee in Europe, to pay the interest or instalments due upon that debt. If there was any surplus, it was barely sufficient to cover the few necessary supplies of clothing and provisions sufficient to enable the slave population to keep up the languishing cultivation, which for several years had been carried on. No improvements were

ever thought of, and even the most necessary repairs in the buildings and machinery were often neglected, until they were almost beyond repair. Despair seemed, therefore, to have benumbed the faculties of even the most enterprising members of the community, and their whole ambition was how to obtain a competent subsistence for themselves and families. They could not dispose of a single particle of produce within the colony. It must all be shipped for Europe, but only in such ships as the "money-lenders" might send for it, and consigned to such persons as they were pleased to point out, and at such freights and other charges as their consciences would permit them to demand.

The poor heart-broken planter dared not utter a single word as to the disposal of his own property, nor, as I have also remarked, could he move a single step from the beaten path of cultivation, though by doing so he might have increased that produce fourfold. If he showed the slightest symptoms of discontent in the one case, or impatience on the other, a foreclosure was immediately sued for, and, ten to one, the very merchant became the *bonâ fide* purchaser of the estate, and, perhaps, as an act of charity, might allow its late proprietor to remain upon it, as his manager.

This ruinous system acted most banefully in another way, both as regarded the colony and the mother-

country. The merchants in Georgetown could never dispose of their cash in the colony. There was no produce ever brought into the market, consequently, in making their home payments, they were compelled to buy bills or coin ; hence these bills and the standard coin of all nations were always at a high premium. The English merchant who received the consignments applied the proceeds, first to discharge the interest of his own debt, and what remained was employed in the extension of his other mercantile concerns ; for he conceived there was no necessity, and certainly there could be little inducement, for him to make shipments to Demerara. Nothing, therefore, was ever sent out but what was actually ordered by the local traders. Matters are now very different ; with the sweets of liberty, and social happiness, there have returned all the blessings this colony ever enjoyed in its most flourishing state, and many advantages that it never could previously have experienced.

The circulating medium has not only been regulated, and greatly increased, but it is still increasing. The immense advances of money that in former times became necessary for the purchase of labourers, are no longer called for ; and instead of nominal proprietors, who were more firmly bound by the fetters of their creditors than ever were the slaves under their control, we have men who are in all respects the real owners and

cultivators of the soil, who can dispose of their produce how and where they please, and ask and obtain for it their own prices; they can also select the best ships, and at the lowest rates, to send that produce to Europe, and can consign it to friends who have their true interests at heart.

The merchant and ship-owner can go into the market, and if they have money, purchase the sugar on the estates where it is made, and may bargain or not for its being brought alongside the ship. Thus the original, natural, and healthy state of commerce, which consists in the mutual exchange of their productions, will soon be restored between this colony and all other countries. In 1833, the merchant, as I have stated, could not buy a good bill upon England for less than eighteen guilders the pound sterling. In 1836, he would not give more than twelve guilders for the best bills that could be offered; and the ship that carried me from Barbados to British Guiana, in December, 1835, took down upwards of 10,000*l.* in specie, to purchase rum and molasses.

While, therefore, the profits upon his own produce are more than doubled to the planter, the price of European manufactures, of all necessaries, as well as luxuries, will be greatly lowered, and the imports in a few years will increase a thousand-fold. Great Britain, it is therefore evident, will be more than rewarded for

the boon she has granted for the freedom of her slave-born subjects; and the planters, instead of being ruined, as their pretended friends have so long maintained, will rise in the scale of energy and enterprise, and acquire more wealth than has ever yet been realised,—wealth that will be blessed and preserved to their children, and their children's children, for a thousand generations:—that will no longer be the price of human blood, but the reward of honest industry, and free labour. Already estates are selling at a great advance of price, and in many instances the merchants, who were so anxious to secure the compensation-money, and who did secure it, have been very much at a loss how to dispose of it in a profitable manner. Many of them, I believe, have tried to prevail upon the planters to receive it back again.

A colony bank was proposed, a few months ago, with a capital of 300,000*l*., and in ten days 220,000*l*. were subscribed; and any property that is now brought into the market, is eagerly bought up at double the price it would have fetched three years ago.

The millions of acres that may be brought into cultivation by a little exertion, and a trifling advance of capital, independent of the other sources of wealth which this bank will call into existence, will not only afford subsistence to thousands of our starving population, but enable British Guiana to become a source

of more real wealth to the world at large than was ever yet extracted from the mountains of Mexico and Peru, and unaccompanied with any of those sufferings which man inflicts upon his fellow-creatures when he sends them into the bowels of the earth to dig for that wealth, which, after all, is but dross.

It is one of those beautiful arrangements of a good and merciful Providence that, whatever "the fool may think in his heart," those duties and labours which conduce most to the general well-being of mankind are at all times those that are the most important and beneficial to the best interests of the individual. In excavating the earth to procure gold and silver, to satiate the avarice of man, disease and death are the inevitable consequences, and the labour increases as the work proceeds. In the labours of agriculture, how severe soever they may be at the commencement, health accompanies every step of our progress; our comforts increase and multiply as we advance, and pleasures unspeakable sweeten every day's toil. We not only secure all those blessings for ourselves, we establish them, and leave them as a legacy to the thousands of generations that are to succeed us. The savannah and the swamp may be, and indeed often are, the sources of malignant disease, and the first settlers suffer accordingly; but the moment cultivation spreads, and they are made available for the production of food, they are

deprived of all their noxious influences upon the constitutions of men; and as light and warmth are freely admitted to the surface of the soil, and permitted to exert their vivifying influences upon those portions which the hand of man may have comminuted, the deadly pestilence which the bush and the marsh may have engendered and nourished, is conquered and destroyed. Health uniformly attends upon cultivation, and wealth as surely follows in their train; man, however, is too often the author of all his own sufferings and miseries, and nowhere more so than in the West Indies.

The banks of the Demerara River, which were long considered as more fatal to Europeans than the swamps of Sierra Leone, are now as healthy as any country within the tropics, and it is the extent and perfection of cultivation which has made it so, and which has not only changed the appearance of the earth's surface, but has actually altered and improved the seasons.

CHAPTER XIII.

NATURAL HISTORY.

NATURE OF THE SOIL IN BRITISH GUIANA—EXTENT AND DEPTH—ACCUMULATION OF TREES UNDER GEORGETOWN—RICHNESS OF VEGETATION — DR. M'TURK, AND MAJOR STAPLES, BENEFACTORS OF THE COMMUNITY—ARTESIAN WELLS AND LAMAHA CANAL—VARIETY OF ANIMALS, BIRDS, AND REPTILES—HABITS AND INSTINCTS OF BIRDS AND INSECTS—FISHES.

THE whole of the land that has hitherto been cultivated in the province of British Guiana, and many millions of acres in addition, have been gained from the sea since the boundaries of the Atlantic Ocean were originally fixed. The accumulation of earthy particles and vegetable matter that form this land, is nearly 150 feet deep, close to the shore. At high-water, and especially during spring-tides, the sea still rises several feet above the ordinary level of the land, and would certainly overflow it to an extent of many miles, if it were not prevented by artificial embankments; we may therefore form some idea of the extent of the deposit; but it would be folly to offer any conjecture as to the ages that may have elapsed since the commencement of its formation.

The three great rivers which have given their names to the several colonies of the province, derive their chief sources from that chain of mountains which rises under the equator, near the mouth of the Amazon, in longitude 50°, and extends to the west, with an inclination northerly, to about 66° west of Greenwich, and which may be called the Lesser Cordilleras, as the Andes are the Greater. But as it is now certain that the River Essequibo has a communication with the Oronoko, and that the Oronoko communicates by the Rio Negro with the Amazon, it is no great stretch of the imagination to suppose, that part of the soil that forms the islands in the Essequibo, and which is considered the most fertile in the colony, may have been brought from a far greater distance.

There are few rivers, I should suppose, whose branches are so extended as that of the great Amazon; they stretch from the twentieth degree of latitude, south of the equator, to about the sixth or seventh north, a breadth of 1600 miles; and in length it extends from the ocean, in longitude 50° west, to the ridge of the Andes in 79°, nearly 1700 miles.

The Cordilleras, or range of mountains that are supposed to form the southern boundary of the French, Dutch, and British Guianas, are marked on the map which I have given, as commencing on the sea-coast, under the Line, and running parallel with

that coast for about ten degrees of longitude in a direction nearly north-west, and for about six degrees more in a due west course. The Oronoko derives many branches from this last division of the chain; but others pass far beyond it, and independent of any supposed communication between the Rios Yurillo and Negro, the Guavicira and Rio Meta come from the mountains of Bogotá; this river, therefore, draws its supplies also from a wide extent of country; but, as compared with the Amazon, it is as the Mediterranean Sea to the great Atlantic Ocean.

The Guiana Cordilleras do not appear to be removed from the coast more than 300 or 400 miles in a direct line, and yet the River Demerara, which is considered as having a shorter course than either the Essequibo or Berbice, has been traced to a greater distance. As yet, however, very little is known of the interior of the country.

The Andes are the great chain of mountains which, stretching north and south, form a boundary for the Pacific Ocean, and from their summits the earth gradually sinks to the east, until it reaches the Atlantic Ocean on the north and south of the Equator. There are, undoubtedly, intersecting mountain-ridges that change more or less the direction of some of its rivers; but the Amazon, the main artery of this continent, has a course nearly due east, drawing its supplies from the

north and from the south, more especially in the latter case, from a distance of more than 1200 miles. While, therefore, the earth's surface is an inclined plane from about longitude 79° to 50° west, in the due course from west to east, we find there is also a descent from latitude 20° south to within two degrees of the Equator, in a direction due north, but that the supplies from the north do not come from a greater distance than two or three degrees on the north of the Equator.

The Cordilleras, that inclose the territory of British Guiana on the south, are the northern boundary of that wide vale through which the Amazon flows; while the southern boundary of the same vale may be traced in a waving ridge that divides its waters from the sources of the Rio de la Plata, which has a course nearly due south for more than 1400 miles.

The Rivers Surinam, Berbice, Demerara, the Essequibo, and partly the Oronoko, come from this range of mountains which separates Guiana from the vale of the Amazons, and their courses are all nearly due north, except the last, which, after having collected its waters from almost every point of the compass, holds a course nearly due east for nearly 500 miles, in order that it may discharge them into the Gulf of Paria.

I merely allude to these well-known geographical details, as illustrating the position, and, in some mea-

sure, the formation of British Guiana; for to whatever extent the land may have proceeded from the base of the Rocky Mountains when the "Word of Power" brought them first into existence, we must be satisfied that a large portion of what now forms the solid materials of the present colonies has been deposited as the detritus of these mountains, and the productions of that primitive land which rose along with them.

In the neighbourhood of the ocean, and for many miles inland, the accumulation of decayed vegetable matter, mixed with various earthy particles, and forming one of the richest loams that has ever yet been discovered, is about 150 feet in depth; but, as already stated, I am not aware of any data that can guide us in any conjecture we may form as to the time that may have elapsed since the first diluvial deposit took place. It has lately been ascertained that, under the capital, Georgetown, which stands on the east bank of the Demerara River, near its entrance into the Atlantic, there is a stratum of wood, consisting of large trees, in a state of perfect preservation, at the depth of 100 feet from the present surface; and another stratum of similar trees, partly decayed, about seven feet under the first. These trees, I have no doubt, were brought down from the interior of the country, and collected here at the bottom of what was then sea; there is, therefore, nothing remarkable in their being found here, with other vegetable matters not yet destroyed.

But I should like to know the opinion of geologists with respect to their ever becoming a coal-formation. If heat sufficient to effect the charring or changing of these trees and vegetables, and the consolidation of the clay and earth, in which they are deposited, was brought into action under the pressure of 150 feet of superincumbent soil, should we (when the whole had cooled down to the common temperature of the earth,) find beds of coal and rocks on the banks of the Demerara, similar to those that now exist on the banks of the Humber? My opinion is, that, sooner or later, a subterranean fire may be generated here, which will not only change the materials that have been deposited, but, by the expansive force of the generated steam or gases, cause this now level plain to assume all those inequalities of surface, and all the other internal phenomena of a volcanic country. In the mean time, however, it may be fairly considered as a happy and a blessed land. It is neither subject to hurricanes, nor affected by earthquakes: some old men do say that they felt a slight undulating motion of the earth when the Caraccas were nearly destroyed, in 1812, and that the noise and commotion that occurred shortly afterwards in the island of St. Vincent, and of which I have already given an account, were more or less heard and felt in the colony of Demerara. But the existence and steady upright bearing of the many tall and slender chimneys which are met with on every estate,

—many of them of great height,—sufficiently attest that this spot of earth has acquired a firm resting-place, and has not as yet been subjected to any regular convulsion of nature. The mountains from which the rivers of this district arise, and the countries through which they pass, are either deficient in those minerals which, coming in contact with each other, produce by their chemical attractions, a developement of those phenomena which give rise to earthquakes and volcanoes; or they have not as yet been pressed into such close connexion as to cause their action or reaction upon each other.

There are no springs of fresh water within the limits of our cultivation, for the clay soil is impermeable; it therefore became necessary to build tanks, and to use every means for preserving the rain-water as it fell from the clouds. This must have been a matter of very serious consideration with the first colonists, and, indeed, up to a very late period, had there been a failure of the usual wet seasons, the colony would have been destroyed. But the talents and exertions of two able and excellent men have at last relieved their fellow-colonists from all danger of suffering from the changes or chances of the weather.

Dr. M'Turk, who went to the colony as a professional man, and who was, and is, the most able physician in the whole province, is equally distinguished as a man of science and of keen observation.

His herculean frame, active mind, and happy temperament, enabled him to penetrate into the woods, and explore many of the wilds, which were even impassable to the native Indians. His zeal and his exertions for the improvement of his adopted country, and the general benefit of his fellow-colonists, were not likely to escape the notice of so able a judge of mankind as Sir Benjamin D'Urban, the late Governor of British Guiana. The Doctor was, therefore, drawn away from his professional pursuits. He became the aide-de-camp and privy-councillor of the Governor; and although this might, and did, injure him greatly in a pecuniary point of view, it proved of the utmost importance to the present and future prosperity of the community.

In his wanderings through the woods, as commandant of the district militia, in search of runaway negroes, or European deserters, Dr. M'Turk discovered a fresh-water lake of some extent; and his comprehensive mind saw at once the practicability of bringing its waters, by an artificial canal, to supply not only the wants of the capital, but also the many cultivated estates through, or near to, which it might pass. The Doctor had examined the country with the eye of an able engineer, and when he submitted his plans to Sir Benjamin D'Urban, they were already so well matured, that the work might have instantly commenced.

An official survey took place, as a matter of form.

The correctness of Dr. M'Turk's views and estimates were most fully proved, and money was subscribed to carry them into effect, as also a board formed, of which the worthy Doctor was chairman, to uperintend the formation of the LAMAHA CANAL. This important and most necessary work was completed in an incredibly short space of time; and a large body of fresh water is brought from a distance of many miles, and in a constant stream, quite sufficient for the supply of Georgetown, and of the whole of that portion of the colony through which it passes. It is only justice to this benefactor of his species to record the following letter, which has come into my hands, as not less honourable to Dr. M'Turk, than to the late Governor of British Guiana.

King's House, Demerary,
18th September, 1826.

SIR,

I have the honour to transmit to you a minute of proceedings of the Court of Policy respecting the Fresh Water Canal, and to request that you will convene the Committee of the Canal, for the purpose of calling together all the proprietors and representatives concerned in it, and of giving effect to the Resolutions of the Court.

It will not escape the Committee, (although I do not perceive that it has been adverted to in the minute,) that the first, and most essential perhaps, of the Regulations, which they will have to frame, in conjunction with the other members of the General Committee, will be one which may ensure the digging of that part of the canal which still remains unfinished, so as to open its communication with the Lamaha.

Since it is only when that shall have been completed, that

a permanent source of water will have been secured; experience having proved that the supplies of the savannah cease to be of avail after a long period of drought.

Together with my cordial concurrence in the thanks of the court to you, and to the committee, for your joint exertions in this important work, I desire to express to you, Sir, in particular, the high and just sense which I entertain of the sagacity with which you suggested the practicability of supplying Georgetown with water from the Lamaha, and of the public spirit and perseverance with which you devoted yourself to the task of tracing the windings of the Mahaica, to discover the best source of water; and after that was found, to the still more arduous and laborious one (performed with so much ability and success,) of laying off and measuring, along such a distance, and through the untrodden woods and savannahs of this country, the course and direction of the intended aqueduct.

You have rendered a great service to the colony, for which, deeply interested as I must ever be in its welfare, I am bound to offer you the tribute of my praise, and of my sincere acknowledgments.

I have the honour to be, Sir,
Your most obedient and most humble servant,
B. D'URBAN.

To the Hon. M. M'Turk, M.D.,
Chairman of the Committee, &c.

The other individual whose name will be held in grateful recollection by succeeding generations, is Major Staples, comptroller of His Majesty's Customs. This gentleman, also, endowed with talents and enthusiasm of no ordinary cast, had fully convinced himself, that fresh water might be obtained by boring through the alluvial impervious clay soil into the

permeable strata of the earth, and that as soon as these were reached, the water would rise to the surface, as had been proved in what were called the Artesian Wells. Major Staples sent to England for machinery; and after many disappointments, and constant application, and a great expense, he succeeded in instructing the negroes how to work that machinery; and at last, when he had nearly exhausted his pecuniary resources, he happily reached the required depth, and the sparkling liquid rose several feet above the present surface of the earth*. The supply has continued most abundant, and the fountain still flows without intermission, or any diminution.

This water was found to be perfectly fresh and palatable, but slightly tasting of iron; and, on analysis, it was discovered, that a considerable quantity of the carbonate of iron was held in solution, but that on being boiled, or exposed to a free circulation of the atmosphere, it was decomposed and precipitated, leaving the water fit for all domestic purposes. If taken or used as it flows from the fountain, it is an agreeable, mild, and most beneficial chalybeate.

* It has since been observed, that in proportion to the height of the tide on the coast, and in the river, so will the column or jet of water vary in height, to the extent of several inches; obviously from the increased pressure upon the superincumbent clay.

The Governor and Court of Policy rewarded the Major for this important discovery with a small grant of money; and he was allowed to erect handsome baths and rooms for drinking these strengthening waters. But the majority of the good folks of British Guiana are too intent upon acquiring wealth, to bestow much time upon such luxuries; I am therefore afraid, that the temple which the Major has erected to the goddess of health has not been as yet a profitable concern, and that the honour of being considered a benefactor to his country will be the chief reward he will receive for his invaluable and important discovery. The success of Major Staples has induced many proprietors to bore for water in other parts of the province, and they have almost all succeeded,so that already one great drawback to their turning their uncultivated land into cattle farms has been obviated, and fresh beef, which sold four years ago, at one shilling the pound, can now be bought for sixpence; and mutton, which till lately could not be purchased for less than three shillings, may now be had at one shilling per pound*.

* This was officially notified in the following letter from the Government Secretary of British Guiana to the Commissary-General, Barbados.

Government Secretary's Office,

SIR, *23d December*, 1835.

I have it in command from His Excellency the Lieutenant-Governor to acquaint you, that excellent fresh beef may

If the Chinese mode of boring were adopted here, it would be found a much more easy and economical method; and as it has been tried, and found to answer so well, by M. Sellow, in the neighbourhood of Saarbrück, in Germany, I can see no reason why it should fail in British Guiana. If the bore were carried further

be had for the daily supply of the King's troops occupying the different posts and barracks in this province, at a price not exceeding sixpence per pound, provided only that the contracts be subdivided and entered into so as to suit the convenience of persons in the immediate neighbourhood of each military station, and not given to one general contractor, as is the case at present.

Sir James Carmichael Smyth would recommend that there should be five contractors employed in this colony; viz. one for Eve Leary, York and Albany, Fort William Frederick, and Kingston; one for Capouey; one for Fort D'Urban; one for Mahaica; and one for Fort Canje and Fort Wellington: several respectable inhabitants have conferred with His Excellency upon the subject, and have expressed their willingness to supply the posts in their immediate neighbourhood, provided only a sufficient quantity of fresh meat should be required so as to make it worth their while.

If a daily issue of fresh meat should not be judged advisable, fresh beef for five days in the week might be contracted for. Should you think proper to adopt His Excellency's suggestion, when the period arrives for advertising the contracts, it would be advisable to state that the offers are not to exceed sixpence per pound.

I have the honour to be,

Sir,

Your most obedient humble servant,

H. E. F. YOUNG, *Gov. Sec.*

down, I am convinced that a much purer water would be obtained, and by means of M. Sellow's apparatus they may penetrate to any depth. We know, that by boring through the London clay, water will rise to the surface as soon as we reach the plastic clay formation, but it is neither of the same quantity or purity as when we penetrate a little deeper, and reach the chalk. The same facts will be found to occur in British Guiana. A pipe made to pass beyond the present ascertained ferruginous strata, will bring the stream up in more abundance, and in greater purity, from a lower stratum.

The instrument used by M. Sellow, is a solid cast-iron bar, about six feet long, and four inches in diameter, armed at its lower end with a cutting chisel, and fixed in a hollow cylinder, which has space enough to allow the detritus of the perforated strata to be received. The solid heavy bar of iron, and its case, are attached to the end of a long rope that passes over a wheel or pulley, fixed over the spot where the hole is to be made; and as this rope is raised up and let down over the wheel, its torsion gives to the iron bar to which the chisel is attached a circular motion sufficient to vary the application of the cutting edge at each descent. When the chamber is full of earth, the whole apparatus is raised quickly to the surface and unloaded, and then returned to the bore. In

China they have gone down to the depth of 1000 feet; and the German engineer who has introduced it into Europe, says, that he has lately made perforations of eighteen inches in diameter, and to a depth of several hundred feet.

The rapidity and luxuriance of vegetation require to be witnessed in this colony to enable the naturalist to appreciate to their full extent the influences of light, heat, and moisture, acting upon a rich virgin soil. The quantity of vegetable matter elaborated from a very limited quantity of earth, in some of the plantain-walks, is not to be described. The height and circumference of the trees, the enormous load of fruit, and the number of trees that have evidently sprung from the same root, appeared to me more wonderful than any other fact I had witnessed in the West Indies.

The plantain is the chief food of the negro population, and is a most wholesome and nutritious vegetable; and, unless in extraordinary dry seasons, they are so very abundant, that a day's food may be bought for a penny. Salt fish, or a little salt meat, is generally eaten with the roasted plantain; and salt fish is evidently preferable, and is certainly less pernicious than either beef or pork. It affords a far better relish to strong farinaceous food, and does not so soon taint the vital fluids. The soil here is too rich for raising good

yams. They become of a great size, and are generally strong-tasted and disagreeable. The Indians cultivate a species, known in the colony as the Buck-yam, which is small and well-flavoured, and makes a very excellent food. The sweet potato and cassava root are very abundant; and almost all the fruits and vegetables of a tropical climate are found wild, and, when cultivated, arrive at great perfection. But Guiana is in no way remarkable for its fruits,—they are not cultivated; and the brushwood becomes so abundant, wherever the land is neglected, that it destroys in a great measure all other vegetable productions. When, however, this wood is uprooted, and its re-appearance is prevented, the surface of the earth becomes covered with an abundance of grass, and with a thousand different varieties of plants, including almost all the species that are found in any other of our colonial possessions. The natural grasses are too rank and strong to be wholesome, even for cattle; but the Guinea-grass, and others, are most productive when cultivated.

The fields here, and even the forests in the interior, are most interesting to the botanist. To the mineralogist, the cultivated portions of the colony are altogether barren, not even a pebble can be found in the mud; and the conchologist may travel for the whole extent of the territory and not find a single living shell on its shore.

Of the productions of animated nature, the extent and variety are such, that no one as yet has attempted to enumerate them. The beauty and variety of the birds, the innumerable species of reptiles and insects, with the other inhabitants of the rivers and the forests, are so extensive, that it will require ages to discover them, and would fill volumes to describe them. I cannot give more than a very limited catalogue of some of the most remarkable varieties of each class; indeed, I shall only mention such as I have myself seen, and a few of which I have preserved in my little museum. The reader may consult the works of Waterton, Handcock, and others.

The following list of a collection, made by my much-esteemed friend, Dr. William Fraser, health-officer at Demerara, and the companion of Mr. Waterton in many of his wanderings, will give some idea of the variety and of the rarity of many of the species found in this territory. It contains, however, but a very small sample of the riches of this inexhaustible field.

MAMMALIA.

Indian Name.	*English Name.*	*Linnæan Name.*
Bees-sa,	Black-bearded Monkey,	Cercopithecus (biza).
Sak-u-winki,	Little Spotted, Dark Brown, and Black Monkey,	Cercopithecus.
Bo-huri,	Large Vampire Bat,	Vespertilio Vampyrus.
Ub-u,	Guiana Porcupine,	Hystrix prehensilis.
Ware-mi-du, *(Loiar)*	Sloth,	Bradypus tridactylus.
Yea-si,	Armadillo,	Dasypus duodecim cinctas.

BIRDS.

Indian Name.	*English Name.*	*Linnæan Name.*
Ca-tita,	Dark Gray Hawk,	Falco (vespertilio).
Mur-ku-di,	Horned Owl,	Strix bubo.
Tura-tura,	Screech Owl,	Strix stridula.
	Barking Owl,	Strix (latrans).
Uit-ik-ki, Ques-quedi,	Tyrant Shrike,	Lanius tyrannus.
	Forked-tailed Shrike,	Lanius furticatus.
Hia-Hia,	Mailed Popinjay,	Psittacus accipitrinus.
Suri-Suri,	Blue-headed Green Parroquet,	Psittacula (Suri-Suri).
Bar-is-se,	Iron-gray Parroquet,	Psittacula (Baris-se).
Kis-kis,	Yellow-headed Parroquet,	Psittacula (Kis-kis).
Bour-a-di	Bill Bird, or Large Toucan,	Ramphastos tucanus.
Scirou,	Black-billed Aracari,	Ramphastos luteus.
Yan-a-kali,	Aracari Toucanette,	Ramphastos viridis.
Hou-tou,	Houtou, or Momot,	Ramphastos momot.
Hoo-du-di,	Large Red-headed Woodpecker,	Picus erythrocephalus.
Tau-ar-a-titte,	Large Red-crested and Speckled Woodpecker,	Picus tauaratitte.
	Little Brown-spotted Ditto,	Picus rufus.
	Little Green-spotted Ditto,	Picus viridis.
Saka-saka-di,	Alatli, or Cinereous Kingfisher,	Alcedo torquata.
Huna-way-ducatu	Green Jacamar,	Alcedo galbula.
	Black Jacamar,	Alcedo niger.
Ya-wara-ceri,	Blue-creeper Guit-Guit,	Certhia cerulea.
	Azure Blue and Black Ditto,	Certhia (elegans).
	Green with Black Cap Ditto,	Certhia viridis atricapilla
Kara-bimitti,	King of the Humming-Birds, or Topaz Colibri,	Trochilus pella.
Hona-bimitti,	Ruby-Topaz Humming-Bird,	Trochilus moschitus.
Tic-tic,	Gray and Yellow Tody, or Fly-Catcher,	Todus cinereus.
Huie,	Ani, or Black Witch,	Crotophaga ani.
Qu-a-o,	Bald-headed Brown Crow of Guiana,	Corvus quao.
Hibi-birou,	White Coir, or Guiana Jay,	Corvus Cayanus.
Cu-i-a,	Red-bellied Curucui,	Trogon curucui.
Arawallakin,	Red-throated Tamatia, or Barbet,	Bucco tamatia.
Boun-ni,	Crested Cassique,	Oriolus cristatus.
Asa-wa-koo,	Black and Yellow Cassique, or Yapou,	Oriolus persicus.
Ya-bana,	Red and Black Cassique, or Jupuba,	Oriolus persicus.
Wak-we-ana,	Troupiale, or Yellow Plantain Bird	Oriolus ictericus.
	Yellow-headed Oriole,	Oriolus icterocephalus.
	Black, with Yellow Crown, Japacani,	Oriolus pullo luteus.
Hic-orc-ana,	Rufous-backed Cuckoo,	Cuculus rufo et ceruleo mixtuo.

Indian Name.	*English Name.*	*Linnæa Name.*
	Rain Cuckoo,	Cuculus pluvialis.
Quak-cu-ara,	Speckled Puff-back, or Nuthatch	Sitta maculata.
	Black-headed Nuthatch,	Sitta atracapilla.
Quo-ras-iri,	Common Thrush,	Turdus Guianensis.
Hoa-hori,	Belfrey Alarum, or Ground Thrush,	Turdus tinniens.
Ha-way-arurruru	White-eared Anter, or Thrush,	Turdus auritus.
Dara, Campanero	Bell-Bird, or White Cotinga,	Ampelis carunculata.
Hi-ki-li-kan,	Fire-Bird, or Scarlet Cotinga,	Ampelis carnifex.
Wal-la-baba,	Pompadour Cotinga,	Ampelis pompadour.
Ha-we-ari, (two kinds,)	Purple-bellied and Purple-throated Blue-Riband,	Ampelis cotinga.
Pi-Pi-a,	Pye-Pia, or Grey Cotinga,	Ampelis cinerea.
Abui-aliki,	Yellow Grosbeak,	Loxia Guianensis flava.
Mac-ku-yu-du,	Red-breasted Madow-Bunting,	Emberiza rubi pectora.
Sac-ki,	Blue Sac-ki,	Fringilla cerulea.
	Purple Sac-ki,	Fringilla negro purpurea
	Blue and Black Tanagre,	Tanagra Guianensis cerulea.
	Black, with Yellow Crown, and breasted,	Tanagra chloro capilla.
	Blue Pit-Pit,	Motacilla cerulea.
	Fork-tailed Fly-catcher,	Muscicapa tyrannus.
Cow-an-arro,	Cock of the Rock,—Gallo del Rio Negro,	Pipra rupi colla.
Salu-lu-petiti,	Gold-headed Manaking,	Pipra capito fulvo.
Hadi-au-seru,	White-crowned Manaking,	Pipra leuco capilla.
	Nut-cracker Manaking,	Pipra gutturalis.
Wa-qua-raio,	Wak-ario, or, "Who are You?"	Caprimulgus Guianensis
Mac-i-di,	"Whip-poor-Will," or Great Goat-Sucker,	Caprimulgus grandis.
Marn-baba-ba,	"Will-come-go,"—the Lesser Ibijan,	Caprimulgus acutus.
Dura-quar-a,	Guiana Partridge,	Tetrao Guianensis.
Cury-cury,	Scarlet Ibis, or Curlew,	Tantalus ruber.
	Lapwing Plover,	Tringa squatarola.
Houn-nu-li, or Tacurou,	White-streaked Green Stork,	Ardea virescens.
Cari-we-ma,	Blue and Green Sultana Hen,	Fulica viride cerulea.
Asi-ruli-kin,	Water-Dog Bird, or Grebe,	Colymbus cinereus.
	AMPHIBIA.	
U-ana,	Guana,	Lacerta iguana.
Cayman,	Common Alligator,	Lacerta alligator.
Gas-i-keru,	Rattle-Snake,	Crotalus horridus.
Couna-Coushi,	Bosch-Master (a fine specimen, 9½ or 10 feet long).	
	FISHES.	
	Sea Hedge-Hog,	Dioden hystrix.

Every creek or inlet upon the shore is crowded with the beautiful Curry-Curry, and other birds of that species. The bright scarlet colour of one, contrasted with the snowy whiteness of others, and the variegated plumage of many, cannot fail to attract the attention of every stranger as he sails up the river towards Georgetown.

I am quite satisfied, that many of the swallows that leave England in the end of September, or first weeks of October, travel as far as the shores of British Guiana; but the route they take, or the time occupied in their aërial voyage, are questions on which I can offer no opinion. On the 23d of November, 1834, I find it entered in my journal at Demerara, that for some days previously I had observed swallows for the first time. That some were evidently the swift, or martin, but the greater number were the common house-swallow of Europe. They were not in any large numbers, nor did they appear to be stationary. Near to the house in which I resided, and close upon the sea-shore, there grew a silk cotton-tree, of great size; and it was upon the widely-spread branches of this tree, which at the date mentioned were partly without leaves, that I discovered them early in the morning, and where they generally rested during the day. Towards evening they would occasionally hunt for flies, but with a sluggish drowsy flight, as if tired

and worn out; and what was remarkable, they had always disappeared the second morning, and it was not perhaps for a day or two afterwards that I would find, on coming down stairs at sunrise, the branches of the silk cotton-tree again occupied.

After the 26th of November, I do not observe that there are any more instances of these arrivals; and from the time that they first attracted my attention, up to this last date, the wind was steady from the north-east. The next remark which I have recorded of the swallow, is on the 20th of January, 1835. They were then in immense numbers, and seemed revelling with delight on some anticipated change. I watched them for hours sporting on the banks of a large canal, near where the large silk cotton-tree before mentioned was. Their manner of flying, rapid gyrations, and joyful chirp or cry, reminded me exactly of many a scene I had witnessed on the banks of the Thames at Hampton Court. There was a bridge, too, over the canal here, and it required no great stretch of fancy to believe, that I had seen the same lively birds chasing each other in sport under the arches of Hampton Court or Richmond Bridges, as they were now doing under and over this on the Cummingsburg Canal. As night closed in they seemed to settle upon the branches of the silk cotton-tree, and amongst the brushwood on the banks of the canal, but at daylight

next morning not a single swallow remained behind. These are facts carefully noted at the moment they were observed. Throughout the whole summer, one or two of the swallow tribe might be seen occasionally, but it was only in November and the end of January that they appeared in numbers, and then, as was abundantly evident, only as birds of passage. The swallow was the only European bird I saw in British Guiana, or in any of the West India Islands.

The most common of all the winged insects in the West Indies, seemed to be varieties of the *Libellula*, or dragon-fly; some very large.

In Barbados and the Islands I observed them in particular places only, attracted, as was evident, by some peculiar fruit or food; but in my Demerara journal I find, under the date of 30th July, that immense numbers were passing my residence in a column of great extent, moving slowly, but in a constant stream, towards the north-east. They were flying very low, not above twenty feet from the earth's surface, and seemed very small and weakly. August 28th, the entry is, "Dragon-fly again, very numerous to-day; but they keep high in the air, passing over the tops of the tallest trees. There were several showers of rain yesterday, but none to-day, and the sea-breeze (north-east) has been pretty strong and constant. 29th August,—Not a dragon-fly to be seen. The air now (2 P.M.) is very hot and

sultry, and within this hour an innumerable flock of a beautiful yellowish-white butterfly has made its appearance, and are sporting in every direction among the branches of the tall trees, the low brushwood, and the long grass,—wind westerly ;—3 P.M., wind now from the east, and the dragon-fly has again appeared, moving against the sea-breeze." I do not find any further notice of the dragon-fly till the 8th January, 1835, when it is stated,—"Noon, fair and cloudy, with wind strong from the north-east ; for the last half-hour the dragon-fly has been passing to the south-east in great numbers, not flying high ; when first observed, 30th July, they were moving in a north-east course, equally numerous. To-day, their direction is due south-east. August 14th,—After a shower of rain, a few dragon-flies observed passing to the south-east, but now they fly higher." After this date they were no longer observed. I here add another extract from my journal :—"Nov. 30th, 1834,—About seven o'clock this evening, during a heavy shower, with a strong breeze from the east, the windows were nearly broken in by a flight of beetles, called here the 'Hard-back.' Wherever the windows were open they nearly filled the rooms, and in many instances extinguished both candles and lamps, as they evidently made for the spot where light appeared. In one of the large globe glass shades, which protected the lamp over the mess-

room table of the 86th regiment, at Eve Leary barracks, 475 were taken, as in a trap. How far this swarm extended I have not learned, but at my quarters, which was perhaps half a mile from the mess-room of the 86th regiment, they were nearly as numerous, though the wind did not blow from the barracks towards my house. The time occupied in passing was about half an hour."

The sand-flies begin to be very troublesome towards the end of January; they seem to move in clouds along the coast. The mosquito evidently had its set times for appearing in countless numbers, though, unfortunately, it was never altogether absent.

When the mosquitos first swarm, they are very troublesome and annoying; and it is only by the smoke of grass, or green wood, that a room can be made habitable. The ova of this insect are deposited on the leaves of aquatic plants, or on the surface of stagnant water. The young fry live for some time in the water, when it is scarcely possible to drink a mouthful without swallowing a dozen. They are like the jumpers in decayed cheese, as they move in the water by jerks, and not regular swimming. The time that they remain in this state I could not ascertain; but when it is accomplished, they rise from the pools in myriads, as winged insects, and are then most blood-thirsty.

The number and variety of frogs which swarm in the

ditches and canals around Georgetown are scarcely to be credited, and the croaking they make during the night, and even in the daytime, is unceasing. There is a species, called the *Whistler*, which has a sharp distinct yelp, or whoop; but the usual noise is a continuous sound of hoarse or bass notes, that occasionally have something of a musical cadence, rising at times into a loud and somewhat mournful swell, that gradually sinks, and "in hollow murmurs dies away." One particular frog evidently leads the choir in every pond, while his companions join in the chorus. The strain is taken up by a thousand separate communities, and is prolonged throughout the whole night.

If I except one little brown bird, of the wren species, that used to welcome the rising sun with its sweet little notes of praise, soft and plaintive like the robin in England, I can truly say I did not hear anything like "the song of birds" in British Guiana. The beauty and variety of the feathered tribes in this province have often been remarked upon, but the care and ingenuity with which many of them provide for their own safety, and that of their young, one might almost suppose was the result of reason and some reflection. Those who build on high trees always choose the extremity of a suitable branch on the lee-side of the tree, and one that is in some measure shaded or covered by a larger branch above, but which does not touch or come in contact

with that upon which the nest is placed. Every nest is protected by a roof, or covering of thatch, through which no rain can penetrate. I have watched for hours the progress of their building-operations, on the trees near my residence; it did not seem in any way to be a joint concern, for the lady evidently had it all to herself, and she was indefatigable in her labours. The covering, or the thatched roof, was the first portion completed; it was composed of coarse grass or straw, laid over the principal stem of the branch, which formed the roof-tree, and in sufficient quantity to throw off the heaviest rain. As soon as this covering was completed, the proper nest was commenced, and seemed to be composed of the finest grass, hair, feathers, and moss, selected with great care. How these nests were attached, whether to the branch or to the covering, I had no means of ascertaining; but they appeared to be fixed in a secure manner, and, when once completed, to require only a little repairing, or touching up, for every succeeding family.

The birds here hatch twice in every year, if not oftener, and generally commence building or repairing their nests as soon as the rainy season ceases. During the heavy rains, the old nests are resorted to as a place of shelter, and as frequently by stranger birds as by the original builders, or any portion of their families; but I never could perceive that they

were kept hold of by force, or that any attempt was made to dispossess the owner, when the season arrived for their proper occupation.

A few additional extracts from my diary will give the reader more correct information than any statement made from recollection. "August 30, 1834.—For some days I have observed the yellow-breasted plantain-bird busy building her nest near the extremity of a branch of one of the large oronoko-trees in the garden. I have watched the proceedings of this bird with some attention: she comes down to the ground, picks up a straw or two, or a tuft of grass, with which she flies up into the tree, but never to that branch where the building is going on; she generally goes to the very topmost, or a distant branch. I have timed her by the watch, and find she will often take three or four minutes to move from branch to branch, and in carefully surveying all around her, before she steals to the nest to deposit her store: she does not consume much time in placing the materials. Sept. 11.—The nest has been completed some time, and the bird is now hatching."

The little wren which I have already mentioned, seems to be so alarmed and annoyed by what is here called the lazy-bird (the *Cuculus rufo*), that she seeks and avails herself as much as possible of the protection of man, building her nest in the most fre-

quented rooms of the house. One actually hatched and reared her young brood under a table in the mess-room of the 25th regiment, at Eve Leary barracks, a room frequented by hundreds daily, and where noise and uproar generally prevailed for half the night, yet nothing seemed to disturb her. To hang up an empty soda-water bottle in the open viranda is considered by this bird as a great boon, as in it she finds a retreat which the lazy-bird cannot reach; yet it is a most remarkable fact, that should the lazy-bird succeed in getting her egg placed in the little wren's nest, she not only hatches it, but is most indefatigable in procuring food for the ravenous maw of the alien monster that has destroyed her own natural offspring.

Here, as in Europe, the young of the foster-mother disappear as soon as the young cuckoo is hatched. Can it be a recollection of the cruel fate of her own young, and of the additional labour she will have to undergo, that makes her thus so persevering in her endeavours to escape from the pursuit of her remorseless persecutor? I saw a lazy-bird to-day follow a wren into the drawing-room at Camp House, and was with difficulty driven out, and prevented from taking possession of the wren's nest."

Though forests, and even individual trees (to the casual observer), generally appear green and covered with leaves, I observe, by attending carefully to the

changes they undergo, that they shed their leaves regularly. I find entered in the diary the following:—"Nov. 23, 1834,—rain almost every night for the last fortnight; vegetation has sprung up wonderfully during the last week, and the earth's surface is again of a lively green; some trees are nearly stripped of all their leaves, while others of the same species have a full fresh foliage."—"December 26,—no rain for two days, but on the 21st and 22nd it fell in torrents, with the wind at west and north-west, and thermometer at 73 and 75. Some birds have been building their nests for the last week." "February 1, 1835,—there are two silk cotton-trees growing within a short distance of this house, and about a hundred yards apart from each other. This day one is as bare of leaves, and has as wintry an appearance as any forest-tree in England at Christmas; the other is clothed in the fresh green foliage of Midsummer." "February 5,—the silk cotton-tree, which on the first instant was naked and bare, is now loaded with leaves of a dark-green hue, and as fully expanded as those of any tree in England in the month of June." "February 12,—the rains seem over; all the birds are now busy building their nests. The pair of plantain-birds that I noticed on the 30th of August, are repairing their former building, while another pair of the same species have selected a tree close to the window where I am writing these notes,

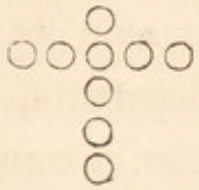
and are labouring hard to complete their work;—can they be of the brood of last September?" "Feb. 20,—the birds are now hatching; the yellow butterflies are still numerous; a green grasshopper has become very common, and a small white butterfly has just made its appearance."

During dry weather here the breeze is steady and pleasant, dense fleecy clouds flit across the heavens, almost constantly obscuring the sun's direct rays, and affording a pleasant and even cool shade at noon. There was nothing of this at Barbados; it was either the fierce fiery glare of the sun, or a dark lowering cloud charged with rain, which always descended in torrents. "Feb. 22,—I have continued for the last hour watching the progress of an Ichneumon fly, called here 'the Mason Bee,' in building one of her villages or collection of breeding-houses in the centre of the ceiling of my dining-room. There were two days of previous investigation, not only of the ceiling, but of every part of the walls of the room, before the spot appeared to be decided upon. This, however, seems to have been done last night, for this morning as soon as it was light the building commenced. The houses are formed of clay, tempered with some gummy liquid; the foundation is laid in a circle, and rises in the form of a cone, thus:—

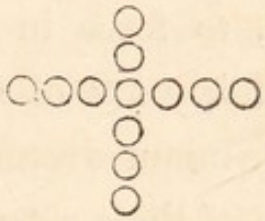


A is the entrance, left open like a chimney."

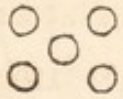
It is not often that the bee builds on the ceiling; she generally prefers the panel above the room-door, or one of the side-posts, and will sometimes erect ten or a dozen of these separate habitations, and they are always placed in a crucial form, thus—



or thus—



and when fewer in number, they will stand thus—



or thus—



One good old lady took up her position within a foot of the sofa on which I was accustomed to lounge during the extreme heat of the day. I therefore could watch all her motions without any trouble. I copy here the memorandum made at the time: "House completely built in about three hours; diameter of the foundation-circle 6-8ths of an inch, height when completed, 5-8ths, and door or chimney projecting scarcely 1-8th. I could not decide whether more than one bee was occupied in the construction, because they are so much alike; but there never have two appeared at the same time." When the building was finished, it was left for the remainder of the day to consolidate, and it soon became quite hard and dry. Next morning, as soon as the sun was up, I found the labourer of the

preceding day arrive, and in her arms a long slender green caterpillar. She approached the open door or chimney, but did not rest on it, for while hovering on the wing she contrived to push the head of the caterpillar into the hole, and then gradually, and by piecemeal, to force in the whole body. As soon as this was fairly out of sight, she took her departure, and in five minutes returned with another victim. I counted seven of these caterpillars pushed into the same building. The eighth time she returned without a caterpillar, but with a load of clay, with which in an instant she closed up the open door, and immediately began to lay a new foundation. This she finished before noon, and left it to dry for the rest of the day. Next morning I saw her bringing the caterpillars, but did not remain to count them.

I allowed the process to go on for four days, when with a sharp table-knife I removed the first nest from the wainscot, and found the ova hatched, and the caterpillars, in whose bodies they had been deposited, nearly all destroyed by the young grubs. In the second the ova had not burst, and in the third the cell was quite crammed with the still fresh bodies of the green caterpillars. I found in the huts that had not been disturbed, the wall broken on one side or other, and that when taken down they were quite empty. Here then we find the insect first preparing a prison for the

caterpillars, in whose bodies she deposits her ova for the purpose of being hatched, and which bodies also supply the young with food, until able to destroy the wall of the building, and find nourishment elsewhere.

To the Ichthyologist, the rivers and shores of British Guiana are rather a barren field; they are not frequented by any large numbers, or any great variety, of fish fit for food. The *Snook* and the *Grouper* are both excellent, and a small white mullet when in season is tolerable. Prawns when taken at low water are reckoned very good; but as yet the fish market is very badly supplied. There are, however, one or two inhabitants of the waters that are rather interesting. The *Cayman* and the *Manatee** seldom come within the boundaries of cultivation, though they are met with higher up the river, and in the creeks. Sharks are very abundant and most voracious, and the human being that accidentally falls into the river is almost instantly carried off. By far the most numerous and most constant visiters of the canals and mud-shores are what are called the *four-eyed fish*. They are, I suppose, the same that are mentioned under that name, as common at SURINAM,—the *anableps*. They are said to be viviparous, but this I doubt. The fish I allude to are seldom more than six inches in length, with a large broad flat

* Trichecus Manati.

head, with the body tapering down to a point at the tail. They move in considerable shoals, and seem to congregate most where the stream is foulest, moving up the canals when the first ripple of the tide raises the mud at the bottom; or collecting in great numbers at the mouths of the canals when the tide is out, and seem to luxuriate in what is more a thick *mire* than muddy water. What gives them the appearance of having four eyes is a division of the cornea into two parts, by a narrow membranous band, each division appearing to have its own pupil and crystalline lens. The division is horizontal, and one pupil is considerably larger than the other.

On approaching the river on a fine morning, the surface of the sea is often covered with what every seaman knows as the *Portuguese Man-of-War*, and the reflected sun-beams from their expanded air-bladders afford an endless variety of the most brilliant colours.

In the barrack-yard at Kingston there is a large pond which has been formed for the convenience of the soldiers, and to preserve water to wash their clothes and barrack-rooms. It has no communication with any ditch or canal; it receives no water but from the clouds, and gives off none except by evaporation, or what is taken by the military for domestic purposes; yet I find it stated in my journal *on the fifth of December*, 1834, that this pond was swarming with the

fry of the white mullet. The question which naturally suggested itself was, how were the ova conveyed here? The nearest canal or trench to which the mullet could have access for spawning, is at least twenty yards from the margin of this pond. I therefore consider it impossible for the fish to have made their way by land. Could the ova be carried up by some water-spout, and descend with the rain? I doubt this; and, indeed, the only probable solution of the fact is that the frogs feed upon the impregnated ova of the fish deposited in the salt-water canals, and carry them into the pond, where they pass through the intestines without having undergone any change. And as this pond was generally crowded with frogs of all sizes, from the *Crapauds* to the *Whistler*, there could be no difficulty in accounting for the large quantities of such ova that had evidently been brought to this rendezvous.

With these remarks I conclude this part of my subject, and shall now proceed to a consideration of the several nations of the human race that are considered as indigenous to this corner of the world.

Within the limits of British Guiana, there are five distinct tribes, or nations, of the human species, who have each their separate territories, in which as yet they reign supreme, and who roam at liberty through the woods and wilds in search of a precarious subsistence, or for objects which they have learned will be

purchased by the settlers on their immediate borders. For the purpose of traffic, there are generally some of each nation in or near Georgetown :—1. The Arrowaaks, on the east bank of the Demerara River, are nearest to our cultivation, and the most frequent visiters in the colony. 2. The Accawai are the neighbours of the Arrawaaks, on the west of the Demerara. 3. The Carabeece, the original people who sent their colonies to the islands in their neighbourhood, and have given a name to these islands, and to the sea that contains them. This nation inhabits chiefly the banks of the Essequibo. 4. The Warrows, who live between the River Pomaroon and the Oronoko. And, 5. The Maccusi, who dwell far inland. The latter nation is the least known, and is considered the most treacherous and savage of the whole.

There are two or three other nations that are occasionally met with by travellers in the interior, but they are placed too near the Cordillera mountains to find their way to the Atlantic coast. Those most frequently seen are named the Paramuni, the Attaraya, and the Attamaka.

On the 27th of January, 1836, I had a long interview with six natives of the Carabeece tribe, and purchased of them a few bows and arrows; indeed, they had nothing else for sale, except a common netted hammock, and some pieces of wood, which I believe

they considered as charms. They were all fine, well-formed, powerful men, though low in stature; one, who spoke a few words of English, was about forty years of age,—all the others were under twenty-five. Their native dress consisted of a piece of calico, about three inches broad, tied round the loins, to which was attached a small bag of blue cloth before; and a narrower strip of the same calico, from a yard to two yards in length, behind. One or two had their long black hair tied "*en queue.*" These were the oldest; with the youngsters it hung loose in all directions. They had all put on some temporary covering for the occasion: some had an old shawl, others a fragment of an old Guernsey shirt, or a portion of a woman's petticoat, wrapt round their middle, and which descended about mid-thigh; but these robes were only thrown over their usual dress, for though the bag was hidden and the tail folded up, they were still there, and no sooner had they left the city than the rags were taken off and carefully folded up, and the ribbon-piece streamed from behind like a monkey's tail. He was considered the greatest dandy amongst his fellows who had the longest tail, or who had acquired wealth enough to purchase a silk ribbon instead of the striped common calico.

On the 28th of January, I had a visit from a large party of the Arrowaaks, consisting of men, women, and children. They wear the same dress, or rather un-

dress, as the Carabeece, with the exception as the tail. The men had the blue bag, but the ladies wore a white apron,—the children, *nil.*: they have a milder expression of countenance than the Carabeece, and their young women are not without some winning charms. There was one woman that appeared old, with a young baby at her back, which she informed me was her own child, while her daughter stood beside her, a mother also, with a son more than two years old. The Arrowaaks are of a lighter tawny colour than the Carabeece. The men were of larger size, but more clumsily put together, and more pot-bellied; the whole, however, were strong healthy men and women, evidently living in a wholesome atmosphere, and not much exposed to any of those noxious influences which undermine the constitution, and destroy animal life.

I do not believe that any of this tribes, or nations, of native Indians in this portion of the great continent of South America are very numerous. The Arrowaaks told me that their nation consisted of seventeen separate clans, or families; that each clan was subject in all things to its chief or patriarch; but I could not make out that there was any chief ruler, or king, over the whole nation. Morality is at a low ebb amongst most of them, and chastity scarcely esteemed a virtue, until after the young lady is married; then, indeed, her husband, if he has not already too many wives, will look strictly after her conduct.

Every man is at liberty to marry as many wives as he pleases, and to dismiss them, I believe, whenever he thinks proper. They are a lazy indolent race, spend most of their time in their hammocks, and are seldom roused to any exertion except by hunger, or some other physical want. I think they must have fallen off in size, for few of the men exceed five feet six inches, and the women may be said to average five feet in height; they are, however, in general well made, and whether their deformed offspring are destroyed or allowed to perish I know not, but none are permitted, so far as I could learn, to grow up to manhood. Attempts are now making to introduce into their settlements some knowledge of letters, and of religion; but as yet little progress has been made with those that are even nearest to our borders.

At the commencement of the revolution in Spanish South America, a considerable tribe of native Indians, who had been civilized and converted to the catholic faith by the Jesuit missionaries, left their original country, and, moving across the Oronoko, settled on what is called the Carabean coast of British Guiana. There they have remained in quiet possession of a large tract of country, and of late measures have been adopted for improving their condition, and for establishing amongst them ministers and teachers of the Gospel.

The early Dutch planters considered it a matter of sound policy to choose their mistresses, or concubines, from the young ladies of the olive hue, and thus to keep up a sort of connexion or relationship with the native tribes; and in order to instil into their minds a deadly hatred and dread of the black Africans. There was worldly wisdom in all this; for, by keeping these people at enmity, and in constant dread of each other, the African slave dared not to escape into the woods, as he well knew he would be instantly destroyed by the natives, or sent back in chains to endure tortures worse than death. But notwithstanding the exertions thus made to keep the two people separate and distinct, there are many individuals in British Guiana in whom the African and American blood is intimately mixed. From the opportunities which I had of seeing some of those individuals, I would say that the breed was improved, and that they formed a more intelligent class, and were finer animals, than either the genuine black or the perfectly-pure copper-skin. Even with the white man, the offspring of the American is much more perfect than any breed between the African and European, in all that regards mental and bodily qualities.

The Indians at all times, and even the Africans in this colony, are extremely fond of showing their persons in the robes which Adam and Eve wore "before their eyes were opened;" and it requires all

the exertions of a tolerably well-regulated police to compel them to go clothed, even in the streets of the metropolis. In the country, the negroes never think of such a thing as clothes, except on a Sunday or holiday, and then no men or women can show more splendid or gaudy dresses. When the Africans do dress, their delight is in finery, and even the best of its kind. The Indian nations, on the contrary, do not seem to have any relish for fine clothes; nor are they disposed to encumber their bodies with covering of any kind.

There is a large house, or "Logie," as it was called by the Dutch, in Georgetown, which has always been the head-quarters, or resting-place, of the natives when they visit the capital. Here their hammocks are slung, and here they pick up any rag, or portion of a dress, that they can get hold of, in order to have a sufficient covering to be allowed to appear in the streets, to sell their birds and such other curiosities as they may have brought from the interior; but except, as I have said, a piece of calico, of some gaudy colour, and occasionally a ribbon "to make a tail," they seldom lay out their money on dress. They do not seem to have any great talent for the mechanical arts. It is chiefly a kind of basket, made of split reed or grass, and rough models of their own habitations made of wood, with bows and arrows, that they manufacture;

they seldom bring any other articles of their own manufacture for sale. They move upon the rivers in light canoes, hollowed out of the trunk of a single tree, pushed on by a paddle instead of the oar. Their townships are of no great extent, and their cultivation very limited; they live chiefly by hunting and fishing, and such fruits as the earth produces of her own accord. The only vegetables they do cultivate are the cassava-root, and a very fine species of yam,—"the Buck-yam,"—*Buck* being the common term for native.

The Dutch planters employed none but female slaves as in-door servants, and, up to a late period, it was their custom to compel the young women to attend upon themselves and their guests at table in the aforesaid dress of Mother Eve: they maintained, that it tended greatly to keep these young females virtuous; for so long as they remained innocent they never expressed any desire for a covering, but, as was the case from the beginning, they no sooner had sinned than they found out that they were naked. But all such barbarous customs have now been abolished, and the few Dutch that still hold estates in the colony allow their servants to dress as others, and are only remarkable for having the most orderly and best-behaved domestics in the whole province, and for their unbounded and kind-hearted hospitality.

CHAPTER XV.

MEDICAL STATISTICS.

CLIMATE—DISEASES—COLONY NOW HEALTHY—CLIMATE REGULAR — CHIEF CAUSES OF SICKNESS AND MORTALITY AMONGST BRITISH TROOPS—BARRACKS AND FOOD—DRS. JACKSON AND FERGUSSON'S VALUABLE REPORTS—LITTLE ATTENTION PAID TO MEDICAL OPINIONS BY MILITARY COMMANDERS—FATAL CONSEQUENCES.

In the early stages of colonization, the pestilential vapours arising from the literally boiling mud and undrained marshes of this low and extended coast, must have proved very destructive of human life, and none but a native of Walcheren could possibly have survived above one season. Tradition, indeed, assures us, that in those days even the Dutchman would not put himself to the expense of a new coat until he found he was safe at the end of the sickly season, and that the first moon in October had shown her horns. Some doctor of these ancient days has recorded for the information of his countrymen what they had to expect on their first arrival. The original was in good Hollands, or Low Dutch, but the translation I have met with runs as follows:—

In July you may die,
In August you must,
In September remember,
In October all's over.

But "*on a changé tout cela;*" the sickly season has not lost the whole of its power, it is still accompanied by much sickness, but, under proper management and judicious treatment, the mortality even of *August* is not more than in any other month. We have here one of the most striking effects of the influence of cultivation upon climate that could possibly be adduced.

In addition, however, to what may be called the Marsh-poison, the irregular lives of Europeans in the olden times must have added considerably to the annual mortality. Men first took spirits in the morning by way of precaution against the dangers of the damp climate, as the Dutch and Highlanders generally do, and found the practice beneficial. They increased the dose because they liked it, and repeated it for the sake of good fellowship, and in this way it may be said they were constantly and habitually more or less intoxicated. Hence when the seeds of disease were introduced into their heated and feverish blood, their course under the influence of a tropical sun was very rapid, and the end fatal. As cultivation advanced and draining improved, the sources of the pestilence were at last in a great measure dried up; and now that regularity, good order, and sobriety, are strictly attended to, I hesitate not to affirm that British Guiana is the healthiest colony in the West Indies; and, after an European has formed a little

acquaintance with the mosquitos and sand-flies, it will be found also by far the most pleasant to live in.

The temperature is remarkably uniform, the thermometer seldom varying above one or two degrees at any season of the year. The trade-winds blow steadily for about nine months from the east and north-east, changing in July, August, and September, to the south-east and south; these are called the land-winds, and this the unhealthy season. The average heat at Georgetown in summer is 86 degrees of Fahrenheit, in the shade; in winter it falls to 82 or 83: there were usually two wet seasons, the short one in January and February, and the long one commencing with June; but, as already stated, cultivation has greatly altered these seasons, both as to the intensity and duration of the rains.

There is not, I believe, upon the face of this earth, any spot where a man by industry and economy, and the advantage of a small capital, can acquire in so short a time a moderate independence, and thereby be enabled to return to his native land with a constitution very little impaired.

For many years after we obtained possession of these colonies, the mortality amongst our troops was truly appalling, and it was not till Lieut.-General Sir Benjamin D'Urban brought his great and philosophic mind to bear upon the inquiry, that the true cause of

that mortality was either properly ascertained, or in any way remedied. The reports and remonstrances of the health-officers were either not read or not acted upon.

The first and great cause of disease amongst the troops in British Guiana (*and it is still a principal cause in many of the other West India colonies, as well as in this,*) is the confined and very defective state of their barrack accommodation. The Dutch casernes or barracks that existed when we took possession of the place, were immediately occupied by our troops. These buildings seemed as if they had been purposely constructed to produce disease and death; and really our own engineers and commanders in former days would appear (in many of our older colonies) to have followed, in this respect, the fashion of the Dutch authorities.

Our ignorance, too, of the laws which regulate the formation and movements of marsh exhalations, led us to adopt in theory what has been found most destructive in practice, in all that regarded the most healthy locality for our military stations. Indeed, the subject of West India diseases was never fairly understood, nor properly investigated, until the late Dr. Robert Jackson, and Dr. William Fergusson, now of Windsor, were placed at the head of the medical staff in these colonies. The enlarged and

philosophical view which those distinguished physicians have taken of this most important of all investigations,—the facts they have brought forward,—and the minuteness with which they appear to have inquired into the nature of the soil and climate of every separate station, and all the other contingencies which could affect the health of the troops,—show that they were not only endowed with the spirit of true philosophy, but that they were guided by the zeal and devotion of pure wisdom and philanthropy. Dr. Jackson, however, has well observed, that "although the army medical officer may take whatever liberty he pleases with the soldier's health, and even life, when he has once been admitted within the walls of the hospital, it is worse than high treason to offer any opinion, or give any advice, that may tend to prevent sickness or obviate mortality, while he is as yet an inmate of the barrack-room."

Dr. Fergusson's able suggestions have been for the most part disregarded; and, as I found in my own case, to dare to offer a humble opinion on a subject the most important of all others,—the preservation of human life,—was in these irritable regions considered as almost tantamount to mutiny.

The two great causes of the sickness and mortality among the troops in British Guiana therefore arise, first, as already stated, from a want of proper barrack

accommodation; and, secondly, from improper food,—food improper under any circumstances for a tropical climate, but more especially so for the damp moist atmosphere of Demerara.

I have already offered some remarks on this subject, as it affects the moral conduct and efficiency of our brave troops. I am now to consider it as connected with health, and the preservation of human life in this province, where it may be said to be the most essential of all considerations. Sir Benjamin D'Urban,—whose long experience in camp and garrison is well known, and whose talents, sound judgment, and true humanity, have scarcely ever been equalled,—was very soon convinced that these were, indeed, the true causes of the melancholy scenes he witnessed after he assumed the government of British Guiana ; and that, although their effects were much aggravated by the intemperance and irregularities of the troops themselves, it was nevertheless the bounden duty of every commanding officer to endeavour to have them removed. After much exertion, he did succeed in getting new barracks to a limited extent, built upon sound rational principles ; and by his own authority, he managed for a time to have the troops furnished with a greater proportion of fresh nourishing meat than the army regulations permitted. But the contractors were more powerful at the British Treasury than all the reasoning

and good sense of the General; and a fiat went forth, that the soldiers here, as elsewhere in the West Indies, should only have fresh beef two days in the week; and that for the other five days they must swallow the salted beef and pork sent out from Ireland, without reference to their diseases or the number of deaths! That Sir Benjamin D'Urban would not have submitted quietly to this decision of the Treasury, had he remained in the colony, is evident from the following letter, which he addressed at the time to the Adjutant-General at Barbados for the information of the Commander in Chief.

Demerara, 5th October, 1831.

SIR,

I have had the honour to receive your letters of the 16th and 18th of September, with their enclosures, respecting the extra issue of fresh-meat rations, in lieu of salt, to the white troops in this district.

Before I proceed to make a few observations which I feel it my duty to offer on the subject, it is just that I should correct an error into which the Secretary of the Treasury appears to have fallen in his letter of the 12th August, inasmuch as no extra issue of fresh meat has ever been made to the *officers;* it has been all along restricted to the non-commissioned officers and private soldiers.

During seven years that I have commanded the troops in this district, their varying health has frequently, in the opinion of the medical officers, required the diminution of a salt-meat diet, and a corresponding substitution of a fresh one; and at their recommendation I have accordingly directed this arrangement to the extent which they have, for the time being, judged necessary—(sometimes to five and six days in

the week, and once or twice to a fresh-meat diet altogether), provisionally, however, and awaiting the confirmation of the Commander of the Forces, *which has always followed;* and as often as the medical officers have been of opinion that this extra issue could be safely diminished, I have gradually reduced it again to the ordinary ration of two days in each week.

The first period to which you advert is that of June, 1828.

The grounds of that issue will be found in the letter to me (enclosed) from the Physician to the Forces (having reference to former issues, with their beneficial effects); and, in consequence of my communication thereon, the measure was sanctioned at the Head-Quarters of the command, and the extra issue continued accordingly,

In the following December (1828) the principal Medical Officer having been of opinion that these issues might be gradually reduced to the ordinary ration of two days in each week, they were so reduced accordingly; but in the middle of January following (1829), his special report again required a diminution of salt meat, and an addition of fresh; and it was ordered in consequence, and reported to Head-Quarters, from whence the measure was sanctioned.

This is the second period adverted to in your letter, and these extra issues (of two days a week,) continued through that year,—the principal Medical Officer not having judged it prudent, adverting to the state of the troops, to advise its discontinuance.

In the month of January, 1830, I had called the attention of the Deputy-Inspector of Hospitals (and principal Medical Officer of the district) to the practicability of returning to the ordinary ration.

His answer showed that such a measure would be prejudicial to the troops, and I accordingly reported upon the subject to you, for the consideration of his Excellency the Lieutenant General commanding the Forces, on the 10th January, 1830. In consequence of which, his Excellency was pleased, in the

communication which I had the honour to receive from you of the 18th January, 1830, to authorize my continuing "the extra issue of four days, instead of two, in each week, for such a period as the Medical Officer might consider essential to the health of the troops." It has since continued in the true spirit of that condition, for there has been no subsequent period wherein the Deputy Inspector-General of Hospitals has thought himself warranted to advise a change.

The very extraordinary state of the weather (upon which I have already had occasion to report to his Excellency), from the end of November last, having continued through the whole of those months usually considered the healthy season, (and during which, in ordinary years, a return to the common ration might have been attempted), so that July, which is held to be the beginning of the unhealthy season, arrived, and rendered such a measure injudicious.

Herewith I transmit a report from the Deputy Inspector-General of Hospitals, (to whom I had communicated the purport of your letters,) in consequence of which I have taken upon me to suspend for the moment, and until the subject can have been brought under the consideration of the Lieutenant-General commanding the Forces, the proposed alteration of the soldiers' diet; and I earnestly hope that his Excellency may feel himself warranted, in the circumstances, to acquiesce in Dr. Bone's recommendation, and sanction a continuance of the present diet until December,—after which, I am quite aware, that the Treasury orders admit of no alternative. I feel secure in stating my opinion (confirmed, as it is, by that of the successive Medical Officers who have had charge of this district for seven years past), that a preponderance of the proportion of salt meat in the soldiers' diet (as directed by the present regulations,) over that of the fresh, is prejudicial to the health of the troops in this peculiar climate, inasmuch as it tends more, in the first instance, to predispose the habit to the diseases of the country, and, in the next, to render their character more obstinate and unmanageable.

Nor can there be any doubt that the eating of the ordinary salted ration creates an unnatural degree of thirst. Those who know the British soldier will be aware that he seldom quenches this with water alone, and in this view I regard the salt ration as an incentive to his greatest bane,—drinking.

It may not be altogether irrelevant to the consideration of increased expense, as it may have been more or less incurred in this case, that although the extra issue of two rations in each week of fresh provisions has been scarcely discontinued since the beginning of 1829, yet a larger issue (such as five or six days), as was made in preceding years, has never been resorted to; for, availing myself of many conferences with the medical officers, it has been my object to effect the desired purpose with the least possible increase of fresh-meat expenditure, and that has appeared to be just so much as might *preponderate*, giving four days of fresh for every three days of salted food.

I have thought it incumbent upon me to offer these observations, (to which I entreat the indulgent attention of his Excellency the Major-General,) in justice to the successive medical officers of this district, as well as to myself; and because of the important influence upon the health of the soldiers *in this climate*, which I believe to be involved in the general question to which they relate.

(Signed) B. D'URBAN, *Major-General.*

Fortunately, I say most fortunately, for the British soldiers destined to garrison British Guiana, Sir Benjamin's successor was a man of the same mind, and endowed with the same feelings. He soon became satisfied of the soundness of his predecessor's views, and determined to act upon them,—perhaps to improve upon them; and although it is altogether out of the power of man to prevent disease, or its increase under

unusual circumstances, it is a pleasant reflection to all concerned, that, taking into consideration the relative numbers exposed, the deaths in British Guiana are now fewer than in any other colony. Were the British troops in Guiana allowed fresh meat five days in seven, they would be as healthy as any troops in the West Indies, and have fewer casualties than they still have.

When the heat and suffocation of the old barrack-rooms came in aid of the excess of the salt provision which they were compelled to eat, the epidemics of the colony committed frightful ravages. We now read with horror of the mortality that took place during the first years of our occupation of the colony; but even down to a very late period, whenever the troops after their arrival were allowed for any length of time to continue upon the regulated ration diet, their loss was frightful. In proof of this assertion, I shall give, in a few words, the history of two or three gallant corps, whose fate it has been to serve in this colony. These histories are taken from official records, and are only selected as being the latest in the medical registers.

1st. "The 19th Regiment arrived in this colony in the month of December, 1826, direct from Ireland, an unusually young and fine-looking body of men, in a high state of military discipline, under an officer in the vigour of life, devoted to his professional pursuits and to the welfare of his corps." I quote these words from Dr. Arthur's special report. They of

course lived on salt provisions during the voyage out, and, on their arrival in British Guiana, came upon the usual five days' salt and two fresh-meat weekly ration. There was no unusually bad weather, nor had even the usual sickly season commenced; when, all at once, in the beginning of May, there was a sudden explosion of disease,—a fever, most severe in its type, and terrible in its ravages,—for in five months one hundred and eleven men, eleven women, and twenty-two children, were carried to the grave; and, as a proof that it was the bad diet, and that alone, which was the cause of this great sickness and mortality, I have to observe, that though the corporals, who lived on their rations as the men did, suffered equally with them, not one of the serjeants died, though many had the fever; and why? because they had a well-regulated private mess of their own, and had bought fresh meat daily from the time of their arrival in the colony. Lieutenant-Colonel Mylne, who caught the bilious remittent fever on the west coast, after it had ceased to prevail in the regiment, was lost, because his over-exertion of body and great anxiety of mind had induced that very condition in him which the salt meat had produced in his men. When the sickness became alarming, extra fresh meat was applied for and granted. At first they had three days in the week, then four days, then five, and at last they had fresh meat every day; yet the sickness continued, and the mortality was not lessened, until they had scarcely a man fit for duty.

The next instance is that of the 25th Regiment, which arrived in this colony from Barbados in January, 1828; and this instance affords a strong proof of the great difference between the climate of Barbados and that of this colony, and shows the impossibility of a physician being able to say what is proper in one colony from what he has observed in another. At Barbados it had not been found necessary to recommend any deviation from the regulated ration. They had lost very few men, and they came to Demerara with the advantage of a two years' seasoning in a tropical climate; and, like the

19th, they were allowed to continue on the usual allowance of five days' salt and two days' fresh meat weekly. Nothing extraordinary occurred, or, at least, is at all remarked, till the beginning of June, when, just as happened with the 19th in the previous year, acute disease broke out with a violence and a virulence that in three months sent sixty-five men, six women, and five children, to their last home. Here, again, when the sickness became alarming, fresh meat was applied for and obtained, for five days in the week, which continued from 6th June to 9th December, when they were reduced to four days, which was continued to them throughout the whole of 1829, and during that year they lost only twenty-nine men. The exertions of Sir Benjamin D'Urban procured a continuance of two days' extra meat during the whole of 1830 and 1831, when it was stopped by a positive order from Lords of the Treasury; and luckily, the two succeeding years were unusually dry and healthy, and the troops suffered less than they would otherwise have done from such a deprivation of their necessary nourishment. On my arrival at Demerara, the 86th Regiment were just upon the verge of that critical period which had proved so very disastrous to the 19th and 25th, and still later to the 65th at Berbice; and when I took the charge in March, 1834, I have no hesitation in saying that I found some men of the 25th afflicted with symptoms indicating scurvy, and I felt most miserable until I had procured for them the two days' extra fresh meat. Fortunately it was granted sufficiently early, and continued long enough, to eradicate that scorbutic tendency, and to afford them protection against the dangers of an unusually wet and trying sickly season; for, although we had nearly the usual number upon the sick list, and a great increase of the sick in July, August, and September, our casualties were indeed far under the usual amount of even the least of former years. The 86th Regiment lost only ten men in the hospital at Eve Leary, where their average strength was two hundred and fifty; but they lost eighteen at Berbice, where they had only one hun-

dred and sixty. This gallant corps arrived at Trinidad about the 1st of September, 1827. At Trinidad and Tobago no precaution was taken to give the men extra fresh meat; and, in consequence, they became so sickly, and the casualties so numerous, that before the end of 1828 it was found necessary to remove them to Barbados.

In 1830, they were moved to Antigua and St. Kitt's, where they remained till February, 1833. They arrived in British Guiana about the end of that month, and in twelve months lost forty-four men, besides several women and some children. They had been six years in the West Indies, and yet no seasoning could prevent the severe loss they sustained here. By getting them fresh meat, in the beginning of May, their loss in 1834 was only thirty men, and the majority of these died before that meat could possibly have any effect upon their constitutions. In Trinidad, Tobago, and British Guiana, they lost eighty-four men in twenty months; whereas their total loss in four years, in the other islands, was only ninety,—six more.

The fresh-meat diet immediately reduced their casualties, as stated, but they have increased nearly a third in the last year, and I firmly believe their loss would have been greater, had the men not got extra fresh meat in September, October, and November last. I, therefore, need not add another word on the great importance of fresh meat to the troops in this individual colony.

I have said it has been stated, from the very highest authority, and that it has hitherto been generally credited, that troops suffered as much from sickness in being removed from one colony to another within the tropics, as they did in removing from Europe to the West Indies. This, I think, I have shown to be a fallacy; but even granting it were a fact, it arises, I

assert, entirely from our obstinacy in compelling men to eat the same food, and adhere to the same customs, in countries and climates requiring the utmost study and discrimination as to each, for they are nearly as different in all respects, except temperature, as the Himalaya mountains and the Demerara swamps.

What a soldier may continue to live upon for years in Barbados, without much injury to his constitution, would, in twelve months in Demerara, as I have proved, render him a prey to the most trifling disease or accident to which he might become exposed. His whole frame would be a mass of corruption, and he would be totally unfit for either exercise or exertion. In every colony time and dire experience have taught the inhabitants what are the products most congenial to the soil, and most beneficial to the living animal; we ought, therefore, to be guided by that experience in selecting the necessary nutriment for the troops in each of these colonies, and not continue, as we have hitherto done, to compel, as it were, all soils and all climates to succumb to the interests of our army contractors. Whatever modification nature and circumstances may hitherto have demanded, the rule was not to be broken; and to shew an *apparent* saving of a few pounds or shillings, I affirm, that thousands of human beings have been doomed to lose their lives. I say, apparent saving,—and I say so advisedly, because

in the present tranquil and flourishing state of all our West India colonies, my already recorded assertion that a saving of 50,000*l.* per annum might be made in our military expenditure, by a change from the present obsolete and pernicious system of feeding the troops, to one founded on plain common sense principles, will be found quite correct*.

In all our colonies within the tropics it is bad policy to feed our troops on salt provisions; and although they are not so pernicious in some of these colonies as in others, yet they uniformly predispose, and are the

* Since writing the above, I have seen a well-written pamphlet, by Colonel Drinkwater, late senior-comptroller of accounts. He states, amongst other benefits conferred upon the nation by that Board, there were more than 9000*l.* per annum saved by reducing the issues of fresh meat to the troops in the West Indies to two days in the week. I beg leave to tell the Colonel, that by this saving of which he boasts, there have been sacrificed more than 100 British soldiers annually; and that, independent of humanity, and all the other Christian feelings that ought to guide us in our conduct towards our fellow-creatures, I would ask, what gain has it been to Great Britain? A hundred British soldiers are certainly of more value than 9000*l.* But, now that it can be proved, and, indeed, as I have shown, *is* proved, that humanity and economy can go hand in hand, why are we to pursue a system as pernicious as it is expensive? There is not even a political motive for doing so, as, since the Reform Bill passed, the minister of the day can never be in want of the votes of two or three overgrown contractors in the House of Commons. I would, therefore, earnestly implore their Lordships of the Treasury to give this matter a little of their attention.

chief cause of the unusual mortality of the epidemics that so frequently occur in all of them. These epidemics, as is evident, arise from causes of which we know almost nothing, and, I allow, are quite independent of the habits or conditions, or even the food, of the inhabitants; but that they are, more or less, aggravated by such habits and conditions, and more especially by unwholesome food, is equally certain. The issue of every case of disease will depend upon the sound or unsound state of the body that is attacked, and that state, as is now fully admitted, is almost always modified or produced by the quality or the kind of food with which the body has previously been nourished and supported. When the constitution is sound, and the body is well nourished and vigorous, that epidemic will appear as a mild and easily-subdued disease, which, in a different condition of the body, will extinguish the vital principle, with a force and a rapidity that baffle all attempts at alleviation or cure.

In British Guiana, salt provisions ought never to be issued above once or twice a week; and the same remark applies to Trinidad and Tobago. By far the greater portion of these colonies is an alluvial deposit; the soil, therefore, being still saturated with moisture, the atmosphere remains damp and heavy, during the driest months, and, of course, is doubly so during the

periodical rains; and yet, though more may die, I am convinced that epidemic disease is not more frequent, or more severe, in these colonies than in the other islands.

Most of the medical practitioners in British Guiana are able, intelligent, and well-educated men; but still, any man who has a diploma from a European college, or university, or, whether he has a diploma or not, provided he can obtain a license from the Governor, may commence practice as a *Doctor* without being called upon to exhibit any proofs of his knowledge or experience. The profession ought to be better regulated, and in a community now so rapidly increasing, and where men of learning and talent abound, some arrangement must be made to prevent the mischief which ignorance and impudence are calculated to produce in a population not yet sufficiently enlightened to distinguish the true physician from the false pretender. The present Governor of the colony is fully disposed to support any measures which the faculty themselves may suggest for the better ordering of their department, and I do hope and trust that the leading men of the profession will take the matter into their serious consideration, and agree upon an ordinance to be passed by the Governor and Court of Policy, for regulating the practice of physic and surgery.

There are many medicinal herbs within, what may be called, the limits of the colony; but their properties are but little known, and have never been fully investigated: the native Indians have recourse to a great many in their different ailments. The gum of a tree called the Haiwas, is their cure for colds: the root of the Wonsomia makes an infusion that allays inflammation of the eyes: the bark of the Mona-tree, when infused, has powerful emetic qualities; and, as a purgative, a tea-spoonful of a fungus that grows on the trunks of fallen trees, when dried and powdered, is found sufficient. The best kinds of this fungus are found on the bark of the Curida-tree. The preparation is also said to produce very beneficial effects in dropsy, and is known to have removed tape-worm, when all other remedies had failed.

The mona-bark contains nearly double the quantity of tannin that has ever been found in the best oak-bark, and the bark of the "Laurus Bebeerus," or green-heart, is found superior, as a febrifuge, to any of the cinchonas, and is used by the natives for the cure of their intermittent and remittent fevers. Mr. Hugh Rodie, a naval surgeon of some standing, and long a resident in this colony, has made a preparation from this bark, which he calls *Bebeerine*, and which is certainly equal, if not superior, in all its remedial effects to the best Quinine.

All knowledge which the natives possess of the virtues of plants has been handed down by tradition. They have no written language; yet they can cure ulcers, destroy the poison of venomous snakes, and allay the symptoms of various diseases with perfect success. Their doctors are a distinguished and a greatly privileged class: they are called PEIJMEN, pronounced PE-AI-MEN, and before the young aspirant can obtain his degree, he has to undergo a rather severe apprenticeship. It is thus described by my excellent friend, Dr. M'Turk, who was at pains to make himself master of the whole proceeding:—"The person who is desirous of learning the art, or whatever it may be called, applies, either personally or through his father, to the elders of the family of the Peijman who is to teach him. The Peijman hears the applicant patiently, who relates to him his history, and that of his family, and where he resides; these statements proving satisfactory, the peijman takes his pupil the first night apart from every house or dwelling, and sings and bellows over him the whole night, occasionally puffing tobacco-smoke in his face. This ceremony being over, which commences at six o'clock in the evening, and continues till six o'clock in the morning, without intermission, he is put into the peij-house (a house built and used for no other purpose), closed in at top and sides, leaving only a small aperture for a

door, which, when shut, renders the inside quite dark. Here the new initiated remains for a week, seated night and day on a block of wood,—no bed, hammock, or any article of furniture whatever allowed in the house; in this condition he is attended by the Peijman every night, who performs the same ceremony as at the beginning: he also visits him daily, on which occasions he gives him to drink a quantity of tobacco-water, which vomits him until he is quite exhausted. The only food that is allowed him is about an ounce of cassava-bread, and about the same quantity of dried fish, and a little water, daily, which he can seldom use from the disturbed state of his stomach.

"At the end of the week, the Peijman gives him, by way of a finale, a calabash-ful of Paiwary, a drink made from toasted cassava-bread steeped in water, which forms a fermented intoxicating liquor; this quantity (about a gallon) he has to drink at one draught, which is sure to vomit him; he is then taken out of the peij-house, looking more like a spectre than a human being. It takes some time before the new Peijman can walk about, and until his strength is restored, or that he can take his departure for his home.

"The peij-houses are now very rare. About twenty years ago there was a large establishment of this sort on the Abanacary Creek, in the Essequibo River,

where at stated periods the Peijmen assembled, to perform their exorcisms and examine the younger Peijmen. A father cannot teach a son, nor a son a father, —at least it is not the custom."

CHAPTER XV.

TOBAGO.

DEPARTURE FROM DEMERARA—ARRIVAL AT TOBAGO—SCARBOROUGH BAY—HISTORY OF THE COLONY—UNHEALTHINESS OF FORT KING GEORGE—CAUSES OF ITS BEING SO—IMPROVEMENT RECOMMENDED—EXTENT AND COMMERCE—APPEARANCE AND FORMATION OF THE ISLAND—ITS HISTORY.

On Tuesday, the 24th of February, I left the River Demerara, on board the army brigantine, Duke of York. My destination was Trinidad, but as the captain had business at Tobago, we stood first for that island. We sailed from Georgetown at 4 P.M., on the 24th, and at 6 P.M., on the 27th, anchored in Scarborough Bay. Tobago is a small island of volcanic origin; the most southerly of the Windward group, and not quite so far to the east as Barbados. This island, it is said, was discovered by Columbus in 1496, which I doubt very much; for, as we know that Trinidad was not seen till two years afterwards, I cannot suppose that Columbus could visit Tobago, and not see the high mountains that were not more than eight or ten miles distant. I should rather think, that Trinidad and Tobago must have been discovered at the same time. The

origin assigned to the name is also doubtful. Tobago, or *Tobacco*, may have been the original name of the narcotic herb now so much in repute in Europe; but why it should be so abundantly used in this little spot as to lead the Spanish commander to designate the island thereby, has nowhere been stated. When first visited, it was occupied by a tribe of natives from the main-land. These, whether from the genuine nation of the Carabeese or not, were accounted CARRIBS by the discoverers. We are told, that they were at war with the Arrowaaks, and that these Arrowaaks drove them from the island, and took possession of it themselves, while the banished Carribs found shelter in St. Vincent's.

In 1580, Tobago was considered a British possession, as the British flag was planted on the island that year. It was not, however, till the first adventurers had disembarked at Barbados, that the ships which carried them out touched at Tobago, and attempted also to form a colony there. In this they did not succeed; and the island may be said to have remained unoccupied, until a company of Dutch merchants sent out about 200 emigrants, who took possession of it in 1632. The island was then named NEW WALCHEREN; but the Dutch were not allowed to remain above two years, as the Spaniards, aided by the natives, attacked them, and the whole were either killed, or carried

prisoners to Trinidad. The commercial enterprise of the Dutch was not to be stopped by this disaster. The LAMPSINS, also Flushing merchants, fitted out a new convoy, after having obtained a grant of the island from the States-General, and under their auspices it became a very flourishing colony. King James I., at the time that he gave Barbados, and the West Indian sovereignty, to the Earl of Carlisle, made a present of Tobago to his godson, the Duke of Courland. This prince also sent out settlers, who arrived on the north of the island (at the harbour still called Courland Bay,) much about the same time that the Hollanders had settled on the south. War was the consequence; the Courlanders were overthrown, and the Dutch remained in quiet possession of the whole. Some privateers from Barbados, while England was at war with Holland, under Sir Tobias Bridges, landed their crews, and carried off much plunder; but the most serious check which the colony received was from the French admiral D'ESTREES, who, in 1677, defeated the Dutch admiral BINKS, in Scarborough Bay, and carried away almost all the property of the colonists. D'Estrees afterwards landed with a considerable force, and took possession of the whole island, making such of the Dutch as had not already abandoned it prisoners of war.

The extinction of the house of Courland, in 1737,

gave occasion for England to demand the cession of the island of Tobago, which was still held by France, but this demand was not attended to. By the treaty of Aix-la-Chapelle, in 1748, Tobago, Grenada, St. Vincent's, and Dominica, were declared to be neutral territories; where the subjects of all European powers were at liberty to form settlements, or carry on commerce, but none of the contracting parties were permitted to place garrisons in any of these islands. At the peace of 1763, France now ceded Tobago to England, as was said, in perpetuity; and from the 20th of May, 1765, we may date the commencement of the present order of things in this colony. At the date just mentioned, a royal commission was appointed to dispose of grants of land, and large capitals were invested in the purchase and cultivation of these grants. In 1781, the Duke de Bouillie captured Tobago, and at the peace of 1783 France was allowed to retain possession of it; but in March, 1793, General Cuyler, at the head of 2000 British troops, reconquered it, and Tobago continues at the present hour a chartered British colony.

Scarborough, the capital of the island, lies in a beautiful valley, on the south-west side of the island. The hills that bound this valley form, as it were, two advancing promontories, within which, and off the town, is the roadstead, or anchorage for ships,

called Scarborough Bay. On the summit of the hill most advanced on the east side, the wisdom of our ancestors has placed the Castle, or Fort, of King George, and constituted it the head-quarters of our military force in the island. The number of troops stationed here is very small, and it is fortunate that it is so, for a spot more destructive of human life does not exist in any part of the West Indies. If it be necessary to retain this position, and keep it fortified for the protection of the shipping in the bay, which I question, the only troops necessary to be quartered in it would be a few artillerymen, to look after the guns, and attend to the signal-post. The barracks for the garrison ought to be on the plain where the town of Scarborough is built. This would make Tobago as healthy as any other station for British troops. The diminution of casualties would soon repay the cost of the new barracks; so that, even as a measure of economy, I would recommend to the serious consideration of the proper authorities, whether at home or abroad, such a change as a beneficial improvement.

The barracks of Fort King George are placed on the top of a detached hill, which rises, by a very steep ascent, above 500 feet from the plain below. Under any circumstances, the mounting from the town to the barracks is a work of labour, and, under a burning sun, not soon accomplished. But when we reflect, that

soldiers, when out on leave, will always loiter till the last moment, and that, probably heated with ardent spirits, they hasten to reach their barracks before the drums have beat off,—that exhausted, panting, and overcome with heat and fatigue, they throw themselves down in the verandahs, or passages, where there is always a strong current of moist air,—air always loaded more or less with the noxious effluvia from the extensive eastern marsh, that approaches to the very base of the mountain, and

> Whence humid Auster, on his drooping wings,
> Gross exhalations brings;
> Where effluvia from the marshy brake,
> Or murky stagnant lake,
> Pregnant with ills arise in misty fogs,—

when we consider, therefore, the position of Fort King George,—first from its elevation leading to over-exertion and unnecessary exhaustion, and next from its forming the very point or pinnacle on which the marsh effluvia collect and concentrate, we cannot in any way feel surprised that the garrison is unhealthy.

The troops that garrison Tobago are now always detached from the British regiment quartered in Trinidad. If allowed to remain for any length of time, they generally leave a fourth of their number behind, and the remainder, after their return to head quarters, have frequent and severe relapses of chest-complaints,

dysenteries, and remittent fevers. Tobago is nearly as unhealthy as Prince Rupert's in Dominica, (where latterly no white troops are allowed to do duty,) and exactly from the same causes. A little alteration would make both stations perfectly healthy.

The length of the island, from the basaltic columns on the north-east, to the point of the alluvial plain on the south-west, is about thirty miles, but its greatest breadth is scarcely twelve miles. The basaltic mountains embrace an area of about forty-four square miles. There is nothing remarkable in the animal or vegetable productions, except that one or two species of birds are more numerous here, and seem to thrive better, than in the other islands, or on the main-land. One called here the *Katraka*, which resembles in some respects our pheasant, will not propagate in Trinidad; and it is also said, that some varieties from Trinidad will not thrive in Tobago; but these assertions I doubt are not correct, as they have not been proved by any well-ascertained facts. There are only three varieties of the humming-bird in the island, but there is one splendid specimen of the *Certhia*, or creeper family. The small American deer, so plentiful in Trinidad, have not yet reached Tobago; but its rocky shores are always swarming with many varieties of fish, and shoals of Turtle. In the Trinidad channel, and indeed, all around the coast, the king-fish, the grouper,

and all the other varieties of intertropical fishes, are caught in the greatest abundance. I had no opportunity of ascertaining the exact number of European colonists, but they are considerably greater than what Mr. Montgomery Martin states. The established religion is the Church of England; but the Presbyterians have become sufficiently numerous to build two churches and have ministers of their own. The free coloured population, in 1833, was under 1200, and the slave population about 12,000. I do not think that there is sufficient enterprise, to warrant our supposing there has been any great increase of population; though certainly here, as has been proved everywhere, free labour has been more productive than slavery could ever be made. The exports during last year have greatly exceeded those of any former period, but I have no means of giving the actual quantities.

The scenery and formation of Tobago, which I had an opportunity of seeing, have given rise to these few remarks; but as my stay at Scarborough was limited to twenty-four hours, I had no opportunity of getting any further information. The form of government consists here of a Lieutenant-Governor and Council, with a House of Assembly, after the same manner as the chartered islands,—viz., Barbados, Jamaica, Antigua, and others,—which are all subject to British law, and have their miniature representatives of the "king, lords, and commons," of the mother-country.

CHAPTER XVI.

TOBAGO.

FORMATION OF THE ISLAND CONSIDERED—GENERAL VIEW OF THE VOLCANIC ORIGIN OF THE ISLANDS IN THE CARRIBEAN SEA—PROBABLE ORDER OF THEIR APPEARANCE—FACTS IN SUPPORT OF THE PROPOSED THEORY.

The eastern and northern boundaries of Tobago consist of a series of basaltic rocks formed into mountains of considerable elevation. The heated matter in a fluid state must, therefore, have been stopped here, in its progress under the bed of the ocean, and has found its way to the surface, elevating at the same time, and modifying by its action, the earthy deposits through which it had to pass, and causing them to form acute or obtuse angles, according to their nearness or distance from the moving force. The mountain masses, however, of this now cooled and crystallized substance, show to what extent, even here, it burst forth, and has overflowed those previously superincumbent strata, while in a heated and liquid form.

As these elevations cooled down and became solid masses, they would naturally interrupt the current of the ocean, and, by causing eddies or stagnant pools,

allow a new deposition of earthy particles to take place, which, in progress of time, have filled up the intervening spaces that now form the plains and valleys that so beautifully diversify the surface of this island. The tongue of low land that stretches to the south-west, and may in after-ages reach the shores of Trinidad, is a continuation of the alluvial deposits from the detritus of the earthy masses, as well as from the interrupted current of the sea.

The whole of the islands of the Carribean Sea are of volcanic origin, and have been formed either by the overflowing of the stream of melted primitive materials in the form of granite, lava, or, as here, of basalt, or by the forces brought into existence by that stream, in its passage under the bottom of the sea, pushing up the earthy accumulations to the surface, after they had received a new impress or form from the action of the heat, affecting more or less the innumerable and hitherto uncombined metals, minerals, and earths, of which they were composed. Taking this as the certain cause of the appearance of all of these islands above the surface of the great deep, I shall now venture to offer some conjectures as to the order in which they did appear.

When that overwhelming and mighty power which, at the command of OMNIPOTENCE, had raised the Andes to their present elevation, throughout an

extent of more than four thousand miles, and laid the foundations of the great continent of South America, could no longer act in an upward direction, it would naturally seek a horizontal course through the media that offered the least resistance. Accordingly, as I suppose, it must have taken a course at first nearly north-east; but as it proceeded, it gradually inclined more to the north and west; and when it reached the eighteenth degree of north latitude, it was suddenly changed to a course due west, or west and by north. This river of liquid fire must, I think, have moved upon the surface of the primitive crust of the earth, and under the accumulated strata at the bottom of the ocean; and it evidently was not able to penetrate through these strata until it reached the middle of the Mexican gulf, where it must have vomited forth what now constitutes the western promontory of Cuba. Successive layers were, no doubt, rapidly added, and hence the present extensive island of that name.

When this enormous mass of matter had cooled down to a certain point, the resistance we may also suppose became greater than the force of the current could overcome, and, consequently, that it would seek another and an easier exit. This was found where St. Domingo and Jamaica now have existence. These in their turn became solid masses too ponderable to be further elevated by the expansive power of the heat.

The main stream then threw off many lateral branches, which gave origin to the Bahamas, (not by overflowing, but by forcing up the superincumbent strata to a certain height,) before the resistance was sufficiently great to force it to the surface at Porto Rico.

The next great out-break must have been at Guadaloupe, where the overflowing matter has formed two separate masses, and from which it sent those minor rivers that raised the foundations of the Virgin and Leeward Carribee Islands, situated in the angle of its main current. As, however, the sources of this current began to fail, and the great fountain became exhausted, the eruptions became less and less in extent. St. Vincent's and Grenada were evidently the last portions of the main stream; as I consider that Trinidad and Tobago were called into existence at a much later period than any of the other islands, and not till the accumulation of new forces had enabled the volcanic fountain to send out a fresh supply of matter.

It was one of those supplies, thrown off at an acute angle from the now consolidated remains of the former eruption, that took, as we may suppose, a course more easterly, and when it had reached the latitude of Tobago was stopped by some opposing barrier, and forced to the surface. Here an overflow, as has already been stated, took place, to a considerable extent, which, cooling down, formed the basaltic mountains of the

island; these again offering a greater resistance than the heated liquid could overcome, we may reasonably conclude its expansive force would push up to the surface those strata that lay immediately over its course, and that it was this expansive power that brought into open day the chain of hills that form the Parian coast and the northern boundary of Trinidad.

That Trinidad was one of the last, if not the very last, formation in this sea, I shall endeavour to prove more fully hereafter; but in the mean time I am anxious to keep the attention of geologists directed to the original formations. I have stated my own opinion as a mere conjecture, a probable rather than a true theory of the actual order of the formation of those of the Carribean Islands, and of the principal chain as well as the many minor branches which were forced out latterly, when the large masses of Cuba, St. Domingo, and Jamaica became solid, and acquired a sufficient power of resistance. These diverging channels brought into existence submarine mountains, which were seized upon by the Polypes, whose labours gave origin to the Lucayas, or Bahama Islands, as the satellites of St. Domingo and Jamaica. Antigua, Barbuda, and Anguilla, and the greater part of the Virgin Islands, are formations dependent upon the offsets from Porto Rico and Guadaloupe. The primitive foundation of Barbados was, perhaps, raised by an original jet from St. Vincent's, and its subsequent elevations may have

been caused by such new forces as gave Trinidad and Tobago their present bearing. In Montserrat, Nevis, and St. Kitt's, St. Eustatius, Saba, and Sta. Cruz, we trace the regular course of the liquid stream and its overflowings when stopped at Porto Rico.

Time, and the action of the elements, and the labours of the Zoophytes, have effected very important modifications in all the islands. In all those where the overflowing of the primitive or liquid matter was the cause of their formation, we now find this matter in its solid crystallized state upon the surface; surrounded by the various diluvial deposits,—more or less changed, first, by the action of the heat, and secondly, by exposure to the influences of the atmosphere and moisture, and the various chemical agents generated by the disintegration of their own particles; and, lastly, by the Polypes, who have wrought, and are still working, wonderful changes under the surface of the ocean.

Subsequent eruptions, too, have covered the original surface of some of the islands with recent lava and crystallized sulphur. The field is, therefore, as extensive as it is interesting; and it is worthy of being especially noticed, that wherever the volcanic stream has forced its way to the surface, and by its overflowing caused the mountain-elevations which now exist, these elevations, if to any extent, form a range of hills, dividing the mass that forms the island into right and left, according to what I have supposed to be the cur-

rent of the stream, but throwing always the largest portion to the left-hand side when the course was westward of north, and to the right hand when it was to the east of north; whereas in those elevations where no overflowing has taken place, the manufactured rocky boundary is always on the north coast of the land, trending to the east and south.

The primitive mountains of the earth, it may further be noted, are always on the western side, whether of island or continent, while the transition or subsequent strata prevail in the eastern division of the elevated mass. Is it not even so in Great Britain? When further we connect, as we must do, the causes of the hurricane with the formation of the volcanic masses in these latitudes, their study becomes one of paramount importance.

If we admit that there is any probability in the account I have thus given of what I conceive to have been the original cause of the formation of the islands in the Carribean Sea, and grant that they made their appearance in the order I have pointed out, we must equally allow that they are all bound or connected together by the now cooled and consolidated trunk and branches of what was once an incandescent and liquid stream of granite, basalt, or lava, or of all combined, and which are now spread under the ocean's bed, like the trunk and branches of a large tree. We must equally suppose that this mass of volcanic matter, as

it cooled down to the earth's temperature, would not occupy the same space which it did while in its heated and liquid state; and that, therefore, throughout the whole extent of its course and ramifications, there would be for a time, and in many places still may be, a vault or empty space formed over the crystallized vein of granite or basalt. That the sides of this vault would be formed of the submarine deposits converted into solid rock by the action of the heat is equally certain; but that by increased pressure, or the action of chemical agents, or the power of the electric fluid, the roof of that vault may have, and indeed, has been destroyed or broken in many places, is also an event we may fairly assert which has frequently occurred. May we not, therefore, suppose that the subsequent earthquakes which have been experienced have arisen from such fallings in, or by the waters of the sea finding their way into the cavity, and, in contact with the still heated or easily affected volcanic mass, becoming converted into vapour?—that by the expansive power of that vapour or steam, or by fresh chemical action, the superincumbent earth was thrown into violent commotion, and, by a further destruction of the vaulted arch and its escape, it gave rise to such phenomena as occurred at Jamaica in 1692, and in the Caraccas and St. Vincent's in 1812?

The ramifications of this volcanic matter, as indicated by the islands it has formed, (if we allow the farthest

removed of the series to form the uttermost verge of the stream, or the greatest distance to which it had penetrated,) are all confined within those bounds or limits which the destructive hurricane has never yet passed; consequently we must suppose that these hurricanes, as has been already hinted, are intimately connected with, or dependent upon, those subterraneous volcanic veins, which must be so numerous in this track. If the theory which I have rather hinted at than explained in the third chapter of this volume is admitted in any way to be a true account of the causes of the phenomena which take place during such awful convulsions of the elements, I would say that the vacuum in the lower strata of the atmosphere, or that *funnel* through which the upper and compressed portions sink down and become so suddenly expanded, is occasioned by the rapid absorption of the electric fluid, in consequence of some new action in the earth's centre, and to which it is so immediately conducted by these connecting veins, so expanded upon, as well as under, the surface of this sea.

The principal trunk or artery upon which the circulation of the subtile fluid may depend, reaches from the most westerly point of the island of Cuba, to the eastward of Barbados, and its influence, as may be seen by consulting the chart attached to this chapter, extends from the eleventh to the twenty-second degree of north latitude,—from the Havannah on the north-

west, to Grenada in the south-east, forming a range sixteen hundred miles in length, and upwards of six hundred in breadth.

According to all that has as yet been recorded of West India hurricanes, this is exactly the bounds to which they have hitherto been confined; and whether they occur on the outskirts of the boundary, as at Barbados or Antigua, they uniformly show a connexion with the supposed course of the volcanic stream in its gradual retreat, from the first eruption in Cuba to its expiring effort in the formation of the island of Grenada and the Grenadines.

The last hurricane at Barbados, as I have stated, affected St. Vincent's; the last at Antigua extended to St. Kitt's and other islands. The Bahamas, though not within what may strictly be called the hurricane-range, are nevertheless (as we should suspect from their connexion with that range,) subject to severe storms, and sudden atmospheric changes; but these are in no way to be put in comparison with the overwhelming power and other phenomena of the true Tornado.

That earthquake which destroyed Port Royal in 1692, was evidently occasioned by the bursting-forth of confined vapour through the dome or arch left by the cooled and consolidated matter of some volcanic stream, and over which it unfortunately happened that the town of Port Royal had been built. In the ac-

count of that catastrophe, as recorded by Edwards, and in the Philosophical Transactions*, we are told "that the town was built on a bank of sand *adhering to a rock in the sea*," that the sand moved in the streets in heaps like the waves of the sea, *and that the earth opened and closed in several places with a very great motion*, swallowing up whole rows of houses, with their inhabitants;"—affording, as I consider it, a proof of the existence of the cavities of which I have spoken, as arising from the cooling of the great volcanic stream throughout all the several branches and deviations from its main channel.

With regard to the period at which the hurricanes occur, it is only necessary to observe that the submarine volcanic veins must be powerful conductors of heat as well as electricity, and as these hurricanes are confined to the months when the sun, in passing to and from the tropic of Cancer, is perpendicular to some portion of the tract, the great accumulation of caloric must affect more or less the atmospheric changes upon which the said hurricanes do certainly depend.

I shall have occasion to return to this subject in treating of the formations in Trinidad, and shall therefore conclude my account of Tobago.

* Edwards' Hist., vol. i., p. 231—Phil. Trans., vol. ii., p. 411.

CHAPTER XVII.

TRINIDAD.

PASSAGE TO TRINIDAD—SCENERY OF THE BOCAS—PORT OF SPAIN—DISCOVERY AND HISTORY OF THE ISLAND—SIR WALTER RALEIGH VISITS THE ISLAND, AND PLUNDERS THE SPANISH COLONY—PRESENT POPULATION OF THE ISLAND—ITS VALUE AS A COLONY—FRENCH LANGUAGE GENERALLY SPOKEN—COURTS OF JUSTICE STILL REGULATED BY THE LAWS OF SPAIN.

On Saturday, the 28th of February, 1835, about five o'clock in the evening, we left Scarborough Bay, and, as hidden rocks are numerous along the shore for a considerable distance, caution was necessary in steering to the westward. The gentle trade-wind drove us steadily along, and, as the current was also in our favour, we glided softly through the waters. As long as daylight served, the sailors amused themselves with catching king-fish; this they did with long lines cast out from the stern of the ship, and hooks baited with thin slices of fat pork. They appeared to be very plentiful, for frequently every hook was occupied, and I am sure there were more than a dozen lines in requisition. The run from one island to the other did not take more than an hour and a half, but the whole

night was consumed in sailing along the northern shore of Trinidad. There was much thunder and lightning, and heavy showers of rain during the night; but when the sun rose on Sunday, the first of March, the scene which burst upon our wondering sight was one of the most sublime and beautiful in nature. We were close under the land, at the western extremity of the main island; in the foreground were bleak and barren rocks, undermined by hollow caverns, and clothed at their summits with all that luxuriance of flower and forest-tree which gives so much beauty and brilliancy to West Indian scenery.

These masses, I found, were separate islets, dissevered from each other, and the main island, and running westward, so as almost to join the Cumana, or rather Parian, coast, which here brings to a point that portion of its circle which half encompasses the extended gulf. Between each of these islets there is a passage from the Atlantic into the Gulf of Paria; but as the current runs strong from the gulf, and the wind under the lee of the mountains often fails, the narrow passes, or mouths ("*Bocas*," as they are called,) are always dangerous. We stood away for the widest channel, which runs between the last island and the continental promontory.

The passage by which Columbus entered the Gulf of Paria, was that channel which separates the southern

shores of the island from the coast of Guiana, and across which the streams of the Oronoko force their way into the gulf. This he called the Serpent's Mouth —"*Boca del Serpiente.*" That by which he sailed out of the gulf, he called the "*Boca del Drago,*" or Dragon's Mouth; and it was this boca that, at six o'clock on this beautiful Sabbath morn, we were about to enter. The whole landscape, lighted up as it now was by the unclouded splendour of the great luminary of day, was such as pen or pencil could never yet portray.

"The Boca de los Monos," or Monkeys' Passage, was the first entrance that we passed: it was still in the shade. We then crossed the opening of the "Boca de los Huevos," or Egg Passage; and, lastly, the "Boca de los Navios," and kept close to the island of Chacachacarreo, steering south-west. There is a dangerous rock off this island, about forty yards in circumference, and not more than nine feet under water; but to that rock we gave as wide a berth as was considered necessary. The breeze still served to carry us slowly along, and when we were within 100 yards of the last point of Chacachacarreo, and, as I thought, about to enter the gulf, I left the deck. I was not absent above a quarter of an hour, yet when I returned, I found that the wind had failed, and instead of seeing, as I had expected, the whole expanse of the Gulf of Paria before me, the current had already carried the

ship back to nearly the same spot which we had passed three hours before.

The dense cloud of vapour which hung over, or rather seemed to rest upon, the tops of the mountains, began now to be agitated, and in a very short time a hurricane swept down their sides, and, reaching the surface of the sea, carried us forward on our course at a rapid pace. We entered the gulf with hardly a sail set, and had to stand away to the westward until the gale abated. These gusts of wind are fortunately not of long continuance, and they are generally confined to the northern coast of the island, where the lofty peaks of the mountains arrest and decompose the usual currents of the atmosphere. After the rain and the wind had ceased, the Gulf of Paria lay all around us, smooth as the surface of a well-polished mirror, and shining with a most dazzling brightness. The breeze was then scarcely perceptible, and it required ten or twelve hours to retrace the distance which we had gone in one hour during the storm.

When day dawned on the morning of the second of March, I found that we were nearly abreast of Port of Spain. The atmosphere on the mountains was clear and transparent, but the plain which they surrounded was still enveloped in a dense thick covering of mist, so calm, and so unruffled, that it almost seemed a continuation of the tranquil wave. The ships around us stood erect, and, as the sun rapidly

rose above the horizon, their masts and yards were beautifully reflected from the surface of the deep.

There seemed so much of repose and soft sublimity in the whole scene, that the mind was carried insensibly to regard with awe and reverence the Almighty Author of Creation, whose power was no less manifested in the contemplated beauty and magnificence of nature, now in repose, than in the howling tempest and the thunder's roar, which we had so lately experienced.

As the sun rose in the firmament, the mist was gradually lifted from the surface of the plain: in some places it seemed to be folded up as a garment, but generally it moved towards the base of the mountains in its expanded form, and gradually mounting upwards, reached their very summits before it disappeared. The city and the plain appeared as sparkling with diamonds by the light reflected from the myriads of dew-drops that hung from every tower and tree. Not a breath of air as yet stirred the foliage, nor could we discover any one living thing. The beauty and brilliancy of the crimson-orange flowers of the "Bois Immortel," which were everywhere fully expanded, gave a singular appearance to the landscape, as they appeared like fiery meteors shining in an atmosphere of variegated green*.

* The "Bois Immortel," in Trinidad, sheds its green leaves in February, when the tree immediately becomes covered with bright crimson-orange flowers, as abundant as its former leaves.

Soon after nine o'clock a gentle breeze came off from the land, but it did not continue to blow steadily till after ten o'clock; we then made towards the shore and cast anchor; and about two P.M. I landed at Port of Spain.

Trinidad was discovered by Columbus during his third voyage, on the 31st of July, 1498; and, either from three mountains which were first seen from the deck of his ship, or the day on which he first saw it, he gave it the name of the *Holy Trinity*. It was then, as is reported, thickly inhabited by a people who had emigrated from the opposite continent (*Carribs*), and who were allowed to remain in undisturbed possession for nearly a century after their discovery. In 1588, the Spaniards first established a colony in this island, and fixed its head-quarters about seven miles inland, near the base of the highest mountain in the island, and at a considerable elevation above the level of the sea. This town was placed under the protection, and named after the husband, of the Virgin Mary, and is still known as St. Joseph's. In 1595, Sir Walter Raleigh visited the colony, and plundered it of all its wealth. He says, the Spaniards cultivated excellent tobacco, and also sugar-canes; but this I doubt. The native Indians aided Sir Walter's crew in their attack upon St. Joseph's, and the whole garrison (only thirty men!) were put to the sword.

As, however, there was no "Eldorado" to be found here, the English commander and his pirates were easily prevailed upon by their allies, the Indians, and the Spaniards they had not put to death, to sail for the Oronoko, upon whose banks that fabled territory was said to have its existence.

The native tribes rapidly disappeared under the tyranny of the Spanish yoke: they were transported by thousands to work in the mines on the continent, and scarcely a remnant was left when Admiral Harvey and Sir Ralph Abercrombie took possession of the island, in 1797. It is very evident, however, that under Spain this colony never was of any great importance; so late as 1783, the whole trade with Europe was confined to a few bags of cocoa, and some indigo; and, whatever may have existed in the seventeenth century, it was not till after 1787, that the cultivation of the sugar-cane became general in the island.

Next to British Guiana, this is the most important and the most valuable of all our Windward possessions. The great extent of territory, and the richness of its alluvial soil, not only afford unlimited scope to the agriculturist, but reward his labours with an abundant increase. Long previous to its conquest by the English, the French may be said to have obtained peaceable possession of this island. Almost all the planters that escaped from St. Domingo with any property, and who

were denied a shelter in Jamaica from the narrow-minded prejudices and pretended fears of the British colonists, fixed themselves here, and many of the most respectable colonists are still of French extraction: very few of the old Spanish stock remain. Whether it was that this being a Catholic colony, or that our taking possession of it was at a critical period in the history of Ireland, I cannot pretend to say; but certainly the great majority of British colonists are from the "Emerald Isle." A number of Scotchmen are no doubt found here, as they are everywhere, and are distinguished as planters and merchants. England also can claim a full share of the community; but the Irish certainly rule: the richest man in Trinidad is however, I believe, an American.

According to the last census, there were about 2018 males, and 1614 females, of European extraction; and of these, about 600 males, and 500 females, were children under age. Of a mixed race there were 8700 coloured males, and about 10,025 coloured females; and of these 3500 were male, and about 3600 female children. Of the native Indians, or Carribs, there still remain about 200 men, and 206 women; and their families consisted last year of 148 male, and 138 female children. A small colony from China was introduced here some years ago, for the purpose of teaching the negroes the cultivation of rice; they did

not however agree with the country, and only seven of these Asiatics were in Trinidad last year. They had all become pork-butchers; but I am not aware that they have any issue. The pure African race is about 8430 males, and 8159 females, including men, women, and children; so that the total population of the island did not exceed 40,000 souls, on the 1st of January, 1835, whereas, if fully occupied, and wholly cultivated, it would maintain four or five millions.

Almost all the negro population and coloured inhabitants speak French as their common language, and some few in the remote districts still understand and converse in the language of Spain; but English now begins to be understood by all classes, though it was not till 1814 that it was introduced into the tribunals of this island. In 1809, petitions were sent to England, praying that the inhabitants might be placed under the protection of British laws, but they were not attended to; and in 1811, Mr. Marryat moved in the House of Commons, that this boon should be granted to them, and that they should have a constitution similar to that of Great Britain; but both motions were lost, and the laws of Old Spain were continued in all their force, and with all their absurdity and cruelty, till the commencement of the present reign. Indeed, it was only three years ago, that the Habeas Corpus Act was extended to Trinidad. The

courts of law, as now modelled, are similar to those of British Guiana, though the forms of proceeding here are still ruled by the customs of Spain. Until the late changes were effected, the Governor of the colony was president of all the law-courts, and sole judge in many of them; and his decision was final in all matters, whether civil or criminal. It was a perfectly despotic government. There was, I admit, always a Council of Government; but the members of that council were, and still are, to a certain extent, named by the Governor, and can be dismissed at his pleasure.

CHAPTER XIX.

TRINIDAD.

COLONIZATION—COMMERCE, ORIGIN, AND INCREASE OF THE PORT OF SPAIN—CHARACTER OF SIR RALPH WOODFORD—PROSPERITY OF THE COLONY—REVENUE OF THE CAPITAL—MARKETS—PRODUCE OF EACH DISTRICT—IMPORTS, EXPORTS, AND SHIPPING.

From the first settlement of Trinidad by the Spaniards in the sixteenth century, it continued under their dominion, without any interruption, till 1676, when a French fleet got possession, and kept it for a short time; but they found it not worth retaining, and very soon took their departure. For more than a century after that period, it must have retrograded rather than advanced in prosperity, as, fifty years ago, the whole of the colonial population, including white, brown, and black, freemen and slaves, did not exceed 700 persons; while the native Indians were more than 2000. About the last-mentioned date, however, a Spaniard from Grenada visited the island, and was so struck with its importance and capabilities, both as a colony and a commercial station, that he proceeded to Europe, and prevailed upon the court of Madrid to give it a share of their attention. Many of those

impolitic restrictions which were peculiar to Spain, and calculated to impede all improvements in her foreign colonies, were, at the instance of Senhor St. Laurent, removed; and a royal edict was published, inviting all strangers, who professed the Roman Catholic faith, to settle in Trinidad, where they would meet with every possible encouragement, and be protected for five years against all duns and arrestment for debt, whatever might be the liabilities they had incurred in the places from whence they came. This last privilege apparently was of the utmost importance to many a spendthrift, for we find that the colonists rapidly increased in numbers, and it is to be feared that much ill-gotten wealth was introduced at this period by thieves and swindlers; but, as I have already said, it was the disturbed state of St. Domingo that principally led to the prosperity and increased cultivation of this island, and kept the community, in some measure, respectable.

Many of the most respectable planters in Hispaniola had become convinced, at a very early period of the French revolution, that the ruin of that colony must follow, and they accordingly took measures for transporting themselves and their slaves to a more settled residence. Some went to the nearest British colonies, where being denied admission, the greater number eventually settled in Trinidad, which not only afforded

a wider field for their industry, but was more congenial to their habits and feelings, as a Spanish and a Catholic colony. Mr. Montgomery says, that the first sugar-estate in the island was planted by a Monsieur la Perouse, in 1787, and that, in ten years, such was the increase of wealth and industry, that not less than 159 estates (large sugar plantations,) were in full cultivation. But the old chronicles, assuredly, state that it was not till 1796 that the two first sugar manufactories were established,—one at Tagarete, in the immediate neighbourhood of Port of Spain, and another at Le Brea, near to where the Pitch Lake is. In 1799, the population consisted of 6500 whites and free persons of colour, and 1140 Indians. The slave population was 14,110, and the quantity of sugar manufactured that year is stated by the returns to have been about 8,500,000 pounds.

Previous to the introduction of the sugar-cane, the colonists were chiefly engaged in the cultivation of the cocoa-bean; and, with indigo, these formed the chief article of their exports, and, for a time, the only circulating medium, or representative of money, which they had in the island, and this, too, so late as 1740.

At a very early date, some fishermen had erected huts upon the shore, and as near as they could with any degree of safety (from the overflowing of the tide) to the entrance to the Caroni river, which is the

largest and principal stream of the island. The few trading vessels that visited the gulf, generally landed their cargoes and took off the produce from this point, —it was called the Port of Spain (Puertè de Espâgna), and in 1757 had risen to be of sufficient importance, that the Governor of the island was induced to remove from St. Joseph's, and take up his residence in its neighbourhood. It has since that period been considered the capital of the island, and is now a very splendid and populous city, containing more than 12,000 inhabitants. The original houses were, for the most part, built of wood, but these were almost entirely consumed by a fire that occurred in 1808, and laid the whole city in ashes; and most fortunately for Trinidad, and her now wealthy capital, Providence, soon after that catastrophe, sent her a Governor who had both talent and energy to cause a great good to arise out of a serious evil.

On the 14th of June, 1813, Sir Ralph Woodford, a captain in the British navy, arrived at Port of Spain, and assumed the government of the island. I mention the date particularly, as it was during the reign of this excellent man, and active magistrate, that Trinidad first began to know her own strength, and became aware of her, till then, hidden capabilities; and all that the island possesses of wealth as a colony, —of industry as an agricultural community, and of

respectability as a commercial people, she owes to the energy, zeal, and enlightened mind, of Sir Ralph Woodford. By his uncompromising firmness, he brought the rude and ill-assorted mass of the colonists into good order, and, by strict discipline, compelled the worst characters either to leave the island or to become industrious and respectable citizens. While he gave every encouragement and countenance to those who conducted themselves as gentlemen, he took care that it should no longer be considered as a refuge for thieves and vagabonds. His laws and regulations were all based upon such sound and rational principles, and such just and enlarged views of human nature, that neither the indolence nor the incompetence of his successors in the government have as yet been able seriously to affect the progress of improvement in the colony; that progress, however, has been of late more owing to the wisdom and good feeling of the colonists themselves than to any impulse given by the executive.

When Sir Ralph Woodford succeeded to the government of Trinidad, the amount of produce shipped was only 15,181 hogsheads, 274 tierces, and about 4283 barrels, of sugar; at his death it amounted to 30,629 hogsheads, 877 tierces, and 5184 barrels. The quantity of rum, in 1813, was only 1745 barrels, and 29 puncheons; in 1829, it was 559 puncheons. The molasses, in 1813, amounted to about 264 hogsheads,

and 37 casks. In 1829, there were shipped 10,686 hogsheads, and 596 tierces. The cocoa, which, in 1813, was only 1,029,512 pounds, was, in 1829, about 3,000,000 of pounds; and it had been more. During the fifteen or sixteen years that he ruled the destinies of Trinidad, and directed the energies of her people, every article of produce was more than trebled, while the labouring population were diminished in numbers rather than increased. The slave population in 1813 amounted to 25,717 souls, and in 1829 there were not more than 23,000.

It was not, however, in the staple articles of the colony only, that such improvements were made; every variety of fruit and vegetables that could be found in the New World, or in eastern climes, was brought to Trinidad, and its cultivation attended to with the utmost care. A large tract of rich land around the government-house was converted into an orchard, or nursery; an able and scientific gardener was brought from Europe to superintend the rearing of exotics, and it has been found that many of the fruits and spices from India are most productive in this island,—the cinnamon and nutmeg-trees more especially; and, in a quarter of a century hence, both cinnamon and nutmegs will be exported in considerable quantities from Trinidad. An attempt was made to introduce the cultivation of rice, and men, as we have seen, were brought from

China, who understood the process; but it has not succeeded to any extent, though not less than 2658 barrels were raised last year, which was said to be of most excellent quality. The Chinese have all disappeared, except a few, which, as I have stated, are now pork-butchers.

As Port of Spain was still in ruins when Sir Ralph Woodford arrived, he had the locality regularly surveyed, and a plan laid down, from which no deviation was permitted, either as to the character of the houses or the formation of the streets; and, as stone of the very best quality for building was in abundance in the immediate neighbourhood of the town, no other material was allowed to be used. The streets were laid out in regular lines, and of a proper width, and all properly paved; and squares, of large extent, were inclosed and planted with great taste, so as to afford cool and shaded walks for the inhabitants during the noontide-heats, or for the enjoyment of the refreshing breeze as evening approaches. Brunswick-square, in Port of Spain, far surpasses in extent and beauty many of which London can boast; and when the trees have arrived at a greater maturity, it will form a most enchanting spot.

On the west side of this square, the only Protestant church in the island has been erected, and it is a most splendid building, though far inferior to the

Roman Catholic cathedral, which stands at the south side of Marine-square. Both these churches were built under the auspices of Sir Ralph Woodford, and are a striking evidence of the splendid views he entertained of what was not only calculated to promote the best interests of the community over which he presided, but of what would be most conducive to their future prosperity and civilization. In conjunction with the titular bishop of the Roman Catholic Church, who resides here, he had comfortable churches built in several districts, and respectables curés appointed to each. He built and endowed schools for the instruction of the rising generation, and established such a system of order and regularity in every department of the state, and amongst all classes of society, that ages must elapse before his memory can be forgotten, or the benefits he conferred on this flourishing colony can be surpassed by any other ruler.

Sir Ralph Woodford appears to have been one of those few men who are born to confer incalculable blessings upon the human race;—to regulate the foundation of societies which are destined to become great and flourishing states;—to show men the necessity of mutual co-operation and firm adherence to fixed principles; and that, when measures are well weighed and have once been decided upon, they are not to be interrupted, nor abandoned, to gain a tem-

porary popularity, or to soften the asperity of a disappointed or detected faction. A vacillating ruler may govern for a time, in a well-regulated community, without producing material mischief; but in the formation or perfecting of a new colony, it is only such men as Sir Ralph Woodford that ought to be employed. That the character I have here drawn of Sir Ralph Woodford was formed from what I have actually seen of his works, I can safely affirm, for I knew nothing of the man, and had scarcely ever heard his name mentioned till I arrived in Trinidad; but that it is not overcharged, will sufficiently appear from the following statement of an able colonist, which has been brought under my notice since I returned to England; and I must add, that this statement expresses what were the sentiments of every respectable planter when I was in the island.

> "Stands (Trinidad) where it did?"
> "——— Alas, poor country!
> Almost afraid to know itself."

One of the most dangerous diseases of the mind is ignorance,—*obstinate, prejudiced, and deep-rooted ignorance.* It is a moral distemper which, unhappily for mankind, is dissimilar to all other maladies that flesh is heir to. For while *this* confines its painful effects to the suffering patient only, the *former* extends its baneful and pestiferous consequences to all those whose misfortune brings them within the sphere of its action, In proportion also to the degree of arbitrary power invested in an ignorant man, so must the *chances* of a tyrannical abuse of that power be augmented. Hence it is

that mankind, when forced to choose of two evils, prefer yielding implicit obedience to a Chief, although he be invested with the attributes of Dictator,—provided he possess *wisdom and humanity*,—than to enjoy the *name of liberty* under the authority of one whose corrupt qualities, arising from the absence of education, or from antiquated, erroneous, and exploded ideas of government, must necessarily disjoint that society, and impede the progress of that civilization, of which erudition may be called the great cement; and tend to encourage the vitiated to defy the laws which justice would raise as a barrier betwixt good and evil. If we throw a glance on the territories of *ignorance and superstition* which the Apennines and the Pyrenees interpose between them and regenerated France, and survey the rapid advance of the arts and sciences, of social comforts, in fine, *of civilization* in the latter,—contrasted with the continual popular dissatisfaction, revolts, tyrannical persecutions and punishments by the *absolute Kings and Governors* of the former,—as also the decay of trade and an insolvent exchequer,—we must come to the conclusion, that this natural difference among neighbouring people, descended from one parent stock, can be traced solely to the want of *education* in their Rulers,—that is to say, to ignorance of those first principles upon which mankind consented to surrender a small portion of their natural and individual independence,—namely, that their aggregate liberty should be preserved inviolate.

These observations are applicable even to familiar society; for it is obvious to all, that those families enjoy the greatest share of happiness whose parents are blessed with wisdom and religion. There requires no argument to illustrate more strongly the truth of this opinion, as applied to larger societies or communities, than to collate the happiness of our "*Queen of Islands*" under the wise and just government of Sir Ralph Woodford, the Father of the Colony, with our present wretchedness and misery.

In the days of the virtuous Sir Ralph, the several districts

were personally inspected by the head of the Executive;—the statistical and Protectorate departments were kept to their duty. The humblest of the wretched and unfortunate slaves, when suffering under the cruel lash, consoled himself at least with the assurance of an appeal to the fountain of mercy. Great and good himself, Sir Ralph loved justice for the poor slave's sake; nor was he deterred by the threats of *ruffianly bullies and burglars*, to swerve from his duty to the King, by withholding justice from the humblest of his subjects. He allied himself to no party for vengeance' sake; and suffered no officious and *libelling lawyer* to lead him with *apparent* reluctance to *dinner parties and two-penny whist*, to subserve his political creed. His seat of government—a model for the colonies—was continually enlivened and graced by the beauty, talent and worth of the island. He upheld the character of *Governor* and the dignity of his Sovereign, by a brilliant and educated suite, a magnificent equipage, with a corresponding retinue in splendid livery. HE never disgraced himself by appearing in public in the *garb* of a domestic, with *holes* in his shoes; nor did HE ever outrage the feelings of his polished host, by converting the convivial hall into a *bear-garden* for gymnastic exercises and other coarse amusements. Character and industry were the only passports to *his* presence; and the steps to preferment were not upon a *broken chest*, or *abstracted proceedings*,—but by upholding the King, and the laws of the land. His presence diffused delight and information into all social parties; and his sojourn in a village or mission was a *jubilee* for its population. By *him* none were condemned unheard. Amity and confidence, the results of his urbanity and application, united the various departments and administrators into one general union of good-will, and sincere attachment. The free artisan and settler found always an equivalent for his services and labour; roads were formed through dense forests, facilitating a speedy conveyance to the remotest districts of the island. In those days, rank was respected and virtue regarded. He inculcated by precept, and enforced by

example, the religious observance of the Sabbath; nor did the clergyman *then* preach to empty benches, and lament the desertion of the house of God. Our *militia* was the theme of admiration, its efficiency and *tenue* disarming the criticism of the King's warriors; the Artillery—that strong arm of the service—rivalled the line by its rapid manœuvres and precision of firing. The King's Prosecutor was *made* to defend His Majesty's black subjects from the rich and haughty; nor did the then Attorney-General *intimidate slave-witnesses by violence of conduct*, or convert his office into a "*salon des dames.*" No one in authority dared to abuse the power with which he was invested, to defeat the ends of justice *by abetting the escape of felons;* for the innate love of justice and the vigilance of Sir Ralph Woodford superseded the necessity of placing additional curbs upon his subordinates. The Judges, the dignitaries of the island, and the few educated civilians, revered Sir Ralph;—by the rest he was feared, yet admired. The virtuous tendency of his conduct, *so novel* in those days, elevated the female character in our island to its just pinnacle of admiration; and while it promoted sociability, saved many a youth from the snares of precipitate *mènage*, thereby rescuing from that endless remorse which is ever its certain attendant. He was never heard or known to descend to *impurities of dialogue* in the Protector of Slaves' office; nor did he ever propose to virtuous females to degrade their sex, *by toasting, at a supper-table, a bachelor of questionable character.* In fine, it was felt an honour, and indeed it was justly so, to possess his friendship, or even his consideration; for he was in truth "THE GREAT AND GOOD GOVERNOR, without fear and without reproach;" and though numbered with the past, yet is he still present in the hearts and memories of all —who love VIRTUE and abhor VICE.

On the 1st of January, 1835, there were 27,905 acres of land under the cultivation of the sugar-cane,

10,468 planted with cocoa, and 1219 bearing coffee; there were only 48 acres planted with the cotton-bush; 16 acres were bearing nutmeg-trees, and 16,974 were cultivated in raising provisions for man and beast; while 10,175 were pasture land. The total number of acres reclaimed from the wilderness is only about 66,780, while, according to the surveyor's reports, about 175,000 acres have been granted to planters; there are, therefore, considerably more than 100,000 acres of appropriated land still uncultivated, while several millions remain unappropriated, and in a state of nature.

There were 549 horses, 4151 horned cattle, 4749 mules, and 1867 goats, returned as the stock of the island; but, independent of there being no mention of sheep and pigs, both very abundant, I am convinced that this is a very imperfect return.

It is impossible to meet with better beef anywhere than in the public market at Trinidad, and the price is only $5\frac{1}{2}d$ per pound. The supply is most abundant:—indeed, the regularity, cleanliness, and abundant supplies in the markets at Port of Spain, show the wisdom and experience of the man who built and regulated these establishments. They are the best supplied and the cheapest markets of any in the West Indies, abounding in fish, flesh, and fowl, and in every variety of fruit and vegetables that can be

found within the tropics. Turtle, of the finest quality, is so very plentiful, that it may be purchased in any quantity, and at all times, for 5*d.* per pound; and, as showing the extent of business that must be transacted in these markets, the duties levied by the town council exceed 6000*l.* sterling per annum.

Port of Spain is governed by a Chief-magistrate and Town Council, which, after the manner of Spanish magniloquence, is called "THE ILLUSTRIOUS CABILDO." The Governor of the colony may be said to be the perpetual mayor; and the Council consists of two aldermen, who are called *Alcaldes* of the first and second election; one perpetual, and eight elected councillors, called *Regidors*, a procurador syndic, a secretary and registrar, and a treasurer; these form "the illustrious Board of Cabildo," which meet for the dispatch of business every Tuesday. In Port of Spain, which is now a magnificent city, and with the considerable patronage which it affords, and the disbursement of a revenue of more than twelve thousand pounds sterling per annum, and composed, as this Board also is, of most respectable merchants and others, its high-sounding title does not appear so very ridiculous; but we may well imagine how very *illustrious* the rulers of such a wigwam as St. Joseph d'Acunha must have been, when the whole inhabitants of the colony that were of European extraction amounted to *fifteen* souls. —Vide Chronicle, A. D. 1733. Port of Spain did not

become the seat of this illustrious Board till 1784. In 1786 the town was divided into *four* barrios, or districts, and two magistrates, or alcaldes, appointed to each. These alcaldes, in addition to their authority in criminal matters and in regulating the police, have also the power of deciding in all civil actions where the amount does not exceed twenty dollars. The police is well organized, and placed under the direction of a very intelligent and active officer. This force consists of sergeants, corporals, and privates, who are still called the *alguasils*, and are all Europeans, chiefly veterans from the British army. As London has her Thames Police, so has Port of Spain her "Alcaldes de Marinha." The Harbour-master and another gentleman are charged with the preservation of order amongst the sailors of the port and shipping in the Gulf, and have the power of fining and imprisoning all disturbers of the peace, whether on board or ashore. In all that is connected with the tranquillity, good order, and safety of the community, we can trace the hand of a master-spirit,—one who, taking the ancient institutions of the mother-country as a foundation, has built upon them a superstructure that will endure for ages, and that is calculated in all its details to improve and humanize the animal man, whether imported from civilized Europe, or as a savage from the deserts of Africa.

As the town is divided into barrios, so has the

colony or whole island been separated into certain defined districts. This became necessary in 1789, in consequence of the many worthless characters that had fled to Trinidad to avoid the payment of their just debts, or to escape from punishment. The chief magistrate of each quarter is called the *Commandant*, and where the population is considerable there are also Adjoint-commandants and assistants. There are thirty-eight quarters in the island, but, for the purposes of the Slave Abolition Act, these have now been consolidated into nine districts, under the superintendence of special magistrates sent from England. The Indians located at Arima and Savannah Grande, and the black settlers at Mansanilla, on the east coast, are each governed by a Corregidor, or magistrate, specially appointed for that duty. These black settlers, I may observe, are the pensioners of one of the West India regiments that were disbanded some years ago, and had lands assigned them on the windward coast of the island, where they are now beginning to show some symptoms of improving industry, and to add considerably to the internal supplies of the island. They not only raise provisions sufficient for their own support, but latterly have sent a considerable quantity to the markets of the capital. This also was one of those wise measures adopted by Sir Ralph Woodford: it may not have progressed

according to the sanguine expectations of some individuals, but I have no doubt of its becoming a thriving, and eventually an industrious community; indeed, it already is so.

The following is a return of the quantities of each article of produce, as made out by the Custom-house for 1834; and, as far as it goes, may be taken as tolerably correct. I have given the names of the districts, and the details for each, in order that the reader may have a perfect view of the actual condition of every portion of this rich and improving colony.

There were upwards of four hundred ships employed in the commerce of this island in the course of last year, carrying more than fifty thousand tons; the imports exceeded three hundred thousand pounds, while the exports amounted to very nearly a million and a half; showing here, as well as in every other colony where a prudent and a proper system has been followed, that free industry is already of far greater advantage to the intelligent planter than ever slave labour could be made, even when under the most severe and unlimited authority of the cruel task-master and his legion of drivers.

ISLAND OF TRINIDAD. RETURN OF PRODUCE, STOCK, AND CROPS, FOR 1835.

DISTRICTS.	CROPS. NATURE OF CROP, AND NUMBER OF ACRES OF LAND IN EACH CROP.									STOCK. NUMBER OF				PRODUCE NATURE OF THE PRODUCE AND QUANTITY OF EACH.								
	Sugar Canes.	Cocoa.	Coffee.	Cotton.	Provisions.	Nutmegs.	Pasture.	Total No. of Acres in Crop.	No. of Acres of Uncultivated Land.	Horses.	Horned Cattle.	Mules.	Goats.	lbs. of Sugar.	lbs. of Cocoa.	lbs. of Coffee.	lbs. of Cotton.	Gals. of Rum.	Gallons of Molasses.	Barrels of Manioc.	Barrels of Corn.	Barrels of Rice.
Aricagua	461	140	8	..	480	..	364	1,453	2,143	11	219	131	25	848,100	44,940	1,100	..	4,340	28,261	59	100	..
Arima	64	1,296	2	..	568	16	275	2,221	4,691	6	36	33	10	52,000	295,554	410	..	2,000	...	484	620	119
Arima Mission	...	118	10	..	51	..	...	179	2,544	2	2	12	..	...	16,947	...	..	...	...	..	..	..
Bocas	...	...	..	32	131	..	...	163	395	..	..	..	6	...	...	...	1,500	...	...	12	4	..
Carenage and Cuesse	796	59	72	..	455	..	418	1,800	2,933	5	127	79	..	857,036	3,310	5,200	..	5,095	29,724	95	202	..
Caroni	96	313	12	..	252	..	172	845	2,246	13	114	22	20	167,275	45,209	700	..	5,940	...	33	187	..
Cedros	1,155	3	16	..	482	..	281	1,937	3,750	5	103	225	197	1,041,162	...	500	..	8,800	35,375	11	280	12
Carapichaima	2,102	248	18	..	1,209	..	892	4,469	6,261	42	329	197	58	3,908,604	22,552	2,600	..	16,985	107,291	20	335	122
Chaguanas	1,398	461	..	..	537	..	438	2,834	4,083	9	120	163	42	2,175,297	93,210	...	..	6,400	50,821	..	206	..
Chaguaramas	...	...	35	..	295	..	...	330	2,061	..	..	..	..	...	...	...	..	...	...	378	410	2
Cimaronero	211	147	5	..	141	..	146	650	1,193	4	78	22	19	306,100	50,820	300	..	7,200	6,000	28	63	..
Caura	...	918	..	..	339	..	67	1,324	1,416	3	15	28	..	...	236,591	...	..	...	...	..	518	30
Diego Martin	489	162	200	..	459	..	466	1,776	3,475	14	81	92	13	619,850	13,990	25,685	..	2,850	22,460	107	290	6
Erin	271	370	6	..	139	..	70	856	429	9	105	29	..	217,800	25,866	700	..	5,679	...	..	80	..
Eastern Coast	...	13	6	..	512	..	160	691	1,600	28	114	..	488	...	...	...	..	...	...	..	400	1,350
Guanapo	9	1,190	2	..	441	..	226	1,868	8,384	7	42	39	81	...	359,646	290	..	...	676	975	975	746
Guapo	720	...	..	..	249	..	499	1,468	2,841	..	137	118	..	1,220,614	...	...	..	...	48,405	7	313	..
Hicacos	176	...	..	..	120	..	54	350	995	3	33	59	110	135,569	...	...	..	800	4,525	30	18	..
Irois	112	...	..	..	32	..	96	240	400	2	73	23	..	194,400	...	...	..	...	6,000	..	..	..
La Brea	214	...	3	..	242	..	115	574	638	4	42	64	67	479,850	...	100	..	...	14,947	35	..	..
Las Cuevas	...	219	..	..	1,048	..	32	1,299	2,707	..	..	..	6	...	2,526	2,000	..	...	...	551	314	..
La Ventille	70	61	73	..	276	..	62	542	650	2	..	14	..	103,000	10,200	9,550	..	...	2,874	208	235	..
Maraval	224	342	333	..	384	..	149	1,432	3,136	18	70	43	20	390,000	71,159	32,932	..	10,800	6,000	311	388	..
Mayaro	672	6	..	16	685	..	339	1,718	4,659	21	148	189	118	1,251,350	200	...	1,300	13,900	34,060	48	111	232
Mucurapo	93	13	14	..	89	..	86	295	265	12	41	21	20	123,715	2,860	2,000	..	3,000	...	517	752	31
Maracas Valley	19	1,542	51	..	544	..	265	2,421	4,694	24	86	39	31	25,000	288,172	11,113	..	...	400	170	230	..
North Naparima	3,131	...	10	..	813	..	642	4,596	3,018	60	220	476	86	4,555,143	...	3500	..	53,615	121,986	..	25	..
Oropouche	1,046	...	..	..	352	..	256	1,654	2,421	7	84	172	5	1,867,664	...	...	..	...	55,183	..	..	..
Point-à-Pierre	1,603	79	24	..	784	..	413	2,908	3,472	26	180	231	49	1,985,846	16,400	3,250	..	5,715	66,109	214	548	..
South Naparima	6,125	89	3	..	1,299	..	861	8,377	7,138	60	244	1182	84	11,963,870	...	150	..	13,464	387,372	..	350	..
St. Anne	12	77	166	..	235	..	87	577	1,005	31	80	22	45	...	700	13,900	..	...	...	249	186	..
Santa Cruz	6	1,802	120	..	923	..	304	3,155	5,290	33	43	38	49	...	540,920	13,887	..	...	2,000	1,094	1,526	..
St. Joseph	627	268	2	..	252	..	348	1,497	1,248	20	150	76	41	755,651	57,760	200	..	3,085	29,987	48	401	..
Savanna Grande	1,851	41	..	..	432	..	288	2,612	2,637	21	79	348	14	2,546,120	...	...	..	6,952	80,595	30	28	..
Savanetta	1,880	...	..	..	633	..	577	3,090	3,696	17	369	367	7	3,133,768	...	...	..	23,031	67,542	..	10	..
Tacarigua & Arouca	1,824	393	20	..	908	..	619	3,764	8,842	24	518	148	143	3,100,750	107,735	1,504	..	103,167	53,164	29	411	3
Toco and Cumana	35	98	8	..	35	..	12	188	472	..	..	7	13	10,846	8,690	300	..	...	300	..	5	5
Tragarete	413	...	..	..	128	..	91	632	181	6	69	44	..	696,900	...	...	..	3,710	26,100	..	50	..
Total . . .	27,905	10,468	1,219	48	16,954	16	10,175	66,785	103,079	549	4,151	4,749	1,867	44,732,430	2,315,957	131,871	3,300	305,528	1,288,157	5,543	10,571	2,658

CHAPTER XX.

TRINIDAD.

CIVIL GOVERNMENT AND COURTS OF LAW, AND MILITARY ESTABLISHMENT—STATE OF RELIGION AND CHURCHES—BLACK COLONY AT MANZANILLA—GENERAL REMARKS.

FORMERLY the colony of Trinidad was under the command of a Governor, who was Commander-in-Chief in and over the island and its dependencies, Vice-Admiral thereof, *sole* Judge of the tribunals of Royal Audiencia and Court of Appeal of Civil Jurisdiction, Intendant of the Royal Treasury, Judge of Crown Lands, President of the Illustrious Board of Cabildo, and Royal Vice-Patron of the Holy Roman Catholic Church. There was no Executive Council whatever, and his Majesty's Council, or the persons with whom the Governor might advise or consult, *if he thought it necessary*, consisted of six individuals selected by himself, and who held the appointment during his pleasure only. The highest law court was the Royal Audiencia, of which, as we have seen, the Governor was sole Judge; while the inferior officers were an Assessor, the Attorney and the Solicitor-General, the Alguasil Mayor, or Provost-Marshal, and a clerk of the court.

In the Court or tribunal called "of Appeal of Civil Jurisdiction," the Governor was assisted by an Assessor; and in the Court of Appeal of Criminal Jurisdiction, he had the aid of the whole of his councillors. The Court of the First Instance for the trial of Civil matters consisted of a Chief Judge, the Judge of Criminal Inquiry, and the Alcaldes in ordinary. The Court for the trial of Criminal prosecutions consisted of the Chief Judge of the colony, and the Governor's Assessor, together with the first and second Alcaldes of the capital; but the Court of Criminal Inquiry was composed of one Judge only, and a clerk of the court. This constitution was given to these courts by an Order in Council of date the 11th September, 1822, and was a great improvement upon the still older system, but it was not till after the commencement of the present reign that the report of the Commissioners sent out to investigate our colonial legislation after the peace, was taken into consideration, and that in Trinidad, as in the other colonies, considerable changes were effected in the number and in the constitution of the several courts.

The Governor has now an Executive Council as well as a Council of Government; the former consisting of the Colonial Secretary, the Attorney-General, and the Colonial Treasurer; while the latter is formed by six *ex-officiis*, and six nominated members. The

Chief Justice, the Colonial Secretary, the Colonial Treasurer, the Attorney-General, the Solicitor-General, and the Collector of the Customs, are by right members of the Council of Government, while the Governor has the power of nominating an equal number, viz., six members, from amongst the planters and merchants of the island. The Supreme Court now consists, as in British Guiana, of a Chief Justice and two Puisne Judges, with the Attorney-General, the Solicitor-General, a Secretary, and the Alguasil Mayor, &c. In civil actions the judges decide according to the laws of Spain or ordinances of the Governor, but in criminal prosecutions they are assisted by three elected Assessors, who form with the three judges that jury whose plurality of voices condemn or acquit the prisoner. I have already offered some remarks on the propriety of altering the constitution of these courts, and shall only add that they are pregnant with the greatest abuses.

There are seventeen barristers and licensed advocates practising in the several courts, eight licensed conveyancers, and more than two dozen of solicitors, several of whom are notaries public. The mixture of tongues that prevails in the island renders a long list of interpreters necessary, but they are chiefly solicitors of the court who are sworn as such. All the pleadings in the several courts since 1814 have been in English,

and the sooner that the laws of England are declared to be the only laws and practices of this colony, the better for the respectable and industrious colonists, and the more rapid and steady will be their march in improvement, and in the civilization of the people.

The town-magistrates have the power of holding Small-debt Courts, and of deciding finally in all matters under twenty dollars; but, though there have been many beneficial alterations and curtailments made in the forms of process in the inferior courts, they are still clogged with several ridiculous forms and observances that favour delay, and only tend to defeat the ends of justice.

The stipendiary magistrates in Trinidad, as in all the other colonies, form a new power created by special Act of Parliament, and regulated in some measure by local ordinances. They were created for the protection and government of the negro population, who, though released from the fetters of slavery, are still in a transition state between absolute bondage and perfect freedom. Most of these gentlemen were sent from England, and had a sound discretion been exercised in their selection, and fitness, rather than friendship, made the criterion of their appointment, they would have proved (as indeed they have done, with all their drawbacks) of the greatest benefit to the colonies. Where there were wise and prudent

governors to instruct these magistrates, and guide them in the discharge of their duties at the first commencement, the system has worked well, and even those who seemed in the first instance the most unfit for the office, have become able and efficient magistrates. But in other instances, where the ruling power was either ignorant or indifferent, the interference of these special justices was often more injurious than beneficial. Their conduct sometimes was evidently more calculated to create discontent than to allay it. This was chiefly owing to their want of experience, and a total ignorance and misconception of the negro character; though in some weak minds it might proceed from a desire to make a display of that power and authority which they believed the law had given them, but were quite unable to comprehend. I must, however, add, that all the gentlemen I have met with as special justices were men of great worth and integrity, and their only anxiety seemed to be to gain a thorough knowledge of the important duties imposed upon them, and to discharge those duties with strict impartiality; and I repeat with pleasure, that it is owing in a great measure to their unwearied zeal and constant watchfulness that order, regularity, and industry, have continued to prevail, and to increase, so universally, throughout the Windward and Leeward colonies. The few incapables sent out on their first appointment were soon got quit of, and their successors have

been selected with more regard to fitness, and they have been more successful.

It is much to be regretted, that men at a very advanced period of life are allowed to remain in situations of high responsibility, especially when the good or the evil destiny of a hitherto flourishing community may in a great measure depend upon their energy and efficiency.

The military force in Trinidad does not exceed five or six hundred men: it is generally the head-quarters of a British regiment, and, for some time past, has been the head-quarters also of the 1st West India regiment, a corps recruited in Africa. The British regiment stationed in this island, as I have elsewhere stated, sends a detachment to Tobago, and the military command is vested in the senior officer present with the troops. Very expensive, and, unfortunately, very unhealthy, barracks have been built at a short distance from the capital, while the old and fast-decaying remains of the wooden Casernes of the Spaniards are still occupied as barracks by the black troops at St. Joseph's.

The militia of the island was originally formed of all the free inhabitants, whether white or coloured, and was so well organized by Sir Ralph Woodford, that it still continues a very respectable force. In another year or two, however, some important changes must be made in the organization of the local military

force of our several colonies. When all the inhabitants are free, they must adopt the same system as in other free countries, and select their militia by ballot. The officers, too, must be appointed without regard to colour, though for a generation or two the white man's mind will be necessary to animate and direct the energies of the black man's physical powers; whether, (I may add,) that power be employed in cultivating the soil,—in acquiring higher attainments,—or in pursuing more refined labours. The lately-emancipated slave is still as helpless as a new-born babe, and even the youngest of the present generation will scarcely have acquired a knowledge of the first principles of freedom; the scholar, therefore, must be kept diligently at his task,—and even then it will not be until the third generation from the present date, that his instruction can be considered as complete, or that he will be able to guide himself with a due regard to his individual interests, or the claims of a well-regulated and industrious community.

Cultivation of the mind must be continued from generation to generation, before there is that degree of talent or general knowledge developed to constitute the multitude a thinking or an informed people. The son must be made to follow the father in the same train of thought, and routine of duty, for a long series of years, before those duties become permanently identified with his mental and animal existence, or that his mind will

be prepared to show those higher attributes which distinguish the philosopher from the savage, or the industrious and religious citizen, from the indolent, idle, and superstitious African. In my intercourse with the negro population I uniformly observed, where the African slave had arrived young, and had come into the possession of a kind and humane master at that early period of his life, and when care had been taken to have him, in some degree, instructed, after his arrival in the colony, that his children, and his children's children, were not only better conducted, but were far superior in intellect to those of the same class of the purely black population, or even to those who had an admixture of white blood, but had not been equally favoured. In a century hence, the natives of our western colonies, whether white or black, will be upon a perfect equality with their brethren of Europe, in all that constitutes the distinguishing prerogatives of man; but at present, and for many years to come, the white man must continue to act the part of a parent and schoolmaster to his sable brother, kindly, but firmly, correcting his wayward fancies, administering such instruction as his improving mind can fully comprehend, and, above all, constraining him to follow those regular and industrious habits, which alone can render him independent or happy hereafter.

Before we acquired possession of Trinidad, every

toleration was granted, except on the subject of religion: here no deviation could be allowed from the Roman Catholic faith. When a settler arrived, it was not necessary to say from whence he came, or to assign any cause for his having come; it was quite enough that he acknowledged himself a professor of, or a convert to, the doctrines of the Church of Rome. Since it has become a British colony, all religions have been tolerated, and equally protected; even the doctrines of the Koran, as professed by the Mandingos, of which nation several wealthy and respectable individuals have located themselves in Port of Spain. The Mandingos have long been known as constituting, in some measure, the merchant-adventurers of Africa; they were, I believe, the best informed of all the native tribes, and all Mahometans, but were occasionally entrapped and sold for slaves. How or why they accumulated in Trinidad I was not able to ascertain, but it is a remarkable fact, that they all succeeded in procuring their freedom long before the abolition of slavery, and formed a distinct society of themselves, strictly bound together by their Mahometan faith. As hucksters, or petty retail dealers, they have not only kept themselves above want, but, in some instances, have acquired wealth. When any of their nation was brought to the island as a slave, his conduct was strictly watched, and, if found conformable to what

they expected, his freedom was instantly purchased; but though made free, he was not allowed to become idle. He was compelled to labour, and that diligently, until the society was repaid the money they had advanced for his purchase; and even when that had been accomplished, he was held as still amenable to the general body for his industry and good conduct. The whole of these people confine themselves, as regards residence, to a particular portion of the city, and have persons regularly appointed to officiate in holy things.

As the great majority of the colonists are still Catholics, it follows, as a matter of course, that the only instruction which has been afforded to the labouring population has been by the ministers and teachers of this church; but, alas! they have as yet made little progress. Beyond the boundary of the city, or town, of Port of Spain, no provision whatever has as yet been made for any religious establishment connected with the Church of England, or any other Protestant Church; so that the Protestants who live at a distance have it not in their power either to attend the ordinances of their religion, or to provide for the instruction of their people according to the tenets of their own faith. There is only one Protestant church, and one Protestant clergyman, in the whole island, as connected with the Establishment.

The only regular military chaplain allowed to our gallant army in the West Indies was (by accident, I suppose,) placed in Trinidad, and he remains there; but he has neither church nor chapel in which he can perform divine service, though he has a great deal of fatiguing, and often dangerous, duty to perform, in being called upon, during all states of the weather, to proceed to St. Joseph's, to bury the dead, or to read the prayers to the living, on a Sunday morning.

Trinidad is the seat of the Catholic bishop who is vicar-apostolic for the whole of the West India islands; and, besides his vicar-general, there are three other curés in Port of Spain, and nine that do duty in the several districts of the colony: these are the regularly endowed clergymen. Of late, however, there has been a great influx of Catholic missionaries, chiefly from the French islands, and even from Europe; but they were not looked upon in a very favourable light by the respectable colonists. The Protestant planters (now a numerous and wealthy body) were loud in their lamentations against the indolence or apathy of the Government, and of the Reformed Churches in Europe, who have left them so long destitute of every means of procuring the comforts of religion, whether in sickness or in health.

There is only one Protestant missionary chapel in Port of Spain; but there was a very zealous and, I believe, pious Catholic priest, that had commenced as

an independent, or voluntary, and had acquired a most numerous and respectable congregation. He adhered most firmly to the forms and doctrines of the Roman Catholic Church, but rejected her authority in temporal things, and set at defiance the anathemas of the Bishop of Olympus, as vicar-apostolic. Morning, noon, and night, this man was at his post, teaching and preaching; and, if his life is prolonged, he will do much good.

The Protestant rector of Port of Spain is an amiable and excellent pastor of the Church, and, in as far as his delicate state of health would permit, while I was there, was most zealous in the discharge of his important duties; but he had neither physical strength, nor mental energy, sufficient to cope with the many difficulties, or avoid the snares that beset his path.

Sir Ralph Woodford provided most liberally for the wants of the Catholic colonists. He caused respectable churches to be built in every district of the island, and granted to each of the clergymen an adequate stipend. And why, I would ask, is there not some provision made for those inhabitants who are Protestants? They are now a fair moiety of the whole people, and, for the most part, settled at a great distance from the capital, where (as I have stated) the only Protestant church in the island is situated. This is a subject that demands attention from the home Government.

I am quite satisfied, from what I have seen, that the forms and ceremonies of the Church of Rome are better calculated to make an impression upon the mind of the unlettered African, than any of those which have been adopted by the Protestant Churches. Superstition is a natural ingredient in the constitution of man, whether in a civilized or savage state; in the latter, where it is most predominant, the pageantry and apparent mystery of the Catholic ceremonies speak a language intelligible to the untutored mind which it can comprehend only. It is a language addressed to his external senses, and therefore calculated to make the most lasting impression on his limited intellectual faculties. The Church of England undoubtedly comes next, and is far preferable to what I would call the simple and sublime forms of primitive Presbytery. The mind must be cultivated before we can address the intellect with any hope of success, as man, in every condition, must first be taught the alphabet before he can learn to read. Painting and sculpture were powerful auxiliaries in the first conversion of the heathen Gentiles; and forms and imposing ceremonies are, in some respects, almost necessary to arrest the attention of a mind that has grown up in total ignorance, or indifference of holy things. The negroes in Trinidad are civil, well-conducted, and industrious; though I am afraid they have not made much progress in religious knowledge.

Before I quit this branch of my subject, I feel it my duty to advert to what I consider not only a cold indifference to, but also a most criminal neglect of, one of the most important duties which every man in authority can have to attend to. I have already mentioned that when the (3rd, I believe,) West India regiment was disbanded, Sir Ralph Woodford caused the men who were entitled to pensions to be located in a well-selected district upon the east coast of the island, at Manzanilla. This military colony, under the able management of Dr. Warden, their corregidor, or commandant, has begun to make rapid progress in acquiring industrious habits, and in such knowledge as one individual could impart to them. They have long been desirous of having a clergyman, and a schoolmaster, and both have become absolutely necessary; yet, though the arrears of their pensions have accumulated to an amount of several thousand pounds, and remain in the military chest of the colony, and when I left the island, were of greater amount than was sufficient to build a church and a school-house, and amply to endow a clergyman and a schoolmaster, they had not been able to obtain either the one or the other. I saw a copy of their memorial, in which they were unanimous in petitioning that these arrears of their pensions might be so disposed of. For what purpose, I would ask, are these industrious colonists to be deprived of the comforts and consolations of

religion, and compelled to bring up their children in ignorance, when they have more than sufficient means to provide for all their wants? Is it because they prefer the doctrines of the Protestant Church to the dogmas of Rome, or that other colonial matters render it impossible for the Executive to attend to their memorials?

Owing to the good feeling, good sense, and proper measures of the more respectable planters, the great crisis of the 1st of August, 1834, passed over without anything like insurrection or disturbance amongst the negro population in Trinidad. I am not aware that a single day's labour was lost on any one of the estates. A few field negroes, on one occasion, came to the capital to ask some information from "Massa Gobernor," and accidentally meeting his Excellency on his return from the town to his residence in the country, they began their "palaver" in a way that did not seem to please, or was not considered suitable as to time and place. Their appearance in such numbers, in and about the capital, did at first create some alarm, and the question of martial law was actually mooted in the council-chamber; but the good sense, and sound judgment, of Chief-justice SCOTLAND convinced the other members of the folly of agitating such a question *then*, and I believe it was never afterwards renewed.

CHAPTER XXI.

TRINIDAD.

FORMATION AND NATURAL HISTORY OF THE ISLAND—REMARKABLE PHENOMENA—PITCH LAKE—MUD VOLCANOES—ANIMAL AND VEGETABLE PRODUCTIONS—ANTS, THEIR HABITS AND ECONOMY.

THERE are few portions of this earth's surface that can afford more interest to the student of natural history, and certainly none more deserving of the attention of the geologist. Trinidad, though dignified with the title of "QUEEN OF THE ISLANDS," and greater in extent than the whole of our Windward islands combined, is still, comparatively speaking, a mere spot or speck in the great chart of the world. Yet in this small spot we find not a few of what may be considered the living representatives of the first inhabitants of a former world, the modified types of long-extinct races of animal and vegetable creations. We have here a beautiful illustration of what geology tells us was the condition of the surface of the whole earth, ere it was prepared for the residence of man; and we find almost every variety of material and of structure that has as yet been discovered by man in his subse-

quent researches throughout what Professor Buckland has so appropriately denominated "the archives of the interior of the earth." We have the land fitted only for the support of vegetable life, or, at most, of a few animals whose forms indicate that their principal abode must be in the waters; we have the mud and slime that had been deposited at the bottom of the earliest seas, baked into hard and stratified rocks, and forming mountains of great extent, some thousand feet above the surface of the present ocean. We can trace, in existing matter, almost all the changes which this world of ours has undergone since THAT BEGINNING when God created the heavens and the earth. We have land still in that condition which geology tells us it was, ere the Almighty Creator, in the counsels of His eternal wisdom and goodness, had issued His decree, "Let us make man;" and we have the same land clothed in all the beauty and verdure of perpetual spring, and constituting what may truly be called a Garden of Eden, an earthly paradise, filled with all that can conduce to the comfort and happiness of the human being.

I am not aware that any mass of primitive unstratified rock has reached the existing surface of the island, but we have every gradation of stratified rocks, from the transition to the tertiary, and even some of later date.

That northern mountain-range which evidently formed the nucleus of the whole island, is composed of clay-slate, shale, and slaty sandstone, while the lower range of hills are chiefly masses of hard compact limestone, intersected by numerous veins of milky quartz. The strata of the carboniferous order are as regularly deposited as in any of the great coal-formations in England; and iron-stone, black and compact, and ochry brown, with the salts of aluminous earths and combinations of sulphur with metals, prevail generally, in larger or smaller masses, throughout the whole of these strata.

That these strata were thrown up from the bottom of the sea at a late period of this earth's existence is, I think, evident; but whether previous or subsequent to the existence of man upon the more ancient portions, we have no adequate means of determining. We have, therefore, not only the *detritus* of a first dry land, that must have been accumulating for ages in extensive beds at the bottom of the sea, modified by the action of intense heat, and raised by the expansive powers of that heat, or of vapour, to nearly three thousand feet above the present surface of the same sea, and forming, as I have said, extensive mountain-ranges; we have also intervening valleys that have been hollowed out by the action of the elements since their elevation,—valleys whose cool shades are now moistened

by fountains of pure water, and enlivened by the never-ceasing music of purling streams; but we have equally the wide-extended SAVANNAH, where it may truly be said the earth is still "without form and void." In some places these Savannahs are neither land nor water, but an intimate mixture of both. In other parts, the waters have in some measure "been gathered together," and form sluggish turbid streams; and not only in those parts where the soil has become in some measure solid, but also where the earthy particles are still mixed with the water, and form a liquid mire, the whole surface is covered with a rank impenetrable vegetation, composed in a great measure of such genera, and even species of plants, as are only found in other places in a fossil state.

In contemplating the enormous quantity of vegetable matter that is here produced in a very limited space, we cannot wonder at the breadth or the length, or even depth of those coal strata in Britain, which, after all, can be but a small part and portion of the remains of a similar vegetation that was co-extensive with the whole surface of a former world; and whose growth, as their fossil remains show, was even more luxuriant than those of the present day.

It is not in the vegetable productions of these Savannahs only that we can trace a resemblance to that condition of the ancient world which geology proves to

have existed before the creation of man; the living inhabitants are also, as I have said, the representatives of families, many of whom have become extinct, but whose existence can be traced from the first moment that the history of organic remains becomes associated with that of mineral phenomena.

The earliest of the terrestrial Mammalia that have yet been discovered, are the small marsupial quadrupeds. This order was evidently the first and most ancient condition under which animals of this class appeared upon our planet. As far as we know, it was their only form during the secondary period. We find them co-existent with many other orders in the early parts of the tertiary period, and the *Manaco*, *Opossum*, *Agouti*, and *Lapo*, (members of the same family,) are still numerous in Trinidad.

If we turn to existing fishes, we find more than one of the family of Sharks, a family the most universally diffused, and the most voracious of modern fishes. There is no period in geological history in which many of its forms did not prevail. In the first, or transition strata, composed as they are of the wrecks of the original world, the remains of this family are very abundant; and in the oozy beds of the Trinidad rivers, and along its muddy shores, we have several varieties, with the noted *Squalus Zygæna* and its treble row of teeth, and large prominent eyes, so characteristic

of those fish monsters of the first ages, and who were supposed to live only "in troubled waters."

If we refer to the Chelonian and Saurian families, which have existed co-extensively through the secondary and tertiary formations to the present time, we have both these families very abundant and of great variety. The oxbill and the green turtles are so plentiful, as to be sold in the markets for five-pence the pound. The land-tortoise is to be met with almost everywhere, and, from the *Cayman* to the "*Mat*," we have an immense variety of the Lizard tribe, all of a frightful and destructive character, without reckoning the smaller fry, or such as are equally numerous in the island of Barbados. The crocodiles grow to a very large size. The Ophidian family is abundant, some varieties grow to a large size, and Boa-constrictors have been killed twenty-seven feet in length; while the *Mauccaw*, a snake with a head like a bull-dog, is often nine or ten feet long, generally active, but easily killed when it has gorged itself with a full-sized agouti.

There is another ugly monster of the serpent tribe, called "the double-headed," because it is scarcely possible to discover which end is the head, they are so nearly alike; and a variety very beautiful, called the coral snake, because its scales form beautiful circles of bright scarlet, alternately with black. The sea-cow (*Trichecus manati*) is an inhabitant of the Savannah,

as also that species of otter called the Brazilian. The Porcupine, and the Mangrove-dog (*Didelphus Philander*), the Armadillo (*Dasypus Peba*), the nearest type of the great Megatherium, are all most abundant.

The great Savannah of Trinidad, which my excellent friend Dr. Fergusson, of Windsor, in his able reports, has likened to an inland sea, is as yet in a great measure a "Terra incognita," and it is only such of its inhabitants as have been found beyond their bounds that have hitherto been described. The mountain of TAMANA, which rises nearly in its centre to a great height, has scarcely ever been visited by man; no human footstep, so far as I could learn, has ever reached its summit, for, if ever it was attempted, no one has returned to tell of his discoveries: yet this mountain is only a few miles from the sea-coast. It might be possible for a man, by care and watchfulness, to escape the Boa and the tiger-cat, and every other living monster, whether of the land or the water, but he cannot guard against the deadly poison of the marsh, or the noisome atmosphere which is generated by the decaying, and protected by the rank, living vegetable matter, with which the half-formed land is literally overloaded. So deadly is that atmosphere, that in a few hours it will destroy life even at noon-day, while during the night two or three inhalations will destroy the strongest and most healthy negro.

It would be well if the deleterious effects of this poisoned air were confined to the boundaries of the Savannah; it would then be of little consequence, as the pestilence might be avoided; but at particular seasons it accumulates, and is spread over the whole island, carrying disease and death into every corner of the land. It is a remarkable fact in the history of these marsh poisons (first I believe fully demonstrated by Dr. Fergusson), that they creep up to the tops of the highest mountains with great rapidity, where their virulence or noxious influences upon the human constitution are increased, or, as it may be considered, concentrated.

The mortality is greater at the top of a mountain a little removed from the plain, than it is on the very margin of the Savannah itself, or even in any intermediate stage between the marsh and the mountain. The men in Fort St. George were far more sickly than those in Cocorite, though the last is not much elevated above the level of the swamp, from whose boundary it is scarcely removed, while the first has more than a thousand feet of elevation, and is at a much greater distance. Though many thousands of pounds of British money were expended in trying to make these stations habitable for man, they have both proved so very destructive of human life, that for some time past they have been altogether abandoned.

As yet no metallic veins have been discovered, nor are they to be expected in the secondary rocks that compose the mountains of this island.

These mountains, I am now to observe, are evidently a continuation of the main-land of Cumana, or coast of Paria, which were raised into their present position by that stream of liquid basalt which, by its overflow, formed the nucleus of the island of Tobago, and which has left marks of its progress in the rocky bottom of the sea that intervenes between the two islands.

We may suppose that that district of the continent called the Caraccas, beyond Cumana, is placed over a still-existing furnace, filled with burning or melted lava; and that a little more to the south, or under the equator, is the great store-house from which all the primitive islands in the Caribbean Sea have been thrown out, as I have attempted to describe them in a former chapter; and we may further conceive, that the same, or a subsequent current, forced into view Trinidad, and those other mountains which enclose the basin of the Gulf of Paria*.

That there is still a connexion kept up between the root and branches of this volcanic stream, is evident from the occurrences that were so fatal upon the Spanish Main, and in the island of St. Vincent's, in the early part of 1812; and as is equally shown by

* See the plan of this supposed order of formation, p. 286.

the frequent though trifling shakes of the earth experienced almost daily in Trinidad, and which, in my opinion, are the effects of the heated air or steam passing along some extensive void, or fault, left unoccupied when that liquid stream of basalt which passed under the island became cool, and had contracted its limits.

That extensive faults or fissures do still exist in the rocks upon which the latter deposits have been formed, is evidenced, in the first place, by that singular and extensive collection of bituminous matter upon the surface of a fresh-water lake, well known as the *Pitch-lake* of Trinidad. This exudation from the Diluvial clay-hills is of the same nature, and produced in the same way, as the *Green-tar* of Barbados. But in Trinidad there was provided a natural reservoir (and of some extent), for the water, which, percolating through the bituminous strata in greater quantity and with more force, carried along with it to that reservoir the pitch, or bitumen, which in the process of time has accumulated to the extent we now find it, and where it has become altered in appearance and consistency by exposure to the action of the sun and atmosphere. At Point La Braye, where this Pitch-lake exists, the clay-slate-rocks which form the northern mountains have evidently come into closer contact with the liquid basalt This point is elevated about

eighty or a hundred feet above the level of the sea, and is composed of these rocks altered to a state resembling Hornblende slate. It is in this mass that the chasm or basin occurs in which the fresh water is collected that supports the accumulated mass of bitumen. It may indeed be a question whether or not this bitumen was distilled from that enormous mass of clay by the action of the heat which has converted it into this Porcelain jasper of mineralogists,—(it has much of that appearance,) or that it exuded, as stated, through the soil in a liquid state, into this cavity where it has accumulated. And, in the second place, by the mud-volcanoes, which are so singular a phenomenon in the history of this island, and, in my opinion, bear positive evidence of the existence of extensive subterranean cavities.

These mud-volcanoes are all situated in the southern point, or neck of land, the surface of which is formed by the last-deposited mud from the Oronoko. They lie directly opposed to the current of the stream from one of the largest mouths of this large river, and, as it appears to me, this stream is driven into one or more of these natural cavities, and compressing the air, and even the first-admitted portions of muddy water, forces them through the strata, until stopped by a vein or dike of basalt or granite, when both rise to the surface in the same manner as in common wells.

Shells and other submarine productions are constantly thrown up with the water and mud, and occasionally portions of a metallic substance resembling pure silver, or crystallized tin.

The action of these mud-fountains is generally continued until they form hills of some magnitude, and hence the truncated cones and bluff round hills that now give a diversified appearance to the southern coast of the island, and that fertility of the intervening alluvial valleys, in which some of the richest plantations in the colony have been established. Though the common pressure is not sufficient to carry up the earthy particles to any great height, it is remarked that the liquid contents of the caldron, from the passage of the air through them, always appear as in a state of ebullition,

The entrance to these cavities is evidently above the low-water mark, but whether on the shore of the island itself or on the opposite continent, I have had no means of ascertaining.

That this is the cause of these mud-volcanoes is proved in some measure by the following facts, which are well established. The mud which they throw out is always cold, the water is of the same saltness as that in the gulf, and, when from diminished pressure or the condensation of earthy particles, they cease to act for a time, the resistance, when overcome,

is attended with a loud report like that of a cannon, and is followed by a dispersion of the mud to a considerable distance around the chimney or aperture through which it is ejected. I need only refer to the common pop-gun of children, in illustration of the action which here takes place; the denser and more compact we make the retaining-plug, the greater will be the force required to compress the air so as to expel it, and the louder the report when it is expelled. The pressure of the water during ordinary neap-tides, or when the current of the river is weak, may not be sufficient to overcome the resistance offered by the accumulation of earthy particles in the upright shaft, but when the spring-tides return, or the current is increased, their united force compels the compressed air to find its way to the surface through the old channel, or to make a new one through the liquid mass. And may there not be a dike of the said basalt rising up through the stratified rocks which stops the progress of the water collected in the strata of the hills, and forces it also to burst forth here as a natural well or fountain?

The mud volcanoes and the Pitch-lake are at some distance from each other, but are evidently connected —the same formation; and I conceive that the bitumen which now floats in such quantities upon the surface of the lake was first poured out into a chasm in the rocks,

and then thrown out of it by the pressure of the water from beneath. Quantities are found upon the sea-shore, and for a considerable way beyond the low-water mark; and that no overflowings take place now, is accounted for by the water having found a subterranean passage to the ocean, through which it issues, and sometimes, as is reported, with a force sufficient to raise the opposing tide five or six feet.

This pitch, which forms a crust over the water of several feet in thickness, is raised somewhat higher than the surface of the surrounding soil, and had it been poured originally into a subterranean vault instead of an open basin, and been subjected to pressure, and not exposed to the action of the atmosphere, it would probably have formed a bed of coal of some extent. In some places, it is as hard and splintery as the finest cannel or parrot coal, and as an article of fuel it resembles that coal very much.

In many of the trees and plants which have fallen into this liquid tar, we see the gradual progress of their conversion from the ligneous state into a mass of bitumen or fossil-coal, retaining at the same time all the marks and peculiarities of that original structure, which is so characteristic of the vegetable remains found in the coal-beds in Europe; affording, as I imagine, a proof that the trees now found in a fossil state in the great coal-formations, were not necessarily charred or burnt previous to their deposition in the coal-strata,

but must have fallen into them while the coal was still in a liquid or bituminous condition. With every respect, therefore, for the opinion of the Rev. CANON of Christ Church, I would submit that the materials which now constitute our great coal-beds, were originally distilled as a liquid bitumen, or mineral oil, from the vegetable matter (mixed with the Detritus of adjacent lands,) by the action of that heat of the subterranean fires whose elevating force formed the hills and mountains in which they are now found, and that by pressure and draining that bitumen has become solid coal.

The Pitch-lake of Trinidad is about three quarters of a mile from the western shore, where it has its principal outlet; it is nearly circular, and the diameter is about a mile and a half. It is asserted by some, that it sends off another underground stream, that passes across the whole breadth of the island, and emerges in the bay of Mayaro, on the east coast. This is exactly the course the liquid basalt must have taken before it gained the surface, and overflowed in such quantity as to form the island of Tobago. The lake and the pitch are probably not coëval with the appearance of the island itself, but were produced by the subsequent action of that same power which elevated the whole stratified mass from the bottom of the surrounding ocean,—that raised the Andes to their present situation, and gave existence to the chain of mountains that run from east to west, and from whose lofty

summits are derived much of that fertile soil which now forms the surface of the southern portion of this island, and the extensive plains of British Guiana.

In the northern portion of the island, plains have subsequently been formed by the earth brought down from the summits and sides of its own slate and limestone mountains. In the south, the substance of hills and valleys are, as we have said, thrown up from the fountains of mud that are still in activity, while the Savannahs, or the intervening central lakes or lagunes, are gradually filling up by the accumulation of vegetable remains, mixed with the soil left by the fresh water that covers their surface during the rainy season, or the spring-tides that even now partially overflow them, but which, as I have said, are not yet fitted for the habitation of man.

The fertility of the cultivated portions of Trinidad is only equalled by that of the richer soil of British Guiana, and were the facilities of transport equal, the two colonies might be considered as nearly the same. But in this respect Guiana will ever stand unrivalled; and as to extent, could the whole island be made productive, it would not equal one ten-thousandth part of our continental territory.

The colonists of Trinidad have been at greater pains to introduce exotic fruits and vegetables than their neighbours on the mainland, and they owe

their industry in this respect chiefly to the encouragement and exertions of Sir Ralph Woodford; he had seeds and plants brought from all parts of the known world, and most of them, it was found, agreed well with the virgin soil of this island.

In the garden attached to the house which I occupied in Port of Spain, and which was not of any great extent, I found, with other trees and shrubs, the following:—Several mango-trees of large size and full bearing (*Mangifera Indica*); several sappadillo trees, also of great size and most productive (*Achras sapota*); plantains and banana-trees in rows (*Musa paradisiaca* and *sapientum*); the avigato pear (*Persea gratissima*). The shaddock, a large tree (*Citrus decumana*). The forbidden fruit (*Citrus buxifolia*); orange, lime, and lemon-trees (*Citrus aurantium*, *Medica*, and *limonum*); almond-trees (*Terminalia catappa*); nutmeg-tree (*Myristica moschata*); sour-sop-tree (*Anona muriatica*); the pawpa-tree (*Carica papaya*). The Otaheite cucumber is a most singular fruit, and its acid juice is most powerful in destroying colours. I tried it with many varieties of stains and printed cottons, and it seemed to destroy all colouring-matter with equal facility. I have not been able to ascertain the classic name of this fruit, but it is allied to the *Cicca disticha;* it did not in any way injure the texture of the cloth. There were also the cinnamon-

tree (*Laurus cinnamomum*), a dozen or two of cocoa-nut-trees (*Cocos nucifera*). The vine flourished and produced grapes under the shade of the plantain-trees. There were also a number of vegetables cultivated, such as yams (*Dioscoreæ*) of different varieties; eddoes, or Taniers (*Caladium sagittifolium*), with okros, and many other esculent roots.

On the mountains, and in their wooded glens, the same species of deer that is found on the continent is very common, and when in season affords good venison. Trinidad is famous for the number and variety of its humming-birds. I think thirty-nine varieties have been collected, from the size of the humble-bee to that of the sky-lark, and of the most gorgeous and splendid colours that light and shade can produce. The other genera and species of the *Aves* are nearly the same as on the opposite continent, but they are neither so numerous nor so varied as in the interior of Guiana. Several kinds of fish are caught in the gulf; but the northern and eastern coasts are swarming with the king-fish, called by the natives the "*Tazar*," the Grouper (*old man*), and the Snapper (*Poisson rouge*), also a species of cod (*morue*), which are all very delicate food. Conger-eels and turtles of all sizes are found everywhere.

They have a superstition here, that there is a small fish peculiar to this island. That it is found in no

other part of the world, and is the most delicious food ever tasted, but woe to the individual that rashly partakes of it. If he ever attempts to leave Trinidad, his fate is sealed from that moment. If content to remain in the island his life will be long and prosperous, but if he leaves its shores he dies. I brought home the stuffed skin of one of these extraordinary fishes, which I gave to Mr. Yarrell.

Barbados abounds in lizards, Guiana is overrun with frogs, but Trinidad above all is remarkable for the number and variety of its communities of ants. Ants, indeed, prevail in all the colonies, but it is only in Trinidad that they become the object of chief notoriety, for it was not possible to stir within the house or out of it, without having our attention called to some singular circumstance connected with the economy of these insects. I shall not trust to memory for what I have to state concerning them, but shall copy from my Diary a few entries that were made while the facts were before me.

The ants to which the following remarks apply consisted of four distinct species, or varieties; one, a very small and active insect, scarcely perceptible, but by far the most familiar and domesticated, trusting, as it were, in a great measure, to man's assistance for its support, and his constant attendant within doors. Its nest was either in some crevice of the wall, or under

the floor of the rooms. It seemed so small and delicate, that I am sure it could not bear exposure to the winds and the rain. The next was a comparatively large strong-bodied black ant; they had their nest in the cleft of a mango-tree growing near the house: it was too high up for me to examine it in detail, but it looked like a large lump of clay placed in the cleft, and attached to both branches of the tree thus: and exactly of the shape of an egg, with the broad end resting in the cleft of the tree; it appeared to be about twelve inches in diameter. Whether they had formed here a permanent settlement, or that it was only a temporary abode, I did not remain long enough to determine. The next was of a still larger size, also black, and with large black wings; these, it was said, were only the males of the second species; but of this I have some doubts. The fourth variety were of an intermediate size, of a lighter colour, and with long white wings, which always dropped off the moment they alighted on any spot. There was a fifth variety,—a small red ant, whose bite was like the sting of a nettle; but these I only saw in a barrel of yams that had come from the Mansanilla settlement: they were not natives of Port of Spain.



"29th of April, 1835,—Our dining-room and

drawing-room are upon the same floor, running east and west; the dining-room has windows to the north, the drawing-room has them both south and north. This afternoon, about five o'clock, the whole of the windows and walls of both rooms, on the north side, became covered with ants; those in the drawing-room division were black ants, with large bodies and short black wings; those in the dining-room, or most western division, were of rather a slender body, but with very long white wings, that dropped off the moment they reached the glass or the wall, or any other place whereon they could alight, and they immediately became as common ants. Near to the south front of the drawing-room, there is a large mango-tree, and in a cleft of this tree, at about forty feet from the ground, a colony of black ants have collected a large mass of clay, mixed evidently with cow-dung. From this mass I have observed for some weeks a black waving line, formed by a descending and ascending column of these busy insects upon the white bark of the tree. This column has entered by the drawing-room door, on the east, has made its way along by the south wall across the division-wall of the dining-room, passing over the top of the door-way, and entering a crevice in the wainscoting at the north-west corner of the room, where they disappear. Here, it is evident, they soon find the object they have come in search of, for

they are not long in returning loaded with some substance, with which they diligently pursue their way back to their nest in the mango-tree. For three weeks they have continued to labour incessantly in this way, and, what with the advancing and retiring lines, the space they occupy is about an inch and a half in breadth. I have swept them off and destroyed them by thousands. I have sprinkled on their path the strongest acids and powdered camphor; I have poured nitric acid into the hole where they enter the wall; but all to no purpose. The broken chain is soon renewed, and though many were killed by the acid on their first entrance, a road was made over their dead bodies, which were eventually removed. These are called the scavenger-ants, and are said to be of great benefit in destroying vermin, and in consuming the remains of dead and putrid bodies. I was told that probably there was a dead rat, or some other animal, behind the wainscot, and that the ants would continue their course until the whole was consumed; and certainly they have continued for the last month with unvarying regularity, night and day. The overwhelming column, which has darkened the windows, and covered the walls of the north side of the room, have not in any way, either as a body, or singly, attempted to pass over to the south side. They were

seen to keep at a respectable distance from the north-west corner, where their wingless congeners have their hidden stores; yet, I am assured, that the winged are the males, and the unwinged the females, of the same species. Half past five, P.M."

"30th April,—Last night, at seven o'clock, I went into the drawing-room, and examined the windows on the north side of the room; scarcely a dozen of the winged ants remained, and next morning not one was to be seen. The column from the tree continued its usual route, and seemed not in the least affected, either by the coming or departure of the flying horde. The little gossamer-ants, my companions and friends of the dining-room, occasionally appear in immense numbers; but though the dining-room and drawing-room pass into each other by folding doors, constantly open, I never yet could detect one of my tiny friends beyond the strict boundary-line of the dining-room in that direction, though they were numerous in all the chambers to the north and south of that room. The flying species, that entered by the dining-room windows last evening, were different from those of the drawing-room: the bodies of many of the drawing-room visiters were one-fourth of an inch long, and their wings short in proportion, and dark: those in the dining-room had white wings, one-fourth of an inch in length,

though their bodies were not above one-eighth of an inch. It is now noon, and I have not yet seen a single winged ant to-day." The next entry is as follows:—

"4th May, 1835,—A good deal of rain last night, and several heavy showers this forenoon: at the present moment, half-past five, P.M., it is fair, but cloudy and dull. I observe a good many swallows* on the wing, hunting very high in the air. For the last three evenings the winged ants have again visited us. A great number of the white long-winged species alighted upon the dining-room table, and it was covered with their wings, which dropped off the very instant they touched the wood. They appeared very helpless when they had lost their elevators, and crawled with difficulty. From a small table in our dressing-room, this morning, I collected a good handful of their wings, but could see no appearance of any bodies. Last night heard the whistling-frog, the same as in British Guiana; although there are no pools or wet ditches in the neighbourhood, so far as I can learn. The tree-locust is at this moment very loud, though the tree where it is resting is at some distance; the noise is so shrill and piercing, that it appears as almost close to the ear.

* "22d of April.—I have just seen two or three swallows hunting for flies after the rain:"—first notice of the swallow in Trinidad.

"23d of May.—This morning I observed that a number of the white wings were upon the corner of our bed, within the gauze mosquito curtains; but the ants had all escaped except one overgrown monster, who appeared so fat that he could scarcely move. He was making his way slowly towards the side of the bed where I was dressing. He was discovered, however, by one of my little fellows, evidently a scout upon the look-out, and in a moment the pigmy had the giant by the throat, and there he pinned him until, either from exhaustion or suffocation, he expired. The operation was soon accomplished, and his little murderer, by some signal or communication with her fellows, had made the intelligence known at the hive; for in less time than I have taken to record the fact, several dozens came galloping to the spot, and, hoisting the motionless body on their shoulders, set off with it to their own den. These little ants are certainly most extraordinary and amusing creatures. I sometimes kill a cock-roach to watch their proceedings. The intestines of the beetle, when trampled upon, will cover an inch square of the floor, and I speak within bounds, when I say that the whole substance of the cock-roach would weigh many thousands of these little ants, yet they not only separate every part of the lacerated intestines from the floor with the greatest care, but they remove the whole body to the mouth of

their retreat, and there dissect it piece-meal, and carry it to their stores. There must be many hundreds concerned in the removal of so large a mass, and yet they all act in concert, and march in the same direction. I observe that they are very diligent during dinner, and carefully remove any crumb of bread, or morsel of meat, that may fall upon the floor. They must have some quiet method of communicating with each other; for if one finds a prize too large for his individual management, he can in an instant call thousands to his aid.

"The scavenger-ants have all left the drawing-room. I see the column is still ascending and descending the tree where their nest is, but they no longer enter this house. We have had no visit from the black-winged ants since I last recorded their appearance on the fourth instant." These are the only entries I find respecting the ants.

I find, however, recorded under the same date, that, "A hive of bees have made a lodgment in the north wall of the dining-room, about six inches from the window-sill. They enter by a small opening, which is covered by the window-shutter, when it is fastened back by the iron hook that secures it; and I find that when the shutter is firmly hooked back, it completely obstructs their entrance. It is not often, however, that the servants are at the trouble of fixing the hook; but as

it has been done occasionally, the bees must have found it an annoyance, and, with the view of providing against it, they have surrounded the hole in the wall by a ball of clay, of the size of a hen's egg, which, though it does not prevent the shutter from being hooked back, keeps it at a sufficient distance from the wall to permit the bees to pass easily behind it. I can discern no other reason for their having placed this ball of clay over their entrance, unless it is to prevent the rain being driven into the hole when it is not protected by the shutter. In either case, we have here a wonderful example of the power of instinct. I have twice removed the ball of clay, but have always found it restored. The bee is very like the meadow, or fog-bee, of England, small and short bodied. The hive does not seem to be numerous. I seldom see more than three or four at a time about the entrance. I do not think they have any sting, for when I destroyed their clay-guard, they were irritated, but did not attempt to sting or molest me."

"30th May.—I caught one of the bees to-day; there is no sting. The head and breast are of a brownish-gray colour; the body has five circles of an orange-yellow, and between these the colour is a dusky shining green. I removed the lump of clay at three P.M. to-day, and shall note the time they take to replace it."

"31st May.—3 P.M. The bees have now completely replaced the clay-safeguard over the entrance to their hive; it is even larger than what I removed yesterday, but is still very wet; indeed, except for an hour or two, it has rained constantly since yesterday. The bees, therefore, must have laboured hard at their task; indeed, they are still labouring, for, as it is now fine, I observe them arrive with heavy burdens of clay, which they place here and there so as to fill up a crevice, or strengthen the mass."

I have copied these notes from the entries made in my Diary, on the days and at the hours mentioned; and, although they may not be of much interest, I can safely affirm that they are correct statements of what I observed at these times.

CHAPTER XXII.

CLIMATE AND DISEASES.

TRINIDAD UNHEALTHY—CAUSES OF FEVER—LOCALITY OF BARRACKS BAD — ATMOSPHERIC PHENOMENA — EARTHQUAKES.

In former times Trinidad certainly was, and I believe still is, the most unhealthy of all our West Indian possessions. In certain situations, and in many of the other islands in particular districts, disease may be more prevalent, and the mortality comparatively greater; but in no other are the effects of the malaria so generally diffused, or so constantly experienced, as in this island. The atmospheric temperature is seldom above the average range common in these latitudes. In the plain in which Port of Spain is situated, it is about 86° of Fahrenheit; but the range between the highest and the lowest degree, during twenty-four hours, is greater here than in any of the other colonies that I am aware of: the nights actually feel cold. It is not, however, any great difference of the temperature that renders the island unhealthy; it is that great extent of uncultivated land, and more especially of that land which is not fit for cultivation, which still

exists, and constitutes by far the largest portion of the island. The poisoned vapour constantly hangs as a dense cloud over these savannahs, and from thence penetrates into every valley, and finds a speedy passage to every hill-top. Under certain circumstances, this *Miasm*, or marsh-poison, becomes greatly augmented in quantity, and more virulent in its quality; and then it is that we find the fevers more frequent, and the symptoms greatly aggravated. This occurs most generally when the weather has been dry for an unusual length of time, or that the rains are prolonged beyond their common duration.

The town of Port of Spain, before it was sufficiently drained, and the streets widened and properly paved, must have been as unhealthy as any other part of the island, and it was long scarcely habitable. It stands at the south-west extremity of a large plain, formed by the earth brought down from the mountains that nearly surround it, and seems to have been placed exactly where the mud from the waters of the gulf, and the detritus of the hills, met and mixed. Marine-square, and the foundation of many of the now splendid houses in that neighbourhood, were covered with the tide not many years ago; the sea, indeed, is retiring so fast in this direction, that, unless the buildings continue to follow it, the town will soon be left considerably inland. Every tide adds to the previous accumulated mud, as

it is observed here that the water flows *muddy*, and retires *clear*. On the east of the town, the beach at low water already extends for more than a mile to the southward, and in a few years more it will no doubt be covered with vegetation. The whole plain, however, as well as the town, has now been so completely drained, the brushwood altogether removed, the streets are so well paved, and the police so properly regulated, that Port of Spain, allowed to be the best built, and most magnificent city in the West Indies, is also as free from disease, and as healthy a residence, as any within the tropics.

The mountains on the north-west boundary of the plain rise almost perpendicularly from the shore of the gulf; and Fort St. George, perched on the first pinnacle, is more than 1000 feet above the level of the sea. This, however, is but the first step on the chain, as the rest of the mountains are considerably higher, and the range, which extends to three-fourths of the circle, terminates on the south-west, at that corner of the plain where the town of Port of Spain has been built, and where it also juts out upon the sea in a spur, or attached hill, of primitive limestone. The road to St. Joseph's passes round the base of this promontory, and is continued in nearly a due east course, gradually rising until it reaches this old capital of the island. The barracks at St. Joseph's stand on a table-

land, about 500 feet above the level of the gulf, and overlook the whole extent of the Great Savannah. This was considered an unhealthy station for European troops, as there was nothing to arrest the Miasm in its march up the hill. It might, however, soon be made a very healthy station, as it only requires to have the barracks built upon a proper construction, and the first floor raised upon pillars from the ground about ten or twelve feet. The case, however, is very different with Fort St. George, and the barracks at St. James's.

It was either Sir Thomas Picton, or Sir Thomas Hislop, that fixed upon the elevated spot where the fort stands, and it was determined an impregnable fortress should be built,—a second Gibraltar, in fact, that was to enable us, under all circumstances, to keep possession of the island. An arsenal was established at the base of the mountain, and cannon of every calibre were sent from England to be mounted upon the ramparts, as soon as they were formed. The top of the mountain, though cut down and extended as much as possible, did not, it was found, afford room for the barracks to hold the men that might become necessary to defend these ramparts; they must therefore be erected on the plain, and in order, as is alleged, that they might be under the protection of the guns of the fort, they were placed in the

very cess-pool of the whole plain,—a most unhealthy swamp, and so low, that it is not possible to drain off the moisture. The river from the valley of Maraval also surrounds this spot, at a few yards from the barrack-wall, and from its bed, which is generally dry for six months of the twelve, as much malaria is distilled as would render half the island unhealthy, were it not partly consumed, in its progress to the mountains, by the trees and plants that flourish so luxuriantly.

It so happened, however, that, after many thousand pounds had been expended,—I believe I might say a million,—in sending out stores of all kinds, even bricks to build barracks and block-houses, and in levelling hills and raising ramparts, it was discovered that no European could live where Fort St. George was to be built; and that even the arsenal, with all its range of store-houses and splendid offices, at Cocorite, could not be inhabited, even by Africans.

It is not meant to attach blame to any one for this useless waste of money. The position chosen was the most important in a military point of view, and it was only from experience we could learn that the atmosphere was so destructive to human life. Reasoning, *à priori*, one would have said, that a position so elevated must be healthy, and it must have been the prevalence of such a belief that led to the general

practice of building barracks in high situations throughout the Antilles. But though I acquit the contrivers of Fort St. George, I cannot find any excuse for their having chosen the situation of St. James's. The barracks, it might have been discovered, were far beyond the reach of any cannon-ball from Fort St. George, so that had that fort been tenable, it would have afforded them no protection. The locality, therefore, which has been chosen for these barracks, must have been adopted for some other reason than that which has been generally assigned; indeed, if I mistake not, St. James's barracks were not commenced until Fort St. George had been abandoned. I would fain hope that these will eventually be abandoned also, and for one-fourth of the sum that they have cost the country, others far more convenient may be erected on a part of the plain where the troops will be as healthy as they are in England; and, however we may regret that want of due consideration, and the extravagance which led to such a useless, or worse than useless, waste of the public money, I should pronounce it a measure of economy, and certainly one of humanity, to have new barracks erected in a proper situation, and the buildings at St. James's removed from the face of the earth.

One of the few facts that have become well esta-

blished with regard to the laws by which the Marsh poison is regulated in its often irregular movements, has been most fully examplified in these barracks. The buildings are three stories high, but the ground-floor is not inhabited; yet, for one case of intermittent fever that is admitted into the hospital from the companies quartered in the upper or third story of the building, there were three, four, or even five, from those in the second story. In the course of a very few weeks the companies in the lower rooms will scarcely have a man fit for duty, while those in the upper rooms will not have above one or two sick. It is therefore necessary to keep them constantly changing, and yet, as I have said, the lower rooms are not upon the ground, but removed full twelve feet above it. The cause of this sickness certainly is that, instead of leaving the ground-story open, and exposed to a free current of air, that would dissipate the poison, it has been built up, and only a very few windows or air-holes left. It is therefore a most powerful magnet for the attraction, as well as a store-house for the concentration, of the unhealthy atmosphere.

The *Miasm* which accumulates here is derived from the dried-up bed of the river, or is that which is evolved from the partially-drained earth of the locality itself. The barrack-yard is the very centre of a hollow which is scarcely above the level of

the Gulf of Paria, and on all sides, except one little corner, it is surrounded by land considerably higher than the first story of the building*. When I took charge of the medical department, on the third of March, 1835, every tenth man of the garrison was in hospital, and yet the troops were not considered as unhealthy.

Sir Thomas Picton, with a view to overawe the citizens of Port of Spain, or to be able to dislodge any enemy that might get possession of the town, caused another fort to be built, on the summit of the spur that bounds the plain to the south-east. The elevation here is also considerable, and the mountain is one of those masses of hard compact primitive limestone, intersected with veins of quartz, which, as I have stated, generally form the lower range of hills;

* One of the most striking and evident proofs of the unhealthiness of any particular situation, is evidenced by the number of vultures or carrion crows that frequent that locality. These scavangers of the Antilles are numerous in British Guiana, as they will very soon assemble in large flocks when the carcass of a dead animal is seen floating in the river Demerara, or in any of the canals, but they do not generally appear in the neighbourhood of Georgetown. In Port of Spain they are still numerous, though much less so than formerly; but the barrack-yard at St. James's is at all times crowded with them, so much so, that you have actually to kick them out of your way. To injure or kill one of these filthy birds incurs a very heavy punishment, so important are their services considered, and so necessary for the safety of the community.

yet when this fort was completed and came to be occupied, it was found that no man could sleep in it with impunity for two nights together. It was instanly abandoned, and has long been pointed at as "Picton's Folly." It will hereafter form a "picturesque ruin," but never can be maintained as a military post.

The mountain-range extending throughout the whole of the northern boundary of the island and part of the east coast, broken as it is by extensive valleys and deep ravines, interferes more or less at all times with the current of the atmosphere on the plain, and greatly alters its condition, by their lofty peaks attracting the electricity, and producing rains and temporary squalls or thunder-storms. The rainy season generally commences here with April, and continues till the end of November; but, as regards the British troops, it has been observed, that the first three months of the rainy season are the most healthy. It was this circumstance, I suppose, that led Dr. Fergusson to call the rains in Trinidad, "*Preserving rains.*" My observations were not continued for a sufficient length of time to enable me to offer any opinion on the subject; but, from the quarterly reports of the medical officers that preceded me, I should infer that after Midsummer there was more sickness than from Christmas to Easter. That it was either before the land

had become completely saturated with moisture, or previous to the rivers becoming dried up, that the inhabitants, and more particularly the military, enjoyed the best health. The first period will extend from April till the end of June, and the second from the end of November to the middle of February. The rapid advance and freshness of vegetation after the commencement of the spring rains must add considerably to the wholesome qualities of the atmosphere, while in the winter months the waters are too abundant to admit of vegetable decomposition, or the escape of that *Miasm* which induces fever.

The fevers of Trinidad are exactly of the same type as those of British Guiana, with, however, a greater tendency to acute inflammatory action of some of the viscera. I saw many cases in Trinidad that required, and were greatly benefited by, a free use of the lancet; but in the course of eleven months I did not see one case of fever in British Guiana in which it would have been either prudent or proper to abstract a single ounce of blood. The sulphate of quinine was not so absolutely required in the treatment of the Trinidad fevers, as in those of Demerara.

In many diseases in which blood-letting is considered by practical physicians as the most efficacious, and the only safe method of cure, I found that it could not be had recourse to in the hospitals at

Demerara but with the greatest caution, and that it frequently proved rather injurious than otherwise. But this I attributed more to the bad effects of the soldier's diet than to any circumstance arising from the influence of climate, as amongst the officers and higher classes of the civilians I observed none of those *Retrograde Liquescent* conditions or temperaments which Dr. Jackson has so ably pointed out as constituting a prominent feature in the history of intertropical constitutions, and induced by climate or irregular conduct.

That diet in Trinidad as well as in Guiana has a most baneful effect upon the constitutions of men during the long continuance of the rains, will appear sufficiently evident from the following short extract from a medical report dated the 31st December, 1828, which, as I am treating of the diseases and climate of the colony, I may be permitted to insert here. "The ulcers," says the writer, "have become obstinate affairs of late; in the first instance they may have been the bites of insects scratched into sores, but they would seem to depend from their character afterwards on some unhealthy state of the system, not always well developed otherwise than through the sores, which, however, are seldom large, but slow in healing, rapid in spreading, and frequently exhibiting the elevated indurated edge, sloughy base, blue areola, as if venous blood had insinuated itself into the adjacent parts in a

thin liquid state. The surface of the sores frequently send forth this sort of blood, sometimes in large quantities, and sometimes there is a deep sore covered with a yellow slough. Some constitutional treatment was necessary, and was conducted on general principles. The weather had long been very wet."

A few extracts from my daily journal of the weather will give the reader a better idea of the changes that took place, than any description from after-recollection.

"14th March, 1835.—I was down stairs before the sun had risen this morning, about six A. M. of the common clock. Darkness, I observed, scarcely disappeared until the disc of the great luminary was above the horizon. A sleepy stillness seemed to pervade the whole of this plain, as not a leaf was stirred from the dawn of day till ten o'clock, when a rather fresh breeze set in from the east, not, however, a regular and equable breeze as on the continent, but one that came in gusts more or less strong. I observed that the sky was clear and cloudless until this breeze commenced; now while I am writing (eleven A. M.) abundance of light fleecy clouds are to be seen, but they are of a gauze-like texture, whereas the clouds in British Guiana were of a compact and dense consistence, resembling mountains of snow. The sky here, I have remarked, is of a pale blueish-gray, but in Demerara it was of the most lovely ethereal blue colour that can possibly be imagined. The eye felt soothed and gra-

tified by gazing upon it. The vultures could be seen at an immeasurable distance in mid-air, but here I observe that it is painful to look upon the heavens, and the birds are not to be traced at any great height. This, I allow, is the dry season, and the face of nature is parched and dried up, and the atmosphere in the plain has a suffocating furnace-like sensation, and wants that general coolness which was felt in Demerara at all times and seasons whenever we faced the breeze.

" The trees here seem to partake of the appearance of the withered herbage.

" This was not the case in British Guiana; for though the surface of the soil might be baked into the hardness of a brick, and the grass destroyed and burnt up, the trees were more luxuriant, and their foliage greener, than at any other season, and it struck me as singular then, that when the rains had been continued for some time, and nature had put on 'her sweetest livery of green,' when the grass had sprung up and the fields were covered with flowers, the trees began to shed their leaves, and were for a time either wholly bare, or one-half of their foliage was decayed and falling to the ground, while the other half began to make its appearance: in looking around me here, however, the trees everywhere have a sickly hue. At this moment the high peaks of the surrounding hills are attracting the floating gauze-like clouds, where a dark mass has been formed, and, as the sun passes the

meridian, we shall have a shower on the plain; I have observed this to take place for some days."

"15th of March.—It is now nearly nine o'clock A.M., and although, till within the last quarter of an hour, the air has been very still upon the earth's surface, and not a ripple on the waters of the gulf, the white gauze clouds have been moving at rather a brisk pace across the heavens in a south-westerly direction. On the south-east horizon there is a dense black bank of clouds, larger than I have observed any morning previous to this, and while I am writing slight puffs of wind blow for a minute, and then again all is still."

"20th of March, Noon.—This is a cloudy sultry day, and, as usual, during the whole morning there has been a breeze for ten or twelve minutes, and then a lull or calm alternately every half hour. There is not much motion in the clouds. Many of the largest trees on the plain, and even on the sides of the hills, are bare of leaves, and the Bois immortel, that hitherto has given so much variety to the landscape, begins to drop its red orange blossoms, and to put forth its fresh green leaves."

"23rd of March, Evening.—This day has been cloudy and dull, with strong squalls of wind, and at six P.M. there was a very heavy shower of rain. The vultures are flying high in the air, and the clouds are accumulated in immense masses around the peaks of the

mountains, and to the north there is much blackness, and evidently squally weather."

"28th of March.—No rain since the evening of the 23rd; weather very hot and oppressive. This day there is some wind, and the sky is clouded, which checks the heat of the sun."

"15th of April, Evening.—It has rained at intervals for the greater part of the last twenty-four hours; at first small rain, without any motion of the air, but latterly very heavy, with strong gusts of wind. I have been much interested in observing the clouds on the hills to the north of this plain; when it was heavy rain and dark on the plain, the sun shone bright on the mountains and in the ravines. At times I could see the dense vapour blown up from the Great Savannah, and when it reached the highest peak of the mountain it seemed to tumble over into the valleys, where it became speedily dissipated. At the present moment, the watery vapours are flitting across the face of the hills in detached masses of great size, light and gauze-like, while the clouds beyond these hills are dark and lowering, and the whole sky is overcast. The rain has now ceased, and it is a perfect calm in the plains, with a transparent atmosphere. In all the mountain ravines the steam seems rising as from a furnace; the night is fast closing in, but the appearance which the late rains have given to the verdure

is quite refreshing, and at this moment, though every valley is filled with vapour, the tops of the mountains stand in bold relief against a cloudless sky."

"22nd of April.—Since the 15th there have been showers of rain almost daily, with very heavy squalls of wind. To-day it has rained a good deal, but there has been no wind. The mist just now hangs on the hill-tops, and to the north it looks dark and cloudy. The wind for some time has been more westerly than it was ever known, and this the 'wise men' say betokens much sickness. We have had a good many admissions into hospital during the last few days, and the inhabitants begin to suffer from intermittent fever. Vegetation advances rapidly, and the humming birds are as thick as butterflies after a summer shower in England, and seem to watch the opening of every flower. Their colours are most brilliant, and many of them appear not larger than a common wild bee. The fire-flies are in great numbers amongst the topmost branches of the most lofty trees, and far surpass the beauty of any Vauxhall illumination. They are not so abundant here as at Demerara, where often the whole surface of the earth appeared as a blaze of fire, and yet my friend Dr. Fraser, a keen observer of nature, assured me that of late years they had become much less numerous than they formerly were in the neighbourhood of Georgetown."

"29th of April.—This has been a remarkably fine day, fresh breezes and a cloudy sky."

"4th of May.—A good deal of rain in the night, and several heavy showers during the day; at this moment, half-past five P.M., it is fair, but cloudy and dull. The tree-locust has been very loud and shrill since the rain ceased, while the whistling-frog is playing in concert. The watery vapours are rising fast to the tops of the hills, where they instantly disappear."

"8th of May.—No rain for the last two days. Two P.M. The tops of the hills are covered with a thick black cap;—the valleys are full of vapour. The wind comes down upon the plain in strong puffs, but as yet no rain has fallen at Port of Spain, though it is evidently abundant all around us."

"13th of May.—The mosquitos for the first time since my arrival begin to be troublesome, but they are very puny insects compared with those in British Guiana."

"30th of May.—After two days of heavy rain, we have now (six P.M.) one of those beautiful evenings that are so delightful in this balmy climate;—the sky clear and serene, and the hills, opposite the window at which I am writing, reflect the rays of the setting sun with a thousand varieties of shade, that change in brilliancy and brightness with every passing moment."

"31st of May.—It has rained for the greatest part

of the last twenty-four hours; but again the evening is fine."

I left Trinidad on the fifth of June, and had no opportunity of taking any further note of the weather. I have not thought it necessary to give any journal of the rising or falling of the thermometer; and the reader, I suppose, knows that the barometer seldom varies within the tropics. I may, however, state that the thermometer was seldom above 90° in the shade, and during the night it sometimes fell to 70°; but the average of the three months that I kept a register was 86°, as already stated.

The plain and the gulf, as far as could be observed, generally remained in quiet repose from sun-rise till after nine o'clock, when the breeze made its appearance; the mornings, therefore, were the most sultry period of the day,—the evenings the most refreshing.

There were two slight shocks of an earthquake, during my residence; one on the night of the 17th of March, and the other on the 20th of May: they were neither of long duration, nor very violent, but the noise was singular, and they induced something like sea-sickness, at least I found this in my own case, and others confessed the same. The noise here, however, was nothing to that which I experienced at Alcoentre, near Lisbon, on the night of the 25th of October, 1809. On that occasion, the houses were shaken to

their very foundations, though happily very little damage was done, and the noise was as if a thousand heavy wagons were galloping along the street.

At Port of Spain it was simply the rattling of the doors and windows for a moment, and nothing more. They are frequently, however, much more severe; one, a few years ago, threw down the spire of the Protestant church, and injured several houses in the town, and occasioned no small alarm to the terrified inhabitants. I do not find that there is any record of these convulsions of nature having ever been of a more serious character. When the Caraccas were nearly destroyed, in 1812, the shock was not felt in Trinidad; and it is rather singular, that the eruption in St. Vincent's, which so alarmed the Barbadians, and caused the garrison to be kept under arms all night, was also heard at Trinidad. During the whole of the 1st of May, 1812, the inhabitants throughout the island were kept in a state of alarm, expecting the approach of an enemy, from the continued firing of what they supposed to be, heavy ordnance at sea, to the north-east. The reader, on turning to page 44, will see that it was about midnight of the 30th of April that the same sounds alarmed the Barbadians; and it is a singular fact, that as these sounds died away in this direction, they began to be heard in Trinidad. The volcanic dust did not reach this island; and it was

in no way affected by those convulsive throes which made the island of St. Vincent's appear as if it were a small Barque floating on the surface of an agitated ocean.

In conclusion, I have only to remark that, as agriculture and improvements advance, the climate of Trinidad will improve; but until the sea has further receded, and the marsh-land has acquired a higher elevation and become more consolidated, there will always exist a more than ordinary supply of that subtile poison which is so destructive to the human race. Yet, when we have such evident proofs of what may be effected, and of what has been effected, in the last twenty years, by industry and good regulations, we may readily believe that it will yet become a most healthy, as it certainly is a very desirable residence.

I am afraid the scientific reader will not find much to interest him in my crude theories; they are, perhaps, neither wisely conceived nor clearly explained, and yet they are of some value as directing the attention of geologists and others to objects of deep importance, and well calculated to explain many of the yet obscure pages in "the history of the Creation.' I am only a dabbler in natural history, and not much acquainted with the records of modern geology, but I have been a keen observer of "the wonderful works of God" from my earliest years, and have sought for information in

the fields and forests rather than in the pages of systematic writers.

With regard to the diet and discipline of British troops in the Colonies, to which my professional duties compelled my more immediate attention, I have spoken with great freedom, and expressed strongly my unbiassed opinion,—an opinion founded upon a careful examination of the subject for the last thirty years. It is to be regretted that so many well-meaning, but certainly mistaken men, have persisted in agitating a question that can tend to no good, and has already gone far to interfere with the well-being of the British army. Language and expressions are made use of in the senate that find their way into the barrack-room, and excite feelings and sentiments which would never otherwise have been known or heard of.

The speeches and declamations of some of our senators, and the exertions of a portion of the daily press, have had the effect of exciting that degree of mutiny and insubordination in the soldiers at home, which, in whatever way it may be dealt with here, will undoubtedly lead, if persisted in, to the necessity of more than *one* being shot when they arrive in the Colonies. I have distinctly pointed out the only sure way in which we can improve their condition, and ensure steady discipline.

The great and good DUKE OF YORK left Britain

an army such as she never before possessed, and his able successors at the Horse Guards would have maintained it in its fullest integrity, had their labours not been interfered with, and their measures opposed by public clamour. A proper severity is often the greatest humanity, and a doubting and dilatory commander will never have an effective or well-constituted army.

In the sketches which I have given of the condition of the inhabitants of our West India Colonies, I have been desirous above all things of bearing my humble testimony to the complete success of that great measure, which will for ever immortalize the glorious reign of King William the Fourth,—a measure by which all his Majesty's subjects were made free, and which has proved not less a blessing to those who gave, than to those who received the boon. The facts I have brought forward, supported as they are by official and authentic documents, clearly show that that dawn of prosperity has commenced in our late slave Colonies which is calculated to have no limit. I have also endeavoured to put upon record the names of a few of the most distinguished individuals who boldly met and patiently overcame every difficulty, and to whom, under God, these Colonies are indebted for all the happiness and prosperity they now enjoy.

It is to be observed, that my remarks apply altogether to the Windward and Leeward Islands;

I know nothing of Jamaica, but the reports from that island would lead me to believe that matters had not been conducted with the same conciliating spirit and sound discretion that guided the authorities in the lesser states. Jamaica, however, has now an able and most honourable officer at the head of her affairs, and if it is possible for firmness, decision, and sound views of what is due to the welfare of the colonists and to the paramount interests of the negro population, to correct the irregularities which evidently have continued to prevail in that colony, and to secure peace and prosperity, Sir Lionel Smith is just the man they required.

At page 135, the reader will find a few remarks as to the necessity for some alteration in the law that regulated the qualification for the exercise of the elective franchise in British Guiana. I have just received an Ordinance from that colony which appears to me a very excellent arrangement; and had it done away with the College of Keysers altogether, and allowed the qualified voters to return the members of the Court of Policy at once, it would, in my humble opinion, have been a still more perfect measure.

I have also added here the Ordinance by which vestries are constituted for regulating and superintending the building and keeping in repair the established churches in Berbice; together with the publication, dividing the lately-constituted parishes between the two establishments of the mother-country. These form the Appendix No. I. In No. II. I have given the late Dr. Maycock's very complete Catalogue of the Plants in our Colonies, the most perfect that has ever yet been published.

No. I.

AN ORDINANCE REGULATING THE QUALIFICATION FOR THE EXERCISE OF THE ELECTIVE FRANCHISE IN BRITISH GUIANA.

By his Excellency Major-General SIR JAMES CARMICHAEL SMYTH, Bart., Companion of the Most Honourable the Military Order of the Bath, Knight Commander of the Royal Order of Hanover, Knight of the Austrian Imperial Order of Maria Theresa, Knight of the Russian Imperial Order of St. Wladimir, Governor and Commander-in-Chief in and over the Colony of British Guiana, Vice-Admiral and Ordinary of the same, &c., &c., &c.—By and with the advice and consent of the Honourable COURT OF POLICY of the said Colony.

To all whom these presents do, may, or shall come, greeting! be it known :—

WHEREAS upon the second day of May, 1835, his Excellency the Lieutenant-Governor, by and with the advice and consent of the Honourable the Court of Policy of British Guiana, framed and passed an ordinance, intituled "An Ordinance to establish a new Qualification for the exercise of the Elective Franchise in this Colony:" And whereas it is expedient and necessary that the same should be repealed :

Be it therefore enacted, as it is hereby enacted, that from and after the passing and publication of this ordinance, the said ordinance, intituled "An Ordinance to establish a new Qualification for the Elective Franchise in this Colony," shall be, and the same is hereby declared to be, repealed,

1. And be it enacted, that from and after the taking effect of this ordinance, every inhabitant of this colony, of full age and not subject to any legal disability, who, for himself, or as curator, administrator, sequestrator, executor, guardian, or in any other capacity, shall have been assessed to pay direct

taxes to the colonial revenue upon an income of not less than 2001 guilders, or who shall have paid direct taxes to the amount of seventy guilders or upwards, in the year of, or in the year preceding, any new election of a member of the College of Electors, or of the College of Financial Representatives of this colony, or who after the publication of this ordinance shall be assessed upon an income of the amount as aforesaid, or who shall be assessed and liable to pay to the colonial revenue of the said colony direct taxes to the amount of seventy guilders or upwards, and not being in arrear in the payment of such taxes for more than six months from the date of such taxes becoming payable, shall be entitled to vote upon and for the election of any such member of the respective Colleges aforesaid.

2. And be it further enacted, that where two or more persons shall possess jointly, or in common, any estate or plantation, or shall be connected as partners in any trade, business, or profession, jointly returning or paying direct taxes to the colonial receiver, each and every of such possessors or partners shall be entitled to vote as aforesaid: Provided that the amount of direct taxes by them jointly paid or payable (when divided by the number of persons paying the same,) shall be sufficient to give or leave to each of such possessors or partners a proportion amounting to the sum of seventy guilders; and provided further, that every such possessor or partner, claiming a right to vote, shall be bound to prove annually, by the affidavit of himself, or of some other credible person, before a magistrate or justice of the peace, who is hereby authorised and required to administer the same without fee or reward, that his individual share of such direct taxes amounts to seventy guilders; which affidavit, to be made as aforesaid, shall be lodged at the office of the Financial Accountant in Georgetown, or at the office of the Assistant-Receiver-General in New Amsterdam.

3. And be it enacted, that every person possessing a right to vote as aforesaid, and who shall be absent from the colony,

shall be entitled to vote by his or her agent or attorney: Provided always, that the name or names of the party or parties absent from the colony, in whose behalf any vote or votes are given, shall be fully set forth in such vote or votes. And be it further enacted, that in every case in which any property affording a qualification or qualifications for voting as aforesaid is administered by sequestrators, curators, administrators, executors, guardians, or trustees, such sequestrators and others as aforesaid, shall be entitled to vote in respect of such property on behalf of the owner or owners thereof: Provided always, that the number of votes received or receivable in respect thereof shall not exceed the number of votes which, under this ordinance, it would be competent for the owner or owners thereof, if in the immediate administration thereof, and directly exercising the right of voting, to give; provided further, that in cases where such property is owned jointly or in common by two or more persons, the affidavit relating thereto, as prescribed in the second section of this ordinance, shall be made and given in.

4. And be it further enacted, that in each and every year, commencing with the year 1837, the Financial Accountant in Georgetown, and the Assistant Receiver-General in New Amsterdam, shall be bound, and they are each of them hereby required, within one calendar month from the last day fixed by law for giving in at the offices of the said Financial Accountant, and Assistant-Receiver-General, the annual returns for colonial taxes, to make out from such returns, or in cases of partnership or joint property, from the affidavits thereunto relating, as hereinbefore required, a list or registry of the names of all persons in the respective districts, who shall appear by such returns and affidavits to be *prima facie* qualified to vote as aforesaid, and in such list or register the said names shall be arranged in alphabetical order of the surnames of the parties so qualified as aforesaid, and upon the completion of such lists, the same shall be posted up during office-hours in some conspicuous place in the offices of the said

Financial Accountant, and Assistant-Receiver-General, and shall moreover be three times published in the *Royal Gazette* of the colony.

5. And be it further enacted, that it shall and may be lawful for the said Financial Accountant, and Assistant-Receiver-General, and they are hereby respectively authorised and required, to correct and amend such list or register, if it should at any time be made to appear to them or either of them, that any clerical or other error has by either of them been committed therein; and it shall be further lawful for any person or persons claiming a right to vote, whose name shall not have been inserted in any such list or registry as aforesaid, by the Financial Accountant or Assistant-Receiver-General, as the case may be, to prefer in writing a representation of any such non-insertion to the Secretary of the Court of Policy, which shall by the said Secretary be, as soon as may be practicable thereafter, laid before the Honourable the Court of Policy, when the Court will make such decision on the case, and such order on the said Financial Accountant or Assistant-Receiver-General relative thereto, as it may deem fit and proper.

6. And be it further enacted, that for the purposes of any election now pending, or in progress, or in which the votes may be returnable before the list or registry of votes for the year 1837 shall be completed, a list or registry of votes shall be framed by the said Financial Accountant, and Assistant Receiver-General, from the returns made for colonial taxes for the year 1836, and such list or registry shall be transmitted by the said Financial Accountant, and the said Assistant-Receiver-General, to the Secretary of the Court of Policy, one week at least before the period of voting at any such election shall cease, to be by the said Secretary laid before the Honourable the Court of Policy, when the boxes containing the votes at any such election shall be opened.

7. And be it further enacted, that every vote to be given at any such election as aforesaid, and every affidavit to be

made in pursuance of the provisions of this ordinance shall be as near as may be respectively according to the forms set forth in the Schedules hereunto annexed, under the letters A, B, and C.

And that no ignorance shall be pretended of this our ordinance, these presents shall be printed and published in the customary manner.

Thus done and enacted at our Ordinary Assembly, held at the Guiana Public Buildings, Georgetown, Demerary, this 2d day of December, 1836, and published the 3d following.

(Signed) J. CARMICHAEL SMYTH.

By command of the Court,

H. E. F. YOUNG, Secretary.

(A.)

I, *A. B.* do swear that *C. D.* and *E. J.* are partners of the firm of
or joint common owners of plantation
(as the case may be), and that the individual share of direct taxes assessed for the year on said firm or plantation, and paid or payable by each of said, amounts to *f* 70.

(Signed) A. B.

Partner in the firm of or joint
proprietors of plantation or agent of
proprietor of plantation
or partner in the firm of

(B.)

I vote for *A. B.* to fill the present vacancy in the College of Electors (or College of Financial Representatives, as the case may be).

(Signed) A. B.
(or Signed) A. B.
Attorney, agent, or representative of C. D.,
absent from the colony.

(C.)

For a Credible Witness.

I, *A. B.* do swear that *C. D. E. F.*, &c. (setting forth the names of the parties to whom the affidavit applies) are partners of the firm of

or joint owners of the plantation
(as the case may be,) and that the individual share of direct taxes assessed on said firm or plantation (as the case may be) for the year paid or payable by each of said partners or joint owners (as the case may be) amounts to the sum of seventy guilders.

No. II.

AN ORDINANCE TO ESTABLISH AND REGULATE VESTRIES IN THE DISTRICT OF BERBICE, IN THE COLONY OF BRITISH GUIANA.

By his Excellency Major-General SIR JAMES CARMICHAEL SMYTH, Bart., Companion of the Most Honourable the Military Order of the Bath, Knight Commander of the Royal Order of Hanover, Knight of the Austrian Imperial Order of Maria Theresa, Knight of the Russian Imperial Order of St. Wladimir, Governor and Commander-in-Chief in and over the Colony of British Guiana, Vice-Admiral and Ordinary of the same &c., &c., &c.—By and with the advice and consent of the Honourable COURT of POLICY of the said Colony.

To all to whom these presents do, may, or shall come, greeting ! be it known :—

WHEREAS by an ordinance of the Governor and Court of Policy of British Guiana, passed upon the 7th day of June 1835, and published on the 9th following, the District of Berbice was divided into six separate and distinct parishes; and it is necessary that some efficient means be adopted for keeping in repair the churches of the said district now erected, or hereafter to be erected, together with any parsonage-house or houses to be erected, and for the regulation of all matters thereunto appertaining :

Be it therefore enacted, as it is hereby enacted, by his Excellency the Governor, by and with the advice and consent

of the Honourable the Court of Policy, that on the passing of this ordinance, his Excellency and the said Honourable Court shall, from out of the resident inhabitants in each and every parish in the district of Berbice, nominate and appoint a number not exceeding six, nor less than four, who together with the minister of the parish shall compose a vestry for the purposes aforesaid; and whenever any vacancy or vacancies shall occur among the persons composing the vestry, the same shall be filled up by his Excellency and the said Honourable Court.

And be it further enacted, that the persons to be nominated as aforesaid, shall, on the last Friday of every month, or at such other times as the minister may appoint, assemble for the purpose of regulating such matters as may be brought before them; and the minister of every parish respectively shall and he is hereby declared to be president of the vestry, by virtue of his office, and any two members of the vestry, together with the minister, shall constitute a quorum.

And be it further enacted, that at the ordinary session of the Honourable the Court of Policy to be held in the month of January, in each year, the said vestry shall submit a statement containing the probable amount of the sum or sums of money which may by them be wanted for the service of the year then ensuing, specifying the purposes for which the same is required; and the Court shall upon such application grant or refuse the same, either wholly or in part, as it may see fit; and it shall be in the power of the vestry to regulate and direct the expenditure of the money granted.

And be it enacted, that every person nominated to serve in any vestry shall be bound to accept of the said situation, and to continue to discharge the duties thereof for three years next ensuing his nomination, on pain of forfeiting the sum of 300 guilders for the benefit of the colony, unless the person nominated shall allege a reasonable cause for such refusal; the validity of which shall be decided on by his Excellency the Governor, and the Court of Policy, or, during its non-session,

by his Excellency the Governor alone: Provided always, that the penalty herein mentioned shall not extend to any person who shall have previously served as a member of the vestry for one whole year within the three years immediately preceding his nomination.

And be it enacted, that the vestry shall report from time to time to his Excellency the Governor any vacancy or vacancies in the vestry, which may from time to time occur, and shall, at the expiration of each year, make or cause to be made, and delivered to his Excellency and the Honourable the Court of Policy, a correct statement of all monies by them received, laid out, and expended.

And that no ignorance shall be pretended of this our ordinance, these presents shall be printed and published in the customary manner.

Thus done and enacted at our ordinary assembly, held at the Guiana Public Buildings, Georgetown, Demerary, this 1st of December, 1836, and published on the 3d following.

(Signed) J. CARMICHAEL SMYTH.

By command of the Court,

H. E. F. YOUNG, Secretary.

No. III.

COURT OF POLICY, BRITISH GUIANA.—PUBLICATION.

THE Governor and the Court of Policy, having in the Ordinance, No. 70 (intituled "An Ordinance for dividing the District of Berbice into Parishes,") reserved to themselves the right of hereafter allotting the parishes according to the religious tenets of the majority of the inhabitants of each parish; and having duly considered the petitions received from the inhabitants of the several parishes as aforesaid, have decided and determined as follows:—

1. The parish of All Saints to be equally under the jurisdic-

tion of the rector of the Church of England, and of the minister of the Church of Scotland, in regard to their respective congregations.

2. The parish of St. Patrick is allotted to the Church of England.

3. The parish of St. Michael is allotted to the Church of England

4. The parish of St. Catherine is allotted to the Church of Scotland.

5. The parish of St. Clement is allotted to the Church of Scotland.

6. The parish of St. Saviour is allotted to the Church of Scotland.

Guiana Public Buildings, Georgetown, Demerary, this 2d day of December, 1836.

By command of the Governor and Court of Policy,

H. E. F. YOUNG, Gov. Sec.

APPENDIX II.

Catalogue of Plants, indigenous, naturalized, and cultivated, in the British West India Colonies, by the late James Dottin Maycock, M.D., F.L.S., a Member of His Majesty's Council in Barbados.

Trivial Names.	*Systematic Names.*
Ægyptian Bean	Nelumbium jamaicense.
African Marigold	Tagetes erecta
African Plum	Cordia Myxa.
Agnus Scythicus	Polypodium aureum.
Alligator Apple	Annona palustris.
Almond Tree	Terminalia Catappa.
Aloes Plant	Aloe vulgaris.
American Jasmine	Ipomœa Quamoclit.
American Torch	Cereus monoclonos.
Annual Sun Flower	Helianthus annuus.
Antigua Balsam	Justicia pectoralis.
Arabian Jasmine	Jasminum Sambac.
Archangel	Eupatorium odoratum.
Arnotta	Bixa Orellana.
Arrow Root	Maranta arundinacea.
Austrian Rose	Rosa bracteata.
Avigato Pear Tree	Persea gratissima.
Bachelor's Button	Gomphræna globosa.
Bachelor's Pears	Solanum mammosum
Bachelor's Pears	Solanum xanthocarpum.
Bahama Red Wood	Ceanothus Colubrinus.
Balsam, or Sea-side Sage	Croton balsamiferum.
Balsam Tree	Clusia flava.
Bambu, or Bamboo	Bambusa arundinacea.

Trivial Names.	*Systematic Names.*
Banana Tree	Musa sapientum.
Barbados Cedar	Cedrela odorata.
Barbados Lilac	Melia Azedarach.
Barbados Pride, or Flower Fence	Poinciana pulcherrima.
Barbados Trumpet Flower	Bignonia Unguis.
Basket Wyth	Tournefortia bicolor.
Bastard Briony	Cissus sicyoides.
Bastard Bully Tree	Bumelia nigra.
Bastard Feverfew	Parthenium Hysterophorus.
Bastard Flower Fence	Adenanthera pavonina.
Bastard Ipecacuanha	Asclepias curassavica.
Bastard Lignum Vitæ	Badiera diversifolia.
Bastard Locust, or Forest Tree	Clethra tinifolia.
Bastard Mammee, or Santa Maria	Calophyllum Calaba.
Bastard Ockro	Malachra capitata.
Bay-Berry Tree	Myrica acris.
Bay-Grape Tree	Coccoloba uvifera.
Bean Tree, or Shrove Tuesday	Erythrina Corallodendron.
Bearded-Fig Tree	Ficus martinicensis.
Beef-Wood Tree	Pisonia nigricans.
Beet	Beta vulgaris.
Bell Pepper	Capsicum annuum.
Bell Pepper	Capsicum grossum.
Belly-Ach	Jatropha gossypifolia.
Bermudas Cedar	Juniperus bermudiana.
Birch Gum Tree	Bursera gummifera.
Birch, or Turpentine Tree	Bursera gummifera.
Bird Pepper	Capsicum baccatum.
Bird Pepper	Capsicum conoides.
Bitter Wood	Quassia excelsa.
Black Basket Wyth	Rivina octandra.
Black Bead Tree	Ceanothus colubrinus.
Black Berry Hunters	Eugenia virgultosa.
Black Cherry	Eugenia ligustrina.
Black Cherry	Cerasus occidentalis.

Trivial Names.	*Systematic Names.*
Black-eyed Peas	Dolichos sphærospermus.
Black Maiden Hair	Adiantum pumillum.
Black Nicker	Sapindus saponaria.
Black Sage Bush	Varronia currassavica.
Black Thorn	Pisonia aculeata.
Black Willow	Capparis torulosa.
Black Wood	Eugenia triflora.
Bloodwort	Moræa plicata.
Blue Eddas	Caladium sagittifolium.
Blue Shake Shake	Crotalaria verrucosa.
Blue Vine	Clitoria ternatea.
Bois Immortel	
Bombast Mahoe	Ochroma Lagopus.
Bonnet, or Bonny Pepper	Capsicum tetragonum.
Bonnet, or Bonny Pepper	Capsicum angulosum.
Box Wood	Phyllanthus nutans
Branched Calalue	Solanum nigrum.
Bread and Cheese	Inga Unguis Cati.
Bread and Cheese, or Sucking Bottle	Paullinia Cururu.
Bread Fruit Tree	Artocarpus incisa. β.
Bread Nut Tree	Artocarpus incisa. α.
Broad-leaved Rose Bay	Nerium coronarium.
Broad-leaved Sour Grass	Paspalum conjugatum.
Broad Pond Duck-Weed	Nelumbium jamaicense.
Broom Weed	Corchorus siliquosus.
Broom Weed	Sida jamaicensis.
Broom Weed	Sida angustifolia.
Brown Jolly, &c.	Solanum Melongena.
Brown Wool Cotton	Gossypium barbadense.
Buff-Coat	Waltheria americana.
Buff-Coat Tree	Guettarda scabra.
Bully Berry Tree	Bumelia nigra.
Bully Tree	Bumelia nigra.
Buona Vista. Bonny.vis.	Lablab nankinicus.
Buona Vista. Bonny-vis.	Lablab leucocarpus.
Buona Vista. Bonny-vis.	Lablab Perennans.

Trivial Names.	*Systematic Names.*
Buona Vista. Bonny-vis.	Lablab vulgaris. β.
Buona Vista. Bonny-vis.	Lablab cultratus.
Buona Vista. Bonny-vis.	Lablab vulgaris. γ.
Burgamot tree	Citrus Limetta.
Bur Grass	Cenchrus echinatus.
Bur Grass	Cenchrus tribuloides.
Butterfly Oncidium	Oncidium Papilio.
Button Sage	Lantana involucrata.
Cabbage	Brassica oleracea.
Cabbage Tree	Areca oleracea.
Calaba Tree, or Santa Maria	Calophyllum Calaba.
Calabash Tree	Crescentia Cujete.
Calalue	Basella cordifolia.
Calavances, or Red Bean	Dolichos sinensis.
Candle Wood	Chiococca racemosa.
Canella, or Winter's Bark	Canella alba.
Cape Jasmine	Gardenia fragrans.
Carnation	Dianthus Caryophyllus. β.
Cashew Tree	Anacardium occidentale.
Cassava	Janipha Manihot.
Cassia Fistula Tree	Cassia Fistula.
Castor-Oil Plant	Ricinus communis.
Caterpillars	Amaranthus viridis.
Caterpillars	Amaranthus polygonoides.
Cedar	Cedrela odorata.
Celery	Apium graveolens.
Cephalic Vine	Convolvulus speciosus.
Changeable Rose Hibiscus	Hibiscus mutabilis.
Chaw-Stick	Gouania domingensis.
Chequered Grape Tree	Coccoloba nivea.
Chereese, or Barbados Cherry	Malpighia punicifolia.
Cherry Pepper	Capsicum cerasiforme.
Chigery Bush	Tournefortia volubilis.
Chigery Grape Tree	Coccoloba nivea.
China Aster	Aster chinensis.
China Orange Tree	Citrus Aurantium.
Chinese Rose	Hibiscus mutabilis.

Trivial Names.	*Systematic Names.*
Chinese Cock's Comb	Celosia coccinea.
Chinese Pink	Dianthus chinensis.
Chinese Rose Hibiscus	Hibiscus Rosa sinensis.
Choco Vine	Sechium edule.
Chocolate-Nut Tree	Theobroma Cacao.
Christmas Bush	Eupatorium odoratum.
Christophine	Sechium edule.
Cinnamon Tree	Laurus Cinnamomum.
Circassian Bead Tree	Adenanthera pavonina.
Citron Tree	Citrus medica.
Clay Peas	Dolichos sinensis.
Climbing Snowberry Tree	Chiococca racemosa.
Clove Pink	Dianthus caryophyllus.
Clove Tree	Caryophyllus aromaticus.
Cocco Plum	Chrysobalanus Icaco.
Cochineal Shrub	Opuntia coccinellifera.
Cocoa Nut Tree	Cocos nucifera.
Cocoa Plum	Chrysobalanus Icaco.
Cocoa Tree	Theobroma Cacao.
Coffee Tree	Coffea arabica.
Common Cucumber	Cucumis sativus.
Common Dill	Anethum graveolens.
Common Everbearing Rose	Rosa indica.
Common Fig Tree	Ficus Carica.
Common Garlick	Allium sativum.
Common Grape	Vitis vinifera. α.
Common Kidney Bean	Phaseolus vulgaris.
Common Leek	Allium Porrum.
Common Pea	Pisum sativum.
Common Soap Tree	Sapindus saponaria.
Common Sow Thistle	Sonchus oleraceus.
Common Sweet Basil	Ocymum Basilicum.
Common Vine	Vitis Vinifera.
Common Wormwood	Artemisia Absinthium.
Conch-Apple, Conch-Nut	Passiflora maliformis.
Coot Weed	Crotalaria lotifolia.

Trivial Names.	*Systematic Names.*
Coral, or Red Bean Tree	Erythryna Corallodendron.
Cork Wood	Annona palustris.
Corn Tree	Adansonia digitata.
Corynth, or Currant Grape	Vitis vinifera. β.
Cowhage Cherry	Malpighia urens.
Cow-Itch Vine	Mucuna urens.
Crab Bush, or Sea-side Laurel	Heliotropium gnaphalodes.
Crab's-Eye Vine	Abrus precatorius.
Creeping Cowhage	Tragia volubilis.
Creeping-rooted Rhapis, or Ground Ratan	Rhapis flabelliformis.
Crested Amaranth, or Cock's Comb	Celosia cristata.
Crimson Everbearing Rose	Rosa semperflorens.
Cuckold's Increase	Dolichos unguiculatus.
Cuckold's Increase	Dolichos sesquipedalis.
Custard Apple	Annona reticulata.
Damacen, or Callimato tree	Chrysophyllum glabrum.
Damask Rose	Rosa damascena.
Damson Plum	Chrysophyllum monopyrenum.
Dark Chinese Rose	Rosa semperflorens.
Dart Wood	Ixora fasciculata.
Devil's Grass	Cynodon dactylon.
Date Tree	Phœnix dactylifera.
David's Root	Chiococca racemosa.
Dialthæa	Waltheria americana.
Dog's Grass	Poa ciliaris.
Dog Wood	Gardenia Randia.
Dove Weed	Euphorbia maculata.
Down Tree	Ochroma Lagopus.
Down Vine	Sarcostemma Swartzianum.
Downy Mountain Ebony	Bauhinia tomentosa.
Dragon's Blood	Dracæna ferrea.
Drooping-leav'd Adam's Needle	Yucca Draconis.
Dwarf Hibiscus	Hibiscus phœniceus.
Dwarf Maiden Hair	Adiantum pumillum.
Dwarf Palm	Rhapis flabelliformis.

Trivial Names.	*Systematic Names.*
Dwarf Pomegranate Tree	Punica nana.
Dwrah, or Amadwrah	Cyperus ligularis.
Dumb Cane	Caladium seguinum.
Dunk Tree, or Mangostine	Ziziphus Jujuba.
Dutch Grass	Cynosurus indicus.
Dyer's Mulberry, or Fustic Wood	Morus tinctoria.
East India Mango Tree	Mangifera indica.
Eatable Wild Pea	Dolichos luteus.
Egg Plant	Solanum Melongena.
English Plantain	Plantago media.
English Wormwood	Artemisia Absinthium.
Ethiopian Sour Gourd, or Monkey's Bread	Adansonia digitata.
Fan Palm	Thrinax parviflora.
Fat Pork	Chrysobalanus Icaco.
Fennel, or Finkle	Anethum Fœniculum.
Fern-like Plant	Aspidium patens.
Fiddle-Wood Tree	Cytharexylum cinereum.
Fingrigo, or Cockspur	Pisonia aculeata.
Fingrigo, or Savine Tree	Zanthoxylum tragodes.
Fit-Weed	Eryngium fœtidum.
Fire Burn Bush	Triopteris jamaicensis.
Five Sprig Tree	Myrodia turbinata.
Flexuose Snake Cucumber	Cucumis flexuosus.
Flower Fence, or Spanish Carnation	Poinciana pulcherrima.
Forbidden Fruit Tree	Citrus buxifolia?
Forest Bark, or Bastard Locust	Clethra tinifolia.
French Bean	Phaseolus vulgaris.
French Bean	Phaseolus multiflorus.
French Guava	Cassia alata.
French Guava	Psidium pyriferum.
French Lavender	Lavandula Stœchas.
French Marigold	Tagetes patula.
French Physic-Nut Tree	Jatropha multifida.
French Rose Tree	Hibiscus mutabilis.

Trivial Names.	*Systematic Names.*
French Willow	Cerbera Thevetia.
French Wormwood	Artemisia gallica.
Fustic Tree	Morus tinctoria.
Galimeta Wood	Bumelia salicifolia.
Galivaughn Peas	Dolichos barbadensis.
Gall Tree	Quassia excelsa.
Garden Balsam	Balsamina hortensis.
Garden Balsam	Justicia pectoralis.
Garden Basil	Ocymum Basilicum.
Garden Carrot	Daucus Carota.
Garden Hydrangea, or Chinese Guelder-rose	Hydrangea hortensis.
Garden Lettuce	Lactuca sativa.
Garden Mangrove	Ficus nitida.
Garden Marigold	Calendula officinalis.
Garlick Pear Tree	Cratæva gynandra.
Germinating-leaf Plant	Bryophyllum Calycinum.
Ginger	Zingiber officinalis.
Ginger Grass	Panicum latifolium.
Golden Apple	Spondias dulcis.
Golden Orange Tree	Citrus vulgaris.
Gooseberry Shrub	Pereskia aculeata.
Gourd Vine	Lagenaria vulgaris.
Granada Yam	Dioscorea bulbifera?
Granadilla Vine	Passiflora quadrangularis
Grape-Fruit Tree	Citrus Hystrix?
Great Corn, or Indian Maize	Zea Mays.
Great Macaw Tree	Acrocomia fusiformis.
Great Water Lily	Nelumbium jamaicense.
Grey Nicker	Guilandina Bonduc. β.
Ground Nut	Arachis hypogæa,
Guava Tree	Psidium pomiferum.
Gully Plum Tree	Spondias lutea.
Gully-Root	Petiveria alliacea.
Gum Elemi Tree	Amyris toxifera.
Gum Tree	Sapium aucupatorium.
Gumma Bush	Solanum nigrum.

Trivial Names.	*Systematic Names.*
Guinea Corn	Sorghum vulgaris.
Guinea Corn	Sorghum cernuum.
Guinea Corn	Sorghum bicolor.
Guinea Corn	Sorghum saccharatum.
Guinea Corn	Panicum polygamum.
Hairy Cerasee	Momordica Charantia.
Halifax Peas	Dolichos sesquipedalis.
Hog Plum Tree	Spondias lutea.
Hog Slip. Hog Vine	Convolvulus umbellatus.
Hog Weed	Boerhaavia diffusa.
Holly-Hock	Argemone mexicana.
Holly-Hock	Althæa rosea.
Holy Thorn, or Royal Cashiaw	Parkinsonia aculeata.
Honey-Berry	Melicocca bijuga.
Honey-Suckle	Passiflora laurifolia.
Hoop Wyth	Rivina octandra.
Hop Shrub	Dodonæa viscosa.
Hop Weed	Bystropogon suaveolens.
Hop Weed	Salvia occidentalis.
Horse Bean	Canavalia ensiformis.
Horse-Eye Bean	Mucuna urens.
Horse Nicker	Guilandina Bonduc. β.
Horse Radish	Cochlearia Armoracia.
Horse Vine	Teramnus uncinatus.
Jaca Tree	Artocarpus integrifolia.
Jack Fruit Tree	Artocarpus integrifolia.
Jack-in-a-Box	Hernandia sonora.
Jalap, or Four o'Clock Flower	Mirabilis Jalapa.
Jamaica Birch Tree	Bursera gummifera.
Jamaica Plum Tree	Spondias purpurea.
Jasmine Tree	Plumeria rubra.
Jerusalem Thorn	Parkinsonia aculeata.
Indian Cale, or Seven Years' Cabbage	Brassica oleracea. γ.
Indian Corn	Zea Mays.
Indian Creeper. Indian Pink	Ipomœa Quamoclit.
Indian Kale	Caladium nymphæifolium.

Trivial Names.	*Systematic Names.*
Indian Oak, or Teak Wood	Tectona grandis.
Indian Root	Asclepias curassavica.
Indian Rubber	Ficus elastica.
Indian Rubber Tree	Euphorbia atropurpurea.
Indigo Berry	Gardenia Randia.
Indigo Weed	Indigofera Anil.
Ink Vine	Passiflora suberosa.
Job's Tears	Coix Lacryma.
Irish Potato	Solanum tuberosum.
Iron Grass	Spermacoce tenuior.
Iron Wood	Siderodendrum triflorum.
Iron Vine	Desmodium spirale.
Italian Senna	Cassia obtusifolia.
Junction Vine	Aristolochia odoratissima.
King of Flowers	Lagerstrœmia indica.
Lady of the Night	Cestrum nocturnum.
Large Duck Weed	Nymphæa odorata.
Large Lime Tree	Citrus medica. β.
Large Wild Barren Pine	Bromelia Penguin.
Largest Sensitive Plant	Desmanthus virgatus.
Least Wild Pea Vine	Rynchosia minima.
Leather Coat Tree	Coccoloba pubescens.
Lemon Grass	Cymbopogon Schœnanthus.
Lesser Shaddock Tree	Citrus Decumana.
Lignum Vitæ	Guaiacum officinale.
Lily	Amaryllis equestris.
Lily	Pancratium fragrans.
Lily	Epidendrum ciliare.
Lime Tree	Citrus Limonum.
Lima Bean	Phaseolus perennis.
Limonia	Triphasia trifoliata.
Loblolly Tree	Varronia alba.
Locust Berry Tree	Byrsonima coriacea.
Locust Tree	Hymenæa Courbaril.
Loggerhead Weed	Spigelia Anthelmia.
Logwood	Hæmatoxylon campechianum.
Long-leaved Mistleto	Pothos lanceolata.

Trivial Names.	*Systematic Names.*
Long Pepper	Capsicum longum.
Love-in-a-Mist	Passiflora fœtida.
Macartney Rose	Rosa bracteata.
Madagascar Periwinkle	Vinca rosea.
Macaw Tree	Acrocomia fusiformis.
Mahogany Tree	Swietenia Mahogani.
Maiden Hair	Acrostichum Calomelanos.
Malabar Nut	Justicia Adhatoda.
Mammee Sapota	Achras mammosa.
Mammee Tree	Mammea americana.
Manchineel Tree	Hippomane Mancinella.
Mangel-Wurzel	Beta vulgaris. ♪.
Mango Tree	Mangifera indica.
Mangostan, or Mangosteen	Garcinia Mangostana.
Many Roots	Ruellia tuberosa.
Many Seed	Jussiæa octonervia.
Marvel of Peru	Mirabilis Jalapa.
Mastick Tree	Sideroxylon Mastichodendron.
May Grass	Panicum latifolium.
May Pole	Agave americana.
Melon	Cucumis Melo.
Menow Weed	Ruellia tuberosa.
Milk Weed	Euphorbia obliterata.
Milk Weed	Euphorbia glabrata.
Milk Weed	Euphorbia pilulifera.
Mistleto	Viscum verticillatum.
Mignonette	Reseda odorata.
Moabite *alias* Mangrove Bead Tree	Inga Unguis Cati.
Monkey Apple Tree	Anona palustris.
Monkey's Bread	Adansonia digitata.
Monkey's Hand	Piper peltatum.
Monkey's Peas	Dolichos luteus.
Montabba *alias* Trubba	Solanum Melongena.
Morass Weed	Ceratophyllum demersum.
Mountain Fern	Cyathæa arborea.
Musk Bush, or Wild Ockro	Hibiscus Abelmoschus.

Trivial Names.	*Systematic Names.*
Musk Melon	Cucumis Melo.
Musk Ockro	Hibiscus Abelmoschus.
Musk Rose	Rosa moschata.
Muskito Bush	Bystropogon suaveolens.
Myrtle Lime	Triphasia trifoliata.
Narrow-leaved Sour Grass	Andropogon angustifolius.
Negro-Oil Bush	Ricinus communis.
Negro-Oil Bush	Ricinus viridis.
Negro Pepper	Capsicum conoides.
Nem Nem, or Toothach Tree	Acacia horrida.
Nettles	Urtica æstuans.
Nettles	Urtica grandifolia.
Nettle Hibiscus	Hibiscus pruriens.
Nettle Sida	Sida urens.
Night-blowing Convolvulus	Ipomœa bona-nox.
Night Shade	Datura Stramonium.
Noyeau Vine	Convolvulus dissectus.
Nut Eddoe. Taniers	Caladium sagittifolium.
Nut Grass	Cyperus esculentus.
Nutmeg Tree	Myristica moschata.
Ockra. Ockro	Hibiscus esculentus.
Oil-Nut Tree	Ricinus communis.
Old Maid, or Cayenne Jasmine	Vinca rosea.
Old Woman's Bitter	Citharexylum cinereum.
Oleander, or Sweet-scented Rose Bay	Nerium odorum.
Olive Mangrove	Avicennia tomentosa.
Olive Pepper	Capsicum cerasiforme.
Otaheite Apple	Spondias dulcis.
Otaheite Gooseberry	Cicca disticha.
Ox-Eye Bean	Mucuna urens.
Pagister Grass	Oplismenus hirtellus.
Palm-Oil Tree	Elais guineensis.
Parsley	Apium Petroselinon.
Pawpaw Ockroe	Corchorus æstuans.
Pawpaw Tree	Carica Papaya.
Pen-Gwyn	Bromelia Karatas.

Trivial Names.	*Systematic Names.*
Pepper-Mint	Mentha piperita.
Pennyroyal	Mentha Pulegium.
Peruvian Cotton	Gossypium peruvianum.
Peruvian Marigold	Tagetes tenuifolia.
Physic Nut Tree	Jatropha Curcas.
Pie-Crust	Jacquinia armillaris.
Pigeon Pea Tree	Cajanus flavus.
Pimento, Jamaica Pepper, or Allspice	Eugenia Pimenta.
Pimploes	Opuntia Tuna.
Pindals, or Ground Nuts	Arachis hypogæa.
Pine-Apple	Bromelia Ananas.
Pinguin	Bromelia Penguin.
Plantain Tree	Musa paradisiaca.
Poison Tree	Sapium aucupatorium.
Poison Wyth	Cissus sicyoides.
Pollard, or White Wool Cotton	Gossypium herbaceum.
Pomegranate Tree	Punica Granatum.
Pond Grass, or Canker Weed	Commelina communis.
Pond Grass, or Canker Weed	Commelina erecta.
Pond Weed	Croton palustre.
Pond Weed	Alisma cordifolia.
Poplar, or Poppy Tree	Thespesia populnea.
Pops	Physalis angulata.
Pop Vine	Physalis barbadensis.
Potatoes	Convolvulus Batatas.
Poverty Weed	Desmodium repens.
Prickle Yellow Wood	Zanthoxylum Clava Herculis.
Prickly Argemone, or Poppy	Argemone mexicana.
Prickly Pear Vine	Cereus trigonus.
Prickly Yam Vine	Dioscorea aculeata.
Prickly Yellow Wood, or Yellow Hercules	Zanthoxylum Clava Herculis.
Pumkins	Cucurbita Pepo.
Pumpion, or Pumkin Gourd	Cucurbita Pepo.
Pumple Nose Tree	Citrus Decumana ?
Purple Cocco, and Taniers	Caladium sagittifolium.

Trivial Names.	*Systematic Names.*
Purple Eye Bright	Spermacoce hirta.
Purple Inga, or Soldier Wood	Inga purpurea.
Purslane	Portulaca oleracea.
Queen of Flowers	Lagerstrœmia Regina.
Rabbit Vine	Teramnus uncinatus.
Rabbit Weed	Sonchus agrestis.
Rata Pepper. Rata Ockro *alias*, Hoho	Corchorus hirtus.
Rattle Bush, or Shake Shake	Crotalaria incana.
Red Cherry Tree	Malpighia glabra.
Red Dialthæa	Reidleia nodiflora.
Red Flag or Plush Grass	Andropogon angustifolius.
Red Mangrove Tree	Rhizophora Mangle.
Red Wood	Coccoloba barbadensis.
Red Yam	Dioscorea alata.
Reed	Panicum arundinaceum.
Reed	Donax arundinaceus.
Rice Grass	Panicum molle.
Right Wyth, or Cat's Claw Wyth	Bignonia Unguis.
Ring Worm Bush	Cassia alata.
Roasting Cassava	Janipha Löflingii.
Roasting Eddoes	Caladium Macrorhizon.
Rocambole	Allium Scorodoprasum.
Rock Balsam	Piper obtusifolium.
Rock Balsam	Piper acuminatum.
Rock Bush	Piper aduncum.
Rock Sage	Lantana involucrata.
Rod Wood	Coccoloba barbadensis.
Rod Wood	Eugenia virgultosa.
Rope Mangrove	Hibiscus arboreus.
Rose of Sharon	Hibiscus Rosa-sinensis.
Raucou	Bixa Orellana.
Rouncival Peas	Vigna glabra.
Rush	Scirpus mutatus.
Rush	Scirpus geniculatus.
St. Helena Lemon Tree	Citrus medica.

Trivial Names.	*Systematic Names.*
St. John's Bush	Psychotria nervosa.
St. Vincent Lilac	Solanum Seaforthianum.
Sambo	Gynandropsis pentaphylla.
Sandbox Tree	Hura crepitans.
Santa Maria Leaf	Piper umbellatum.
Sappadilla Tree	Achras sapota.
Savanna Grass	Paspalum distichum.
Scarlet Runner Kidney Bean	Phaseolus multiflorus.
Saven Tree, or Bastard Iron Wood	Zanthoxylum Pterota.
Scallion	Allium Ascalonicum.
Scotch Grass	Panicum pilosum.
Scotch Grass	Oplismenus hirtellus.
Scratch Cocco. Eddyes	Arum esculentum.
Scratch Wyth	Cissus sicyoides.
Scratching Eddas	Arum esculentum.
Screw-Pine	Pandanus odoratissimus.
Sea Island Cotton	Gossypium hirsutum.
Seaside Balsam	Croton balsamiferum.
Seaside Grape	Coccoloba uvifera.
Seaside Lavender	Heliotropium gnaphalodes.
Seaside Laurel	Xylophylla falcata.
Seaside Laurel	Heliotropium gnaphalodes.
Seaside Milk Weed	Euphorbia glabrata.
Seaside Samphire	Sesuvium Portulacastrum.
Seaside Vine	Convolvulus brasiliensis.
Senna Tree	Cassia emarginata.
Sensitive Plant	Mimosa pudica.
Seville Orange Tree	Citrus vulgaris.
Shaddock Tree	Citrus Decumana.
Shallot	Allium Ascalonicum.
Short Grass	Panicum distachyon.
Shrubby Goat Weed, or Sweet Weed	Capraria biflora.
Siberian Motherwort	Leonurus sibiricus.
Silk Cotton Tree	Bombax Ceiba.
Silk Grass	Agave americana.

Trivial Names.	*Systematic Names.*
Silk Grass	Agave vivipara.
Silver-leaved Plant	Tussilago nutans.
Silver Wood	Kœlera serrata.
Silver Vine	Hedysarum volubile.
Small Cotton Tree	Gossypium barbadense.
Small Cotton Tree	Gossypium herbaceum.
Small Cotton Tree	Gossypium vitifolium.
Small Barren Pine	Bromelia paniculegera.
Small Duck Weed	Ceratophyllum demersum.
Small-grained Black Pepper	Piper Amalago.
Small Red Thrubba	Solanum torvum.
Small Pomegranate Tree	Punica nana.
Small Wild Cucumber	Melothria pendula.
Smallish Cloven-Berry Bush	Casearia parviflora.
Smaller Indian Kale	Arum divaricatum.
Smooth and Prickly Lawsonia	Lawsonia alba.
Smooth Primrose Willow	Jussiæa octonervia.
Snake Gourd	Trichosanthes anguina.
Snake Wood	Cecropia peltata.
Soap-Tree, or Soap-Berry	Sapindus saponaria.
Sorrel	Hibiscus Sabdariffa.
Sour Orange Tree	Citrus vulgaris.
Soursop Tree	Annona muricata.
South Sea Rose	Nerium odorum.
Spanish Ash	Lonchocarpus violaceus.
Spanish Lemon Tree	Citrus medica.
Spanish Needle	Bidens leucantha.
Spanish Needles	Yucca Draconis.
Spanish Oak	Inga Bourgoni.
Spear-Mint	Mentha viridis.
Spirit Weed	Ægiphila martinicensis.
Spirit Weed	Ægiphila elata.
Spikenard	Bystropogon suaveolens.
Spur Pepper	Capsicum frutescens.
Squashes	Cucurbita Melopepo.
Stinking Weed	Cassia occidentalis.
Star Apple	Chrysophyllum Cainito.

Trivial Names.	*Systematic Names.*
Star Grass	Schœnus stellatus.
Star Plum	Chrysophyllum monopyrenum
Stopper Berry Tree	Cerasus sphærocarpa.
Strawberry Pear	Cereus trigonus.
Sugar Apple Tree	Annona squamosa.
Sugar Bean	Phaseolus lunatus.
Sugar Cane	Saccharum officinarum.
Supple Jack	Paullinia Cururu.
Supple Jack	Paullinia barbadensis.
Sweet Brier	Acacia tortuosa.
Sweet Brier Rose	Rosa rubiginosa.
Sweet Cassava	Janipha Löflingii.
Sweet Gourd	Trichosanthes anguina.
Sweet Heart	Desmodium supinum.
Sweet Marjoram	Origanum Majorana
Sweet Lime	Triphasia trifoliata.
Sweet Lime	Citrus Limetta.
Sweet Pea	Lathyrus odoratus.
Sweet-scented Birthwort	Aristolochia odoratissima
Sweet-scented China Rose	Rosa chinensis.
Sweet-scented Flea Bane	Baccharis odorata.
Sweet-scented Hemp Agrimony	Eupatorium odoratum.
Sweet-scented Water Lily	Nymphæa odorata.
Sweet Sop, or Sugar Apple Tree	Annona squamosa.
Sweet Wood Tree	Laurus caroliniensis
Sweet Wood Tree	Laurus parviflora.
Tamarind Tree	Tamarindus indica.
Tammatas	Solanum Lycopersicon.
Teak Wood, or Indian Oak	Tectona grandis.
Thistle, or Rabbit Weed	Sonchus oleraceus.
Timber Sweet Wood	Laurus caroliniensis.
Tithymaloides	Euphorbia Tithymaloides.
Top-Knot Plum	Spondias purpurea.
Trinidad Butterfly Plant	Oncidium Papilio.
Trumpet Tree, or Snake Wood	Cecropia peltata.

Trivial Names.	*Systematic Names.*
Tuberose	Polyanthes tuberosa.
Turmerick	Curcuma longa.
Turkey Berry Tree	Cordia Collococca.
Turk's Head	Melocactus communis.
Turnip	Brassica Rapa.
Vine Nettle	Tragia volubilis.
Virginian Pepper Wort	Lepidium virginicum.
Upright Pink	Dianthus virgineus.
Water Cress	Nasturtium officinale.
Water Lemon	Passiflora laurifolia.
Water Lemon	Passiflora maliformis.
Water Sweet Weed	Laurus parviflora.
Water Weed	Spigelia Anthelmia.
West India Tea	Capraria biflora.
Welch Golden Rod	Solidago cambrica.
White Bully Tree	Bumelia salicifolia.
White Cedar Tree	Bignonia Leucoxylon.
White Cocco, or Tyre	Caladium Macrorhizon.
White-flowered Jasmine Tree	Plumeria alba.
White Hercules	Zanthoxylum fraxineum.
White Hoop	Tournefortia bicolor.
White Sage	Lantana involucrata
White Willow	Capparis Breynia.
White Wood Tree	Bignonia Leucoxylon.
Wild Basil	Ocymum americanum.
Wild or Bastard Ipecacuanha	Asclepias curassavica.
Wild or Bastard French Guava	Cassia alata.
Wild Bay Berry Tree	Eugenia coriacea.
Wild Cane	Erianthus arundinaceus.
Wild Calabash	Cestrum laurifolium.
Wild Cassava	Jatropha Gossypifolia.
Wild Cinnamon	Canella alba.
Wild Clary	Heliotropium indicum.
Wild Clary	Heliotropium parviflorum.
Wild Clove, Bay-Berry Myrtle	Myrica acris.
Wild Coffee	Coffea occidentalis.
Wild Coffee	Pavetta pentandra.

Trivial Names.	*Systematic Names.*
Wild Coffee	Psychotria tenuifolia.
Wild Dolly	Phaseolus semierectus.
Wild Dwrah	Cyperus strigosus.
Wild Elder Bush	Piper umbellatum.
Wild French Guava	Cassia occidentalis.
Wild Hemp	Malachra capitata.
Wild Hemp	Malachra fasciata.
Wild Hiccory	Rivina octandra.
Wild Honey Tree	Casearia parviflora;
Wild Hops	Hyptis capitata.
Wild Indigo	Indigofera Anil.
Wild Lavender	Heliotropium curassavicum.
Wild Lily	Epidendrum ciliare.
Wild Liquorice	Abrus precatorius.
Wild, or Monkey Eddoe	Caladium nymphæifolium.
Wild Ockro	Malachra capitata.
Wild Olive	Bontia daphnoides.
Wild Parsley	Cardiospermum Helicacabum.
Wild Pepper Grass	Lepidium virginicum.
Wild Pines	Yucca Draconis.
Wild Pomegranate	Volkameria aculeata.
Wild Purslane	Portulaca parvifolia.
Wild Purslane	Portulaca pilosa.
Wild Sage	Lantana involucrata.
Wild Senna, or Wild Cassia Fistula	Cassia emarginata.
Wild Shaddock	Citrus medica.
Wild Spikenard	Bystropogon pectinatum.
Wild Slip	Convolvulus hederaceus.
Wild Tamarinds	Cassia Chamæcrista.
Wild Tobacco	Baccharis odorata.
Wild Tulip	Amaryllis zeylanica.
Wild Water Lemon Vine	Passiflora fœtida.
Wild Wormwood	Parthenium Hysterophorus.
Winged-Seeded Horse Radish Tree	Moringa pterygosperma.
Woolly-Pyroe	Phaseolus Mungo.

Trivial Names.	*Systematic Names.*
Worm Seed Weed . .	Chenopodium anthelminticum
Yams	Dioscorea sativa.
Yellow Hercules . .	Zanthoxylum Ochroxylum.
Yellow Hercules . . .	Zanthoxylum Clava Herculis.
Yellow, or Jamaica Plum .	Spondias lutea.
Yellow Lupin . . .	Crotolaria retusa.
Yellow Nicker . . .	Guilandina Bonduc. α.
Yellow Thistle . . .	Argemone mexicana.

THE END.

London: JOHN W. PARKER, West Strand.

PUBLISHED BY JOHN W. PARKER,

WEST STRAND, LONDON.

A HISTORY OF THE INDUCTIVE SCIENCES, from the Earliest Times to the Present. By the Rev. WILLIAM WHEWELL, M.A., F.R.S., ETC. Three Vols. Octavo.—*Nearly ready.*

"A JUST story of learning, containing the antiquities and originals of KNOWLEDGES, and their Sects; their inventions, their traditions, their diverse administrations and managings; their flourishings, their oppositions, decays, depressions, removes, with the causes and occasions of them; and all other events concerning learning, throughout all ages of the world; I may truly affirm to be wanting. The use and end of which work, I do not so much design for curiosity or satisfaction of those that are lovers of learning; but chiefly for a more serious and grave purpose; which is this, in few words; that it will make learned men more wise in the use and administration of learning."—BACON.

The Sciences of which the history is given in this work, are—

ACOUSTICS, ASTRONOMY, BOTANY, CHEMISTRY, ELECTRICITY, ELECTRO-CHEMISTRY, GALVANISM, GEOLOGY, HEAT, HYDROSTATICS, MAGNETISM, MECHANICS, MINERALOGY, OPTICS, PHYSIOLOGY, ZOOLOGY.

THE PHILOSOPHY OF LIVING. By HERBERT MAYO, F.R.S., Senior Surgeon of the Middlesex Hospital.—Post Octavo, 8*s.* 6*d.*

"FOR though we Christians do continually aspire and pant after the land of promise; yet it will be a token of God's favour towards us, in our journeying through the world's wilderness, to have our shoes and garments (I mean those of our frail bodies) little worn or impaired."—BACON.

A MANUAL OF CHEMISTRY. By WILLIAM THOMAS BRANDE, F.R.S., Prof. Chem. R.I., of His Majesty's Mint. The FOURTH EDITION, revised, and very considerably Enlarged; and with an INDEX, comprising many Thousand References. In a thick Octavo Volume, 30*s.*

ALTHOUGH Three Editions of the *Manual of Chemistry* have already appeared, the present may be considered as a new work. It has been almost wholly re-written; everything new and important in the Science, both in English and Foreign Works, has been embodied; it abounds in references to Authorities; and no pains have been spared to render it, in every respect, valuable, as a Text-Book for the Lecturer, and as a Manual for the Chemical Student. It contains a connected view of the present state of the Science, *practical* and *theoretical*, and is prefaced by an HISTORICAL SKETCH OF THE RISE AND PROGRESS OF CHEMICAL PHILOSOPHY: it is illustrated by nearly *Three Hundred Wood-Cuts*, and by numerous *Diagrams* and *Tables*. It is divided into Three Parts, forming a very thick Octavo Volume; but it is so arranged, that each Part may be bound separately, with separate Titles and Contents. The INDEX is upon an extended scale, and renders the work accessible as a DICTIONARY OF CHEMISTRY.

THE WEST INDIES; the Natural and Physical History of the Windward and Leeward Colonies; with Sketches of the Moral, Social, and Political Condition of the Inhabitants, immediately before and after the Abolition of NEGRO SLAVERY. By SIR ANDREW HALLIDAY, K.H., M.D., F.R.S.E., ETC., Deputy Inspector General of Army Hospitals.—Post Octavo, with Maps, 10*s.* 6*d.*

NOTES ON INDIAN AFFAIRS. By the Honourable FREDERICK JOHN SHORE, Judge of the Civil Court and Criminal Sessions of the District of Furrukhabad.—*In the Press.*

THE STUDY OF MATHEMATICS conducive to the DEVELOPEMENT of the INTELLECTUAL POWERS. By the Rev. TEMPLE CHEVALLIER, B.D., Professor of Mathematics in the University of Durham. 1*s.* 6*d.*

THE MECHANICAL EUCLID; containing the Elements of Mechanics and Hydrostatics, demonstrated after the manner of the Elements of Geometry; and including the Propositions fixed upon by the University of Cambridge, as requisite for a Degree. To which are added, NOTES on the LOGIC of INDUCTION and DEDUCTION. By the Rev. W. WHEWELL, M.A., Fellow and Tutor of Trinity College, Cambridge.—*In the Press.*

AN ELEMENTARY TREATISE ON THE DIFFERENTIAL AND INTEGRAL CALCULUS. By the Rev. T. G. HALL, M.A., Professor of Mathematics in King's College, London; late Fellow and Tutor of Mag. Coll. Cambridge. 12*s.* 6*d.*

THE PRINCIPLES and PRACTICE of ARITHMETIC, comprising the NATURE and USE of LOGARITHMS, with the Computations employed by Artificers, Gaugers, and Land-Surveyors. By JOHN HIND, M.A., late Fellow and Tutor of Sidney-Sussex College, Cambridge. 7*s.* 6*d.*

LECTURES upon TRIGONOMETRY, and the APPLICATION of ALGEBRA to GEOMETRY. Second Edition, considerably altered, 7*s.* 6*d.*

THE MATHEMATICAL PRINCIPLES OF MECHANICAL PHILOSOPHY, and their Application to the THEORY of UNIVERSAL GRAVITATION. By JOHN HENRY PRATT, M.A., Fellow of Gonville & Caius Coll. Camb. 21*s.*

* MECHANICS APPLIED TO THE ARTS. By the Rev. HENRY MOSELEY, M.A., Professor of Natural Philosophy and Astronomy, King's College. With numerous Engravings, 6*s.* 6*d.*

* READINGS IN SCIENCE; being FAMILIAR EXPLANATIONS of some interesting Appearances and Principles in NATURAL PHILOSOPHY. With many Cuts, 5*s.*

* POPULAR PHYSIOLOGY; being FAMILIAR EXPLANATIONS of the most Interesting Facts connected with the STRUCTURE and FUNCTIONS of ANIMALS, and particularly of MAN. By PERCEVAL B. LORD, M.B., M.R.C.S. With numerous Engravings, 7*s.* 6*d.*

THE TRINITIES OF THE ANCIENTS; the Mythology of the First Ages, and the Writings of the Pythagorean School, examined, with reference to the knowledge of the Trinity ascribed to Plato, and other ancient Philosophers. By ROBERT MUSHET, Esq.—*In the Press.*

A DISCOURSE on the STUDIES of the UNIVERSITY of CAMBRIDGE. By ADAM SEDGWICK, M.A., F.R.S., &c. 4*s.*

BISHOP HALLIFAX ON THE CIVIL LAW; A NEW EDITION, with ALTERATIONS and ADDITIONS, by JAMES WILLIAM GELDART, LL.D., the King's Professor of the Civil Law in the University of Cambridge. Octavo, 8*s.* 6*d.*

THE CAMBRIDGE GREEK and ENGLISH TESTAMENT. The Greek and English being given in Parallel Columns on the same Page. New Edition, with the Marginal References. 8*s.* 6*d.*

STEMMATA ATHENIENSIA; TABLES of BIOGRAPHY, CHRONOLOGY, and HISTORY, to facilitate the Study of the GREEK CLASSICS.—*Nearly ready.*

DISSERTATIONS ON THE EUMENIDES OF ÆSCHYLUS, with the Greek Text, and Critical Remarks. Translated from the German of C. O. MULLER. Octavo, 9*s.* 6*d.*

SCHLEIERMACHER'S INTRODUCTIONS TO THE DIALOGUES of PLATO. Translated from the German by WILLIAM DOBSON, M.A., Fel. of Trin. Col. Camb. 8vo. 12*s.* 6*d.*

A HEBREW GRAMMAR, for the USE of SCHOOLS and STUDENTS in the UNIVERSITIES. By the late CHRISTOPHER LEO, Hebrew Teacher in the University of Cambridge. Octavo, 12*s.* 6*d.*

GESENIUS' HEBREW LEXICON. Translated by CHRISTOPHER LEO. Two Volumes Quarto, £3 3*s.*

THE STUDENT'S MANUAL OF ANCIENT HISTORY: containing Accounts of the POLITICAL CONDITION, GEOGRAPHICAL SITUATION, and SOCIAL STATE of the principal NATIONS OF ANTIQUITY; carefully digested from the Ancient Writers, and illustrated by the Discoveries of Modern Scholars and Travellers. By W. C. TAYLOR, LL.D. Crown Octavo, 10*s.* 6*d.*

THE STUDENT'S MANUAL OF MODERN HISTORY, by the same Author, is *in the Press.*

* THE FAMILY HISTORY OF ENGLAND. By the Rev. GEORGE R. GLEIG, M.A.; with a Series of

PICTORIAL ILLUSTRATIONS

of the COSTUMES, ARCHITECTURE, SHIPPING, &c., of the successive periods of British History. In Eighteen Parts, at 1*s.* each; or complete in Three Volumes, at 6*s.* 6*d.* each.

A POPULAR HISTORY OF THE REFORMATION, in GERMANY, SWITZERLAND, and GREAT BRITAIN; and of its chief Promoters, Opposers, and Victims. By THOMAS B. FOX. 3*s.* 6*d.*

* HISTORY OF THE CHRISTIAN CHURCH; FROM THE ASCENSION OF JESUS CHRIST TO THE CONVERSION OF CONSTANTINE. By the late Rev. EDWARD BURTON, D.D., Regius Professor of Divinity in the University of Oxford. SECOND EDITION. 6*s.* 6*d.*

THE ANGLO-SAXON CHURCH; its HISTORY, REVENUES, and GENERAL CHARACTER. By the Rev. HENRY SOAMES, M.A., Author of the *History of the Reformation.* Octavo, 10*s.* 6*d.*

HISTORY OF THE ENGLISH EPISCOPACY, FROM THE PERIOD OF THE LONG PARLIAMENT TO THE ACT OF UNIFORMITY; with Sketches of the Religious Parties of the time; and a Review of Ecclesiastical Affairs in England from the Reformation. By the Rev. THOMAS LATHBURY, M.A. Octavo, 12*s.*

THE EARLY CHRISTIANS; their MANNERS and CUSTOMS, TRIALS and SUFFERINGS. By the Rev. W. PRIDDEN, M.A. 4*s.*

* SCENES and SKETCHES from ENGLISH HISTORY. With Engravings. 3*s.* 6*d.*

* HISTORY OF THE CRUSADERS; or, SCENES, EVENTS, and CHARACTERS, from the Times of the Crusades. By THOMAS KEIGHTLEY, Esq. Two Volumes, with Engravings, 11*s.*

* THE HISTORY OF MOHAMMEDANISM, and the Principal MOHAMMEDAN SECTS. By W. C. TAYLOR, LL.D., M.R.A.S., &c. With Engravings, 5*s.* 6*d.*

THE LIFE OF SIR WILLIAM JONES, by the late LORD TEIGNMOUTH; with Notes, Selections from his Works, and a Memoir of his Noble Biographer, by the Rev. SAMUEL CHARLES WILKS, M.A. Two Volumes, with Portraits, 10*s.* 6*d.*

* LIVES OF SACRED POETS; with an INTRODUCTORY SKETCH of SACRED POETRY. By R. A. WILLMOTT, Esq., Trinity College, Cambridge. With Portraits, 4*s.* 6*d.*

* LIVES OF EMINENT CHRISTIANS; containing the Lives of BISHOP WILSON; ARCHBISHOP USHER; DR. HAMMOND; JOHN EVELYN; BERNARD GILPIN; PHILIP DE MORNAY; BISHOP BEDELL; and DR. HORNECK. By the Rev. R. B. HONE, M.A. Two Vols., with Portraits, 9*s.* Vol. III. will shortly appear.

A DISCOURSE ON DEATH; with APPLICATIONS of CHRISTIAN DOCTRINE. By the Rev. HENRY STEBBING, M.A. Price 4*s.*

DISCOURSES ON REPENTANCE. By the Rev. T. AINGER, M.A., Assistant Minister of St. Mary, Greenwich. 2*s.* 6*d.*

PALEY'S EVIDENCES OF CHRISTIANITY EPITOMISED; with a view to exhibit his Argument in a small compass, without omitting or weakening any of its component points. BY A MEMBER OF THE UNIVERSITY OF CAMBRIDGE. 5*s.*

THE HISTORY OF LITERATURE; being a POPULAR VIEW of the PROGRESS of LEARNING, from the Earliest Times. By R. A. WILLMOTT, Esq., Trin. Coll. Camb.—*In the Press.*

ESSAYS; on CONVERSATION, and on QUACKERY. Foolscap Octavo, 3*s.* 6*d.*

MUSICAL HISTORY, BIOGRAPHY, AND CRITICISM; being a GENERAL SURVEY of MUSIC from the earliest period to the present time. By GEORGE HOGARTH. 7*s.* 6*d.*

THE PROPHETICAL CHARACTER AND INSPIRATION OF THE APOCALYPSE. By GEORGE PEARSON, B.D., Christian Advocate in the University of Cambridge. 10*s.* 6*d.*

ARCHBISHOP LEIGHTON'S PRÆLECTIONES. PARÆNESES, ET MEDITATIONES IN PSALMOS ETHICO-CRITICÆ. Second Edition, 8*s.*

OFFICE for the VISITATION of the SICK; with Notes and Explanations, by WILLIAM COXE, M.A., Archdeacon of Wilts. New Edition, enlarged. 1*s.* 6*d.*

CHRISTIAN RESPONSIBILITIES, arising out of the recent CHANGE in our WEST INDIA COLONIES. By the Rev. EDWARD ELIOT, B.D., Archdeacon of Barbadoes. 3*s.*

THE MILITARY PASTOR; a Series of PRACTICAL DISCOURSES, addressed to SOLDIERS; with PRAYERS for their Use. By the Rev. J. PARKER LAWSON, M.A. 5*s.* 6*d.*

THE DOCTRINE of TRADITION, as maintained by the Church of England. By the Rev. S. PEARSON, M.A., Christian Advocate in the University of Cambridge.

ARCHBISHOP USHER'S ANSWER TO A JESUIT; with other TRACTS on POPERY. In a large Octavo Volume, 13*s.* 6*d.*

THE CHURCHES OF ROME AND ENGLAND Compared in their DECLARED DOCTRINES and PRACTICES. By RICHARD MANT. D.D., M.R.I.A., LORD BISHOP of DOWN and CONNOR. 6*d.* By the same Author,

ROMANISM AND HOLY SCRIPTURE COMPARED; Wherein is shown the Disagreement of the Church of Rome with the Word of God, no less than with the Church of England, on many of the Fundamental Articles of Christianity. 9*d.*

THE ROMAN-CATHOLIC DOCTRINE OF THE EUCHARIST. The Scriptural Argument considered, in reply to Dr. Wiseman. By THOMAS TURTON, D.D., Regius Professor of Divinity in the University of Cambridge, and Dean of Peterborough.—*In the Press.* By the same Author,

NATURAL THEOLOGY considered chiefly with reference to LORD BROUGHAM'S DISCOURSE on that subject. Second Edition, Post Octavo, 8*s.*

THE HYMNS OF THE PRIMITIVE CHURCH; now first Collected, Arranged, and Translated. By the Rev. J. CHANDLER, M.A., Fel. of Cor. Chris. Col. Ox. *In the Press.*

CONVERSATIONS AT CAMBRIDGE; including among others, the following:

S. T. Coleridge at Trinity; with unpublished Specimens of his Table-Talk.—The Poet Wordsworth and Professor Smyth.—Kirke White and the Johnians; with some Account of his last Days.—Thomas Babington Macaulay, with Records of the Union.—Gray and Mason—a Summer-Day with the Muses.—Praed and his "Chansons."—Edward Lytton Bulwer, and T. M.—Cowley and his Friend William Hervey.—The History of a Lost Student, taken down from his own lips.—The Poet Cowper, and his Brother of Benet.—Sidney Walker and John Moultrie.—The Destructives of 1643; Oliver Cromwell at Cambridge.—One Hour with Henry Martyn, and a Glance at the present state of Religious Feeling in the University.—A Word with Professor Sedgwick. Price 6*s*.

POSTHUMOUS RECORDS OF A LONDON CLERGYMAN; edited by the Rev. J. HOBART CAUNTER, B.D. 7*s*.

Introductory Sketch.	The Gambler.	The Fortune-Teller.
A Female Narcissus.	The Widow.	The Sisters.
The Condemned.	The Hypochondriac.	and
The Afflicted Man.	The Parvenu.	The Two Friends.

LIGHT IN DARKNESS; or the RECORDS of a VILLAGE RECTORY. 3*s*. 6*d*.

The Village.	The Village Schoolmaster.
The Retired Tradesman.	The Village Apothecary.
The Good Aunt.	The Deserted Wife.

The Family at the Hall; or, Pride and Poverty.

SACRED MINSTRELSY; a COLLECTION of SACRED MUSIC, from the best works of the Great Masters, arranged as Solos and Concerted Pieces, and with Accompaniments for the Piano-Forte or Organ. Complete in Two Handsome Folio Volumes, 2*l*. 2*s*., Half-bound; or in Nos., I. to XXIV., at 1*s*. 6*d*.

* MANUAL of INSTRUCTION in VOCAL MUSIC, chiefly with a view to Psalmody. By JOHN TURNER, Esq. 4*s*.

* READINGS IN POETRY; Selections from the Works of the best English Poets, with Sketches of the Writers, and Notes. 4*s*. 6*d*.

THE BRITISH MONTHS, a Poem, in Twelve Parts. By RICHARD MANT, D.D., M.R.I.A., Lord Bishop of Down and Connor. In Two Pocket Volumes, 9*s*.

THE RELIQUARY; by BERNARD and LUCY BARTON; with a Prefatory Appeal for Poetry and Poets. 3*s*. 6*d*.

A NEW TRANSLATION of the SATIRES of HORACE. —*In the Press.*

ROSE-BUDS RESCUED, AND PRESENTED TO MY CHILDREN. By the Rev. S. C. WILKS, M.A. 4*s*. 6*d*.

ORIGINAL FAMILY SERMONS; contributed by upwards of ONE HUNDRED AND FIFTY DIVINES OF THE ESTABLISHED CHURCH. Five Volumes, at 6*s.* 6*d.* each, or in Parts, at 1*s.* each.

A DAILY PRAYER BOOK, for the USE of FAMILIES and SCHOOLS. By J. T. BARRETT, D.D., Rector of Beauchamp, Essex, 1*s.* 6*d.*

NATIONAL EDUCATION, AND THE MEANS OF IMPROVING IT. By the Rev. T. V. SHORT. B.D., Rector of Bloomsbury. 1*s.*

* ON THE EDUCATION AND TREATMENT OF CHILDREN. Being Mrs. CHILD'S "MOTHER'S BOOK," revised, and adapted to the use of English Parents and Teachers. 2*s.* 6*d.*

THE YOUNG LADY'S FRIEND; a MANUAL of PRACTICAL INSTRUCTION and ADVICE to YOUNG FEMALES, upon their entering LIFE after quitting School. By a LADY. 3*s.* 6*d.*

A MANUAL OF DOMESTIC ECONOMY; including COOKERY and HOUSEHOLD MANAGEMENT, with a Collection of Valuable Receipts, in every department connected with the HEALTH, COMFORT, and ECONOMY of a FAMILY. *In the Press.*

A DICTIONARY OF DIET; being a SUCCINCT HISTORY of all PABULARY and NUTRITIVE SUBSTANCES, SOLID, and FLUID, used as FOOD. *In the Press.*

A POPULAR ACCOUNT OF ROADS AND RAILROADS, BRIDGES, TUNNELS, and CANALS; and of the various Modes of Travelling and Conveyance, by means of Animals, Steam and other Carriages, and Steam Ships and Vessels, in all parts of the World. By the Author of "KEEPER'S TRAVELS IN SEARCH OF HIS MASTER." *In the Press.*

BRITISH SONG BIRDS; being POPULAR DESCRIPTIONS and ANECDOTES of the BRITISH CHORISTERS of the GROVES. By NEVILLE WOOD, ESQ. Foolscap Octavo, 7*s.* By the same Author,

THE ORNITHOLOGIST'S TEXT BOOK; being REVIEWS of ORNITHOLOGICAL WORKS, published from A.D. 1678 to the present day; with an APPENDIX, discussing various Topics of Interest connected with Ornithology. 4*s.* 6*d.*

SKETCHES OF THE COASTS AND ISLANDS OF SCOTLAND, and of the ISLE of MAN; descriptive of the Scenery, and illustrative of the progressive Revolution in the Economical, Moral, and Social Condition of the Inhabitants of those Regions. By LORD TEIGNMOUTH. 2 Vols., with Maps. 21*s.*

*THREE WEEKS IN PALESTINE AND LEBANON. With many ENGRAVINGS. 3*s.*

TWO YEARS AT SEA: being the Narrative of a Voyage to the Swan River and Van Diemen's Land; thence, to various parts of India. With Notes of a Residence in the Birman Empire, and of the Services and Sufferings of the Missionaries in that Country. By JANE ROBERTS. New Edition, Foolscap Octavo, with Engravings.—*In the Press.*

ARTISANS AND MACHINERY; the Moral and Physical Condition of the MANUFACTURING POPULATION considered, with reference to MECHANICAL SUBSTITUTES for HUMAN LABOUR. By P. GASKELL, Esq., SURGEON. 6*s.*

ISSUED BY THE LABOURER'S FRIEND SOCIETY, OF WHICH THEIR MAJESTIES ARE PATRONS.

COTTAGE HUSBANDRY; the UTILITY and NATIONAL ADVANTAGE of ALLOTTING LAND for that Purpose. Price 4*s.*

USEFUL HINTS for LABOURERS, on various Subjects. Price 1*s.* 6*d.*

FOR STUDENTS IN GERMAN.

BERNAYS' (Prof. King's Coll., Lond.) GERMAN GRAMMAR. 5*s.*

BERNAYS' GERMAN EXERCISES, adapted to the Grammar. 5*s.* 6*d.*

BERNAYS' GERMAN EXAMPLES, illustrating the Author's German Grammar, and forming a KEY to the German Exercises. 3*s.*

BERNAYS' GERMAN READER, a Selection from the most Popular Writers, with Translations and Notes, for the use of Beginners. 5*s.*

BERNAYS' GERMAN POETRY for BEGINNERS, with ENGLISH NOTES. 4*s.*

BERNAYS' GERMAN HISTORICAL ANTHOLOGY. 7*s.*

BERNAYS' GERMAN POETICAL ANTHOLOGY; Selections from the Poets; with a History of German Poetry, and Notes. 8*s.* 6*d.*

APPROVED MODERN SCHOOL BOOKS,

CHIEFLY USED AT KING'S COLLEGE, AND OTHER PUBLIC SCHOOLS.

---

*ENGLISH GRAMMAR. By the Rev. Dr. RUSSELL, late Head Master of Charter-House School. 1*s.* 6*d.*

*THE CLASS READING-BOOK; designed to furnish Youth with Information on a variety of subjects. By GEORGE LUDLOW, one of the Masters at Christ's Hospital, Hertford. 3*s.* bound.

A PRACTICAL INTRODUCTION TO ENGLISH COMPOSITION. By the Rev. J. EDWARDS, M.A., King's College. 2*s.* 6*d.*

*READINGS IN ENGLISH PROSE LITERATURE; containing choice Specimens of the Works of the best English Writers; with ESSAYS on ENGLISH LITERATURE. 4*s.* 6*d.*

*ARITHMETIC TAUGHT BY QUESTIONS. 1*s.* 6*d.*

THE FIGURES OF EUCLID; with Questions, and a Praxis of Geometrical Exercises. By the Rev. J. EDWARDS, M.A., of King's College, London. 3*s.*

*A FIRST BOOK ON GEOMETRY; including PLANE and SOLID GEOMETRY, and an Introduction to TRIGONOMETRY. 1*s.* 6*d.*

*EASY LESSONS IN MECHANICS: with Familiar Illustrations of the Practical Application of Mechanical Principles. 3*s.*

*READINGS IN POETRY; a Selection from the Works of the best English Poets; with Specimens of the American Poets; Literary Notices of the Writers; and explanatory Notes. 4*s.* 6*d.*

*READINGS IN BIOGRAPHY; a Selection of the Lives of the most Eminent Men of all Nations. 4*s.* 6*d.*

*OUTLINES OF GEOGRAPHY. By GEORGE HOGARTH. With Maps and Cuts. Tenpence.

*OUTLINES of the HISTORY OF ENGLAND. By GEORGE HOGARTH. With Engravings of Costumes, Antiquities, &c. 1*s.* 3*d.*

*OUTLINES of ROMAN HISTORY. By GEORGE HOGARTH. With Cuts of Costumes, &c. Tenpence.

*OUTLINES of GRECIAN HISTORY. By the Rev. BARTON BOUCHIER, M.A. With MAPS and VIEWS. 1*s.*

*OUTLINES OF SACRED HISTORY; from the Creation of the World to the Destruction of Jerusalem. With Engravings. 3*s.* 6*d.*

A MANUAL of ANCIENT GEOGRAPHY; with the Ancient and Modern Names of Places, and the Words marked with their proper Quantities. By the Rev. WILLIAM HILDYARD, M.A. 2*s.* 6*d.*

*OUTLINES of ASTRONOMY. By the Rev. T. G. HALL, M.A., Professor of Mathematics, King's College, London. With Cuts, 10*d.*

*Those to which a * is prefixed, are published under the Direction of the General Literature and Education Committee of the Society for Promoting Christian Knowledge.*

LATIN.

AN ELEMENTARY GRAMMAR of the LATIN LANGUAGE, with PRACTICAL EXERCISES. By Dr. SCHULTE. 2*s.* 6*d.*

MAJOR'S LATIN EXERCISES for the JUNIOR CLASSES OF KING'S COLLEGE SCHOOL, LONDON. 2*s.* 6*d.*

PROGRESSIVE EXERCISES in LATIN LYRICS. By the Rev. J. EDWARDS, M.A., King's Coll. London, Classical Examiner at Christ's Hospital. 3*s.* And, by the same,

1. The CATILINE of SALLUST; with ANTHON'S NOTES. 2*s.* 6*d.*

2. The JUGURTHA of SALLUST; with ANTHON'S NOTES. 2*s.* 6*d.*

3. SELECT EPISTLES of CICERO and PLINY; with ENGLISH NOTES. 4*s.*

SELECT ORATIONS of CICERO; with ENGLISH NOTES, Critical and Historical. 2*s.* 6*d.*

RULES AND EXERCISES in the USE of the LATIN SUBJUNCTIVE MODE. By the Rev. JAMES CROCKER, M.A. 4*s.*

The KEY, for the Use of Teachers. 2*s.* 6*d.*

GREEK.

THE FIRST GREEK READER, from the German of JACOBS, with ENGLISH NOTES, strictly Elementary. By the Rev. J. EDWARDS, M.A.—*In the Press.*

EXCERPTA EX HERODOTO; with ENGLISH NOTES, by the Rev. J. R. MAJOR, M.A., Head Master of King's Coll. School. 4*s.* 6*d.*

A SCHOOL GREEK TESTAMENT. 3*s.* 6*d.*, bound.

FRENCH.

VENTOUILLAC'S RUDIMENTS of the FRENCH LANGUAGE; or FIRST FRENCH READING-BOOK. New Edition, Revised by J. F. WATTEZ, French Master in King's Coll., London. 3*s.* 6*d.*

LIVRE DE CLASSE; with ENGLISH NOTES. By the late Professor L. T. VENTOUILLAC. 5*s.*

FRENCH POETRY; with ENGLISH NOTES. By the late Professor L. T. VENTOUILLAC. 2*s.*

BRASSEUR'S PRACTICAL EXERCISES ON FRENCH PHRASEOLOGY; with a LEXICON of IDIOMATIC VERBS. 3*s.* 6*d.*

THE FRENCH SCHOOL CLASSICS. Careful Abridgements of Popular French Works, for the use of Young Persons of both Sexes, in a state altogether unobjectionable.

1. TELEMAQUE. 2*s.* 6*d.*
2. VOYAGES DE CYRUS. 2*s.*
3. BELISAIRE. 1*s.* 6*d.*
4. PIERRE LE GRAND. 2*s.*
5. CHARLES XII. 2*s.*
6. GIL BLAS *is in the Press.*

LE BOUQUET LITTERAIRE. Recueil de Beautés Religieuses et Morales, de divers Auteurs. Par Feu L. T. VENTOUILLAC. 3*s.* 6*d.*

SELECT BOOKS FOR YOUNG PERSONS.

* A FAMILIAR HISTORY OF BIRDS; their Nature, Habits, and Instincts. By the Rev. E. STANLEY, M.A., Rector of Alderley, Cheshire. Two Volumes, with Engravings, 7*s.*

* DOMESTICATED ANIMALS considered with reference to Civilization and the Arts. By MARY ROBERTS. With Engravings. 3*s.* 6*d.*; and, by the same Author,

* WILD ANIMALS; their Nature, Habits, and Instincts; with Incidental Notices of the Regions they inhabit. With Engravings. 3*s.* 6*d.*

* THE ELEMENTS OF BOTANY. *In the Press*, a New Edition, Enlarged and Improved, and with many Cuts.

CONVERSATIONS on GARDENING and NATURAL HISTORY. By the Author of the *Elements of Botany*. 2*s.* 6*d.*

* The BOOK of ANIMALS. The BOOK of BIRDS. The BOOK of FISHES. The BOOK of REPTILES. The BOOK of SHELLS. 1*s.* 6*d.* each; all with numerous Engravings.

FIRST SUNDAYS at CHURCH; or, FAMILIAR CONVERSATIONS on the MORNING and EVENING SERVICES. By the Rev. J. E. RIDDLE, M.A. 3*s.* 6*d.*

ABBOTT'S READER; a Series of Familiar Pieces, in Prose and Verse, calculated to produce a Moral Influence on the Hearts and Lives of Young Persons. By the Authors of the YOUNG CHRISTIAN; THE CORNER-STONE; THE TEACHER, &c. 3*s.*

SANDFORD AND MERTON; Modernized and Abridged by ROSINA MARIA ZORNLIN. With Cuts. 3*s.* 6*d.*

COUSIN KATE; or, the Punishment of Pride; a Tale. By CATHERINE GRACE GODWIN, Author of "THE REPROVING ANGEL," &c. With many Cuts. 2*s.* Also, by the same Author,

2. BASIL HARLOW; or, Prodigality is not Generosity. 2*s.*

3. ESTHER MORE; or, Truth is Wisdom. 2*s.*

* CONVERSATIONS of a FATHER with his CHILDREN. Two Volumes, with Engravings. 5*s.* 6*d.*

* EASY LESSONS on MONEY MATTERS; with Cuts, 1*s.*

TALES AND STORIES from HISTORY. By AGNES STRICKLAND. Two Volumes, with many Engravings. 7*s.*

FABLES and MORAL MAXIMS, in PROSE and VERSE. Selected by ANNE PARKER. With One Hundred Wood-Cuts. 3*s.* 6*d.*

POPULAR POEMS FOR YOUNG PERSONS; selected by ELIZABETH PARKER. *In the Press.*

FIVE HUNDRED CHARADES, from History, Geography, and Biography. New Edition, Revised and Corrected. 1*s.* 6*d.*

* PERSIAN FABLES, for Young and Old. By the Rev. H. G. KEENE, M.A. Price 1*s.*, with Eighteen Engravings. Also,

* PERSIAN STORIES; illustrative of Eastern MANNERS and CUSTOMS. Price 1*s.*, with Engravings.

* SISTER MARY'S TALES in NATURAL HISTORY. 2*s.* 6*d.*

LONDON: JOHN W. PARKER, Publisher, WEST STRAND.

356.

XXII