

Wintering in Rome / by A. G. Welsford; with an introduction by G. Sandison Brock.

Contributors

Welsford, Arthur Gerald.
Brock, G. Sandison.
Royal College of Physicians of London

Publication/Creation

London : Health Resorts Bureau, 1907.

Persistent URL

<https://wellcomecollection.org/works/ux5mxeck>

Provider

Royal College of Physicians

License and attribution

This material has been provided by This material has been provided by Royal College of Physicians, London. The original may be consulted at Royal College of Physicians, London. where the originals may be consulted. Conditions of use: it is possible this item is protected by copyright and/or related rights. You are free to use this item in any way that is permitted by the copyright and related rights legislation that applies to your use. For other uses you need to obtain permission from the rights-holder(s).



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

WINTERING IN ROME

A. G. WELSFORD M.D. F.R.C.S. D.P.H.

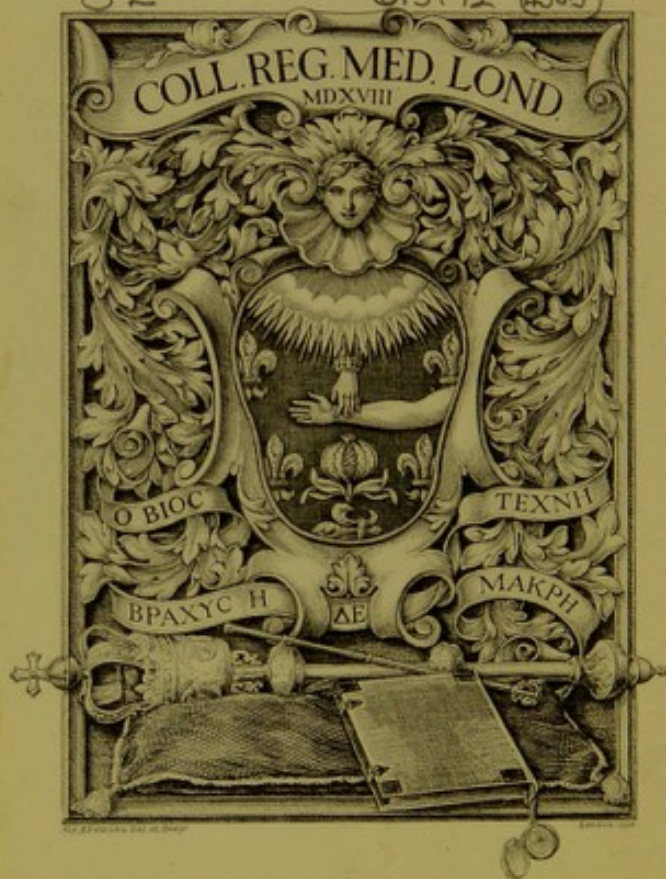
WITH INTRODUCTION BY

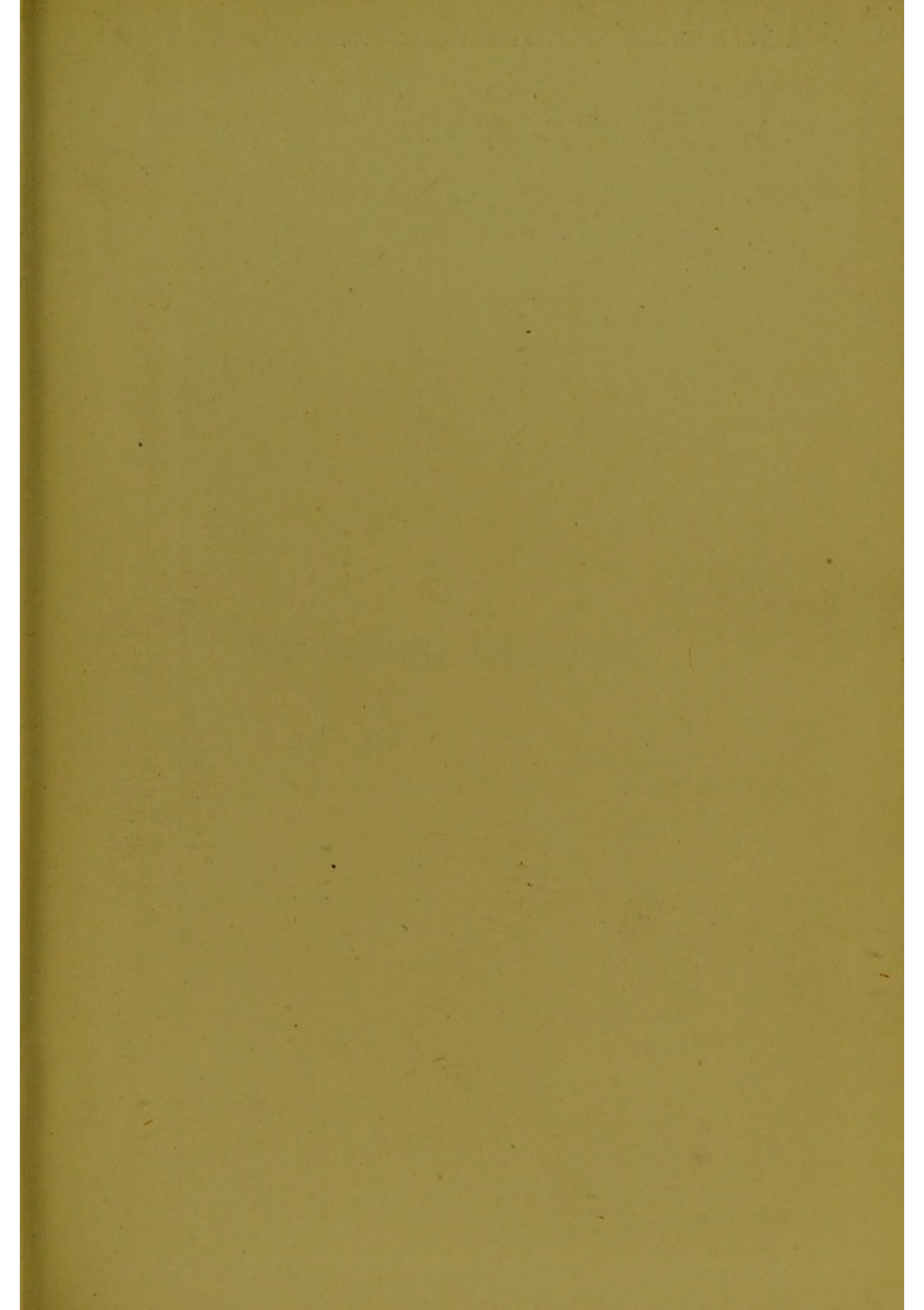
G. SANDISON BROCK M.D. C.M. F.R.S.E.

SL
2/6 net

SL

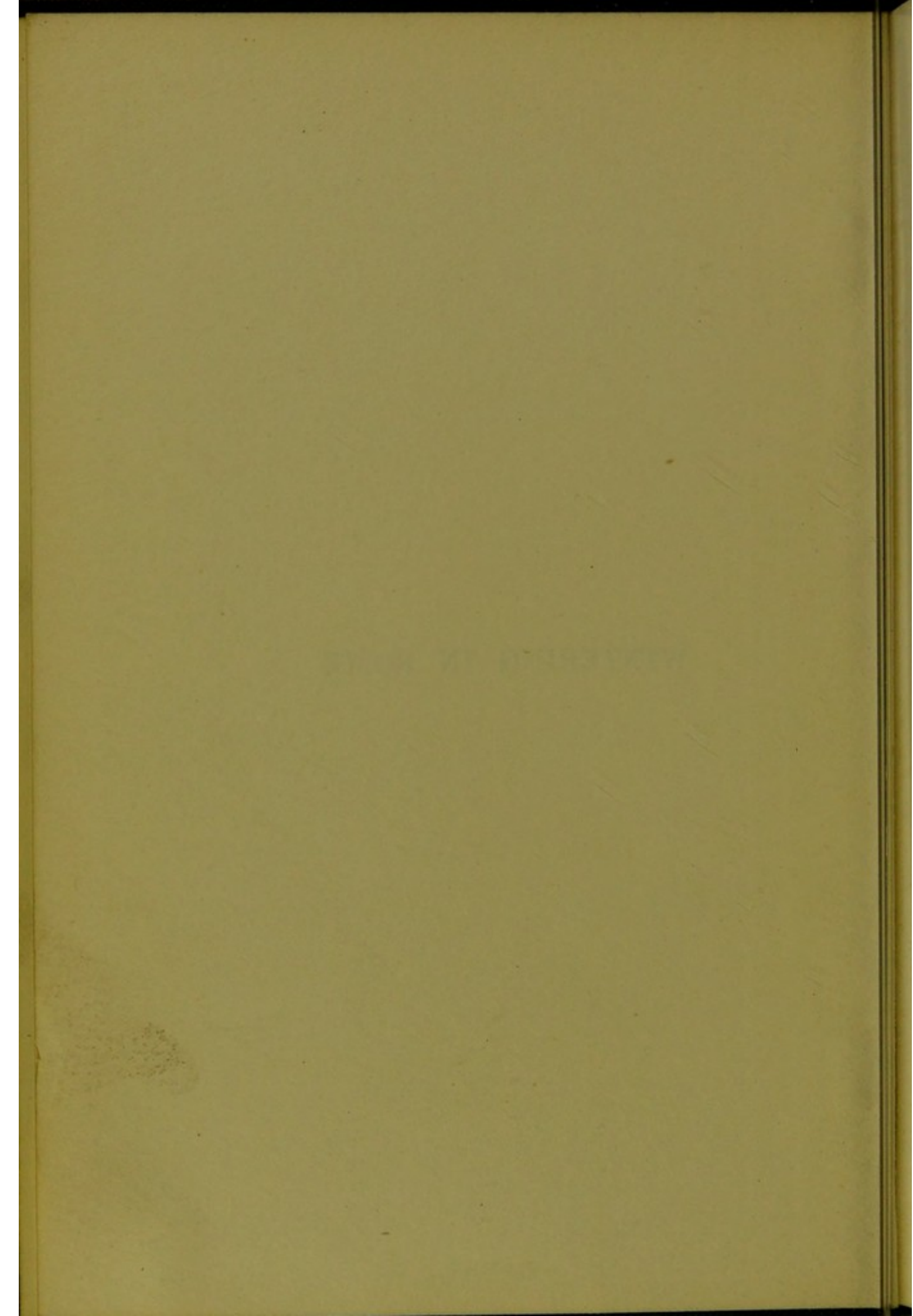
613.12 (4563)







WINTERING IN ROME







D. ANDERSON, PHOTOGRAPHER, ROME.
VIEW OF ST. PETER'S FROM THE VILLA DORIA.

WINTERING IN ROME

BY

A. G. WELSFORD, M.D., B.C. (CANTAB.)

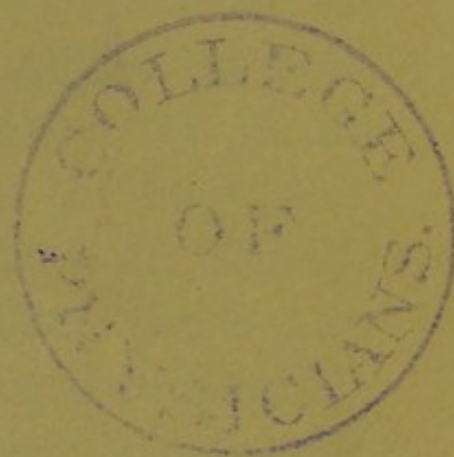
FELLOW OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND, DIPLOMA OF PUBLIC
HEALTH (CAMB.), B.A. (1ST CLASS NAT. SCIENCE TRIPOS)

WITH AN INTRODUCTION BY

G. SANDISON BROCK, M.D. (GOLD MEDAL), C.M. (EDIN.)

M.D. ROME, FELLOW OF THE ROYAL SOCIETY OF EDINBURGH, PHYSICIAN
TO THE BRITISH EMBASSY AT ROME

SECOND EDITION



London :

THE HEALTH RESORTS BUREAU

27 CHANCERY LANE, W.C.

1907

[All Rights Reserved]

| | |
|----------------------------------------|---------------|
| ROYAL COLLEGE OF PHYSICIANS LIBRARY | |
| CLASS | 613.12(456.3) |
| ACCN. | 25366 |
| SOURCE | |
| DATE | |

PREFACE.

THIS little book was published in Rome with the title of *Rome as a Winter Resort*, and in preparing the second edition the opportunity has been taken to revise and amplify the text. A concise presentment of facts has been my aim, and it is hoped that the short paragraphs into which the text has been broken up will be of assistance to the reader.

I desire to express my best thanks to Dr. G. Sandison Brock for his kindness in writing an introduction to this little book, and for the considerable help which he has given me in its compilation. We both hope that the book may be of service to our compatriots, both British and American, who purpose visiting the sunny land of Italy, and that it may succeed in destroying some of the myths about Rome which have been told to generations of visitors.

I desire to thank Professor R. Santoliquido and Dr. Pavone for their kindness in supplying me with some valuable statistics, and my thanks are due also to Mr. C. C. Morgan, British Consul

at Rome, who was good enough to read through this sketch, and who helped me in many ways.

I have not hesitated to write of the drawbacks of Rome as well as of its advantages as a winter resort, but I believe that the latter far outweigh the former, and if there are any who are still sceptical I would recommend to them that they should come to Rome and see for themselves.

A. G. WELSFORD.

35 PIAZZA DI SPAGNA,
ROME, *August*, 1907.

CONTENTS.

| | PAGE |
|------------------------------------|------|
| PREFACE | v |
| INTRODUCTION (DR. BROCK) | xi |

CHAPTER I.

| | |
|-------------------------------|---|
| THE CLIMATE OF ROME | 1 |
|-------------------------------|---|

CHAPTER II.

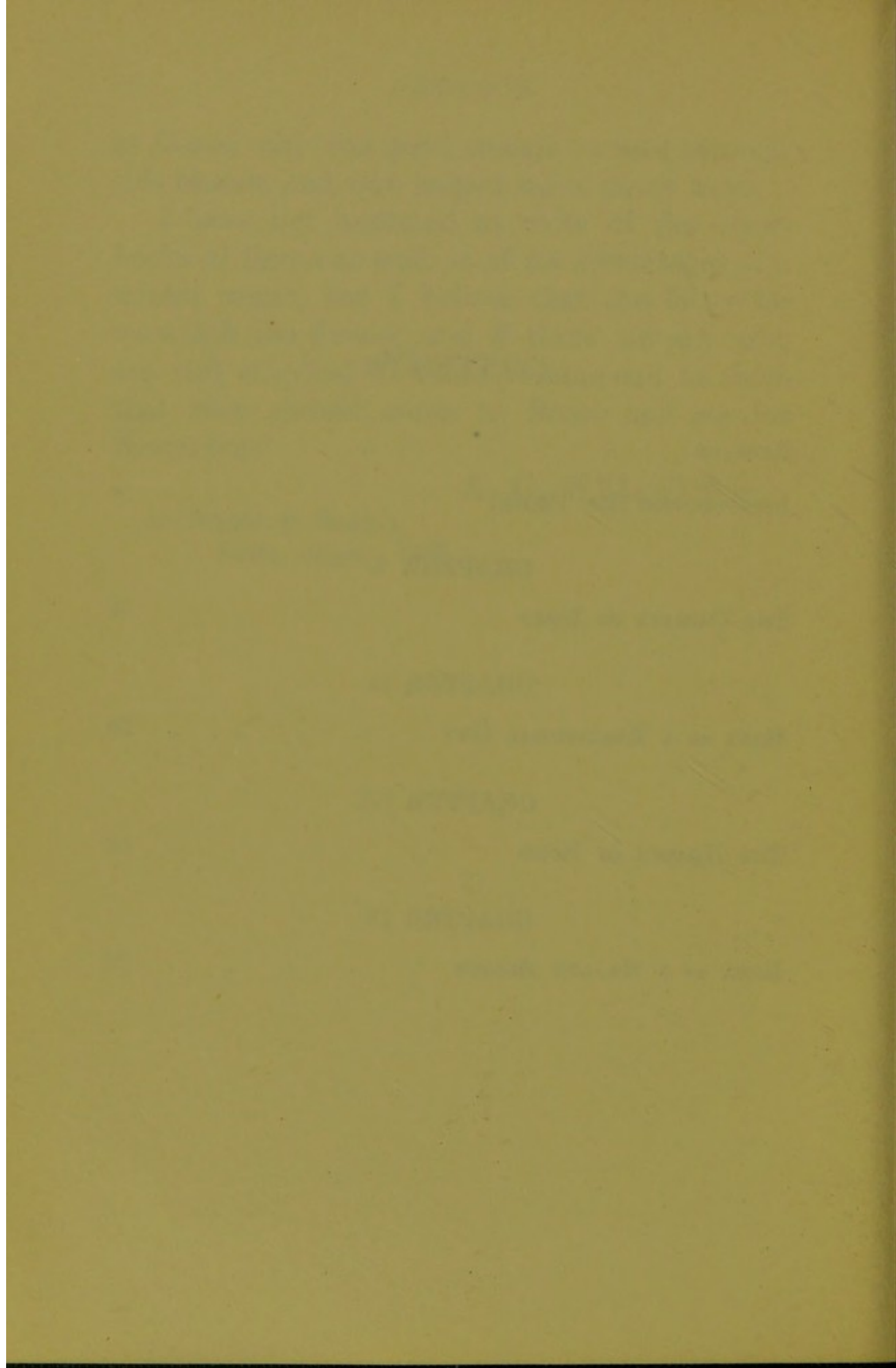
| | |
|--------------------------------------|----|
| ROME AS A RESIDENTIAL CITY | 29 |
|--------------------------------------|----|

CHAPTER III.

| | |
|------------------------------|----|
| THE HEALTH OF ROME | 60 |
|------------------------------|----|

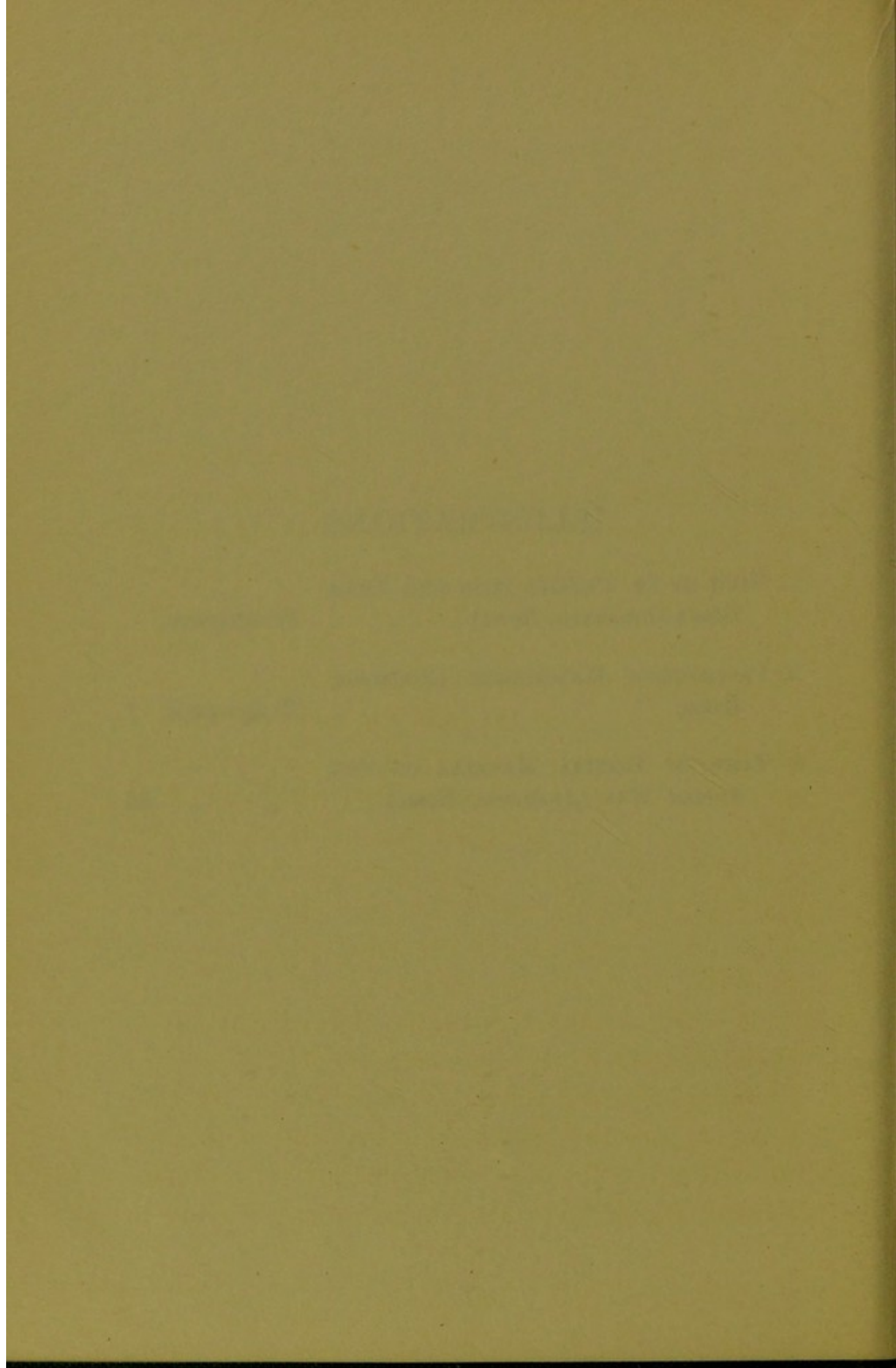
CHAPTER IV.

| | |
|-----------------------------------|----|
| ROME AS A HEALTH RESORT | 86 |
|-----------------------------------|----|



ILLUSTRATIONS.

1. VIEW OF ST. PETER'S FROM THE VILLA
DORIA (*Anderson, Rome*) *Frontispiece*
2. PASSEGGIATA MARGHERITA (*Anderson,*
Rome) *To face page 1*
3. TOMB OF CECILIA METELLA ON THE
APPIAN WAY (*Anderson, Rome*) *65*



INTRODUCTION.

To those of my countrymen or their Transatlantic cousins meditating a visit to the Eternal City—and who is there among them but one day hopes to wend his way thither?—I heartily commend the perusal of the following pages. In a concise but pleasantly readable form will here be found all the information required to give them a clear and accurate idea of the climatic and the sanitary conditions prevailing in Rome, of the social advantages, occupations, and amusements which it offers, and, if the quest of health be the object of the visitor, some useful indications as to the principal ailments in which its sunny Italian skies and favourable local conditions may be expected to prove beneficial.

It is indeed most desirable that an authoritative statement of the true facts regarding modern Rome from these points of view should be laid afresh before the Anglo-American public in such an accessible form as this small book affords. Hitherto such facts have been mostly buried in

a mass of ordinary guide-book information, or in works which from their size and high price have not been widely read, or which are now out of date and no longer give their readers a reliable picture of the present state of the city. So much has of late years been accomplished in Rome in the matter of hygiene, and such important changes in the health and comfort of its inhabitants and visitors have resulted therefrom, that a trustworthy account of this bettered condition of things cannot fail to be useful to, and welcomed by, the travelling public. Current ideas on the subject are too often derived from antiquated guide-books or popular novels, in which the same old story of the supposed unhealthiness of Rome is regularly repeated, with a complete disregard of all that has been done to remedy it. It is strange how constantly the fact is forgotten that the insanitary conditions undoubtedly prevailing in the past have long since given place to a state of things which warrants us in assigning to Rome one of the foremost places for salubrity amongst the capitals and other large cities of Europe.

The statistics adduced by Dr. Welsford will come as a surprise to those who still think of Rome as a hotbed of typhoid and malaria. Were it possible to estimate the incidence of the former disease amongst the Anglo-American colony only,

in the course of a winter, I am convinced that the number of cases would turn out to be remarkably small, and the death rate the merest fraction. As a matter of fact it is quite rare nowadays to encounter enteric fever among visitors at the hotels, and if travellers would avoid the eating of oysters and uncooked vegetables (in salads), which are notoriously liable to sewage contamination, it is probable that we should hardly ever meet with a case of this disease.

As for malaria, or so-called "Roman Fever," there is nothing now left of it to associate it with the city of Rome except the name. Even in the past I much doubt whether it was ever so prevalent as is commonly supposed. Before the parasitic cause of malaria was discovered, there was no certain means of distinguishing it from some other diseases which clinically it may closely resemble, and doubtless in those days many cases of what was really typhoid, or pneumonia, or other acute malady, were diagnosed, when not running a typical course, as malarial. But whatever "Roman Fever" may have been in former times, it may certainly at the present day be regarded as a *quantité négligeable* and little more than an interesting tradition. True, it is not uncommon for a patient suffering from some other and perhaps trifling ailment to

imagine that he is a victim of this much dreaded malady, and many more will be found who assert (with a certain pride) that they have had it while in Rome on some previous visit. However ill-founded such beliefs may be they readily gain acceptance, and passing from one person to another come eventually to be regarded as established facts. And so it happens that many otherwise well-informed people, and indeed not a few medical men in both England and America, still look upon "Roman Fever" as something to be greatly dreaded by the traveller, who, should he dare to visit Rome at all, must be prepared to fall its victim unless he adopt extraordinary precautions. To those of us who are acquainted with the actual facts nothing could seem more fantastic than such an idea, but traditions and superstitions of this kind die hard, and this particular one appears to be endowed with a veritably hydra-like vitality. Speaking of this question from my own personal experience of medical practice in Rome, an experience now extending over twelve years, during which time I have made careful search in the blood for the malarial parasite in all doubtful cases, I am still able to say that I have never yet encountered a single instance of the disease which was contracted in the city. And my experience in this respect is not singular, for all

the medical practitioners of Rome can bear similar testimony to the almost total immunity of the city from malarial fever.

Another unfortunate prejudice which still clings to Rome is a fear of the night air, in consequence of which visitors nearly all close the windows of their sleeping apartments at night even when their rooms, as is not uncommonly the case, are of very small dimensions. Considering what a deleterious effect such a custom might be expected to have on the general health of the individual in provoking headache and want of appetite and in rendering him susceptible to colds, sore-throats, etc., it is surprising that so little illness in Rome is attributable to this cause. Its evil influence is perhaps counteracted by the fresh air and sunshine which the inhabitants are privileged to enjoy in such abundance during the day. Whether it be actually injurious to health or no, this Roman custom is at any rate exceedingly disagreeable to most English and American visitors, who are used to the open window and greatly dislike the idea of having to sleep in rooms which are not thoroughly well ventilated. To such it may be a solace to be assured that in Rome the windows may be opened with as much safety as in London, and indeed with much more comfort and benefit than in the cold and foggy

atmosphere of the English metropolis. The windows of Roman houses are moreover furnished with outside shutters of the Venetian pattern by means of which the amount of light and air admitted may be regulated at will. If, indeed, the city were infested by mosquitos like so many other Italian towns, there might be some excuse for this exclusion of night air, as being the lesser of two evils, but Rome stands almost alone amongst the cities of Southern Europe in being practically free from this insect pest. A mosquito is in fact a rarity, and the use of mosquito curtains unknown within its walls. That this tends to the comfort of every visitor, and especially of the patient who suffers from insomnia, need only be mentioned to be realised. The desirability of Rome as a residence is undoubtedly much enhanced by this fortunate immunity.

In the natural desire to correct the misapprehensions and ill-informed statements current in regard to the climate and hygiene of Rome, we have no wish to rush to the opposite extreme and to picture our city as a place where visitors are proof against the ordinary ills of humanity, and where risks may be incurred with impunity which elsewhere would be attended with serious consequences to health. Dr. Welsford in his advocacy of Rome as a health resort has rightly

been careful to warn the too enthusiastic sight-seer of the danger of acting on such a rash presumption. Personally I have for this very reason been chary of recommending Rome as a winter residence for the very delicate and highly nervous, finding in practice that human nature is as a rule too weak to resist the temptations to exposure and over-exertion which the many fascinations of the Eternal City present. If such patients will only be careful not to "mistake sunshine for summer" but to wrap up well when the Tramontana (or north wind) is blowing; not to walk much during the Scirocco (or south-east wind); not to enter cold churches and galleries without putting on an extra wrap or an overcoat, and never to do so when over-heated; and generally to exercise an ordinary degree of prudence and patience in their sight-seeing, there is no reason why they should not benefit by the climate of Rome and at the same time enjoy the inestimable advantage of having at command its unrivalled wealth of archæological, artistic, and literary treasures.

Whilst Rome like every other locality has its own peculiar meteorological characteristics which the reader will here find set forth in the chapter on its climate, it is erroneous to suppose, as many people do, that the diseases met with in the city or the causes producing them have

anything special or peculiar in their nature. There is, in fact, no particular malady which prevails more in Rome than in other cities, much less one which is exclusively confined to it: neither do those diseases which occur originate differently nor tend to run a course in any way dissimilar to what they do elsewhere. Only in one respect can they be said to differ, namely, so far, that owing to the comparative mildness of the climate and the large amount of sunshine, certain of them are apt to be less severe and of shorter duration than is the rule in less favoured localities.

It must however be borne in mind in visiting Rome, or for that matter any part of Italy, during the colder months of the year, that one cannot with impunity disregard certain precautions rendered necessary by the marked difference between sun and shade temperatures which is common to the whole of Southern Europe. Of these precautions the selection of appropriate clothing is one which is not sufficiently attended to, and in regard to which the simplest and wisest rule is to provide oneself with the same warm garments for use in Rome as one would wear at home during the English or American winter. These are the more necessary inasmuch as in many of the hotels the rooms are heated with hot-water pipes to a degree which greatly

increases the contrast between indoor and outdoor temperatures and renders it unsafe to venture out of doors without adequate protection against the sudden change. Similarly the wary visitor, when driving in open carriages in cold weather, should put on a wrap or overcoat, and not be lured by the brilliant but deceptive sunshine into exposing himself without such protection to the risk of contracting a severe chill. Again, as already remarked, in entering churches and galleries a like precaution is advisable, for these places are often damp and chilly, and are a frequent source of colds and catarrhs to those who, particularly when overtired or over-heated, visit them without adopting such safeguards.

It will be noticed that in discussing the climate of Rome much stress is laid on the influence of the two prevailing winds, the Tramontana and the Scirocco. This influence is undoubtedly very great, not only as shown by their physical characters, but in the way they react upon the comfort and health of the inhabitants. A very short experience suffices to convince the visitor of the difference which they present to one another in the first respect, but their effects on health are not so obvious, and even old residents are by no means agreed as to which wind is the preferable one from this point of

view. The cause of this difference of opinion is not far to seek ; it is chiefly a question of individual peculiarity which can only be determined by personal experience. To most people in robust health the keen dry north wind with its accompaniment of brilliant cloudless sky is delightfully stimulating and bracing, whilst the southerly wind, moist and balmy, but usually bearing rain and cloud in its train, proves enervating and depressing. But there are not a few who find the Tramontana irritating and trying to the nerves, whereas the Scirocco gives the same persons a soothing sense of comfort and well-being.

As to the respective influences of these winds on the general health of the community my own impression is contrary to the popular opinion which condemns the Scirocco as unwholesome and deleterious. It may have been so under the less hygienic conditions which formerly existed in Rome, when its warmth and moisture may well have favoured the development of typhoid and gastro-intestinal affections, as well as of malaria, which disease is now known to be inoculated by the heat and moisture-loving anopheles, or spotted-winged mosquito. But under the present perfected sewerage system, and in the absence of those fever-carrying insects, the Scirocco has lost whatever power it

may once have possessed for evil, and, although it still retains its enervating character, exercises by virtue of its mildness a salutary effect, especially in the case of those who suffer from rheumatism, from catarrhal affections of the mucous membranes, or from nervous irritability. To such the advent of the Scirocco after a long spell of Tramontana is most welcome, often bringing great relief to their symptoms, and fully compensating them in this way for its objectionable features. The Tramontana, on the contrary, is to be regarded as a treacherous wind of which any one with the tendencies just mentioned must beware, especially when, as sometimes happens in the colder months, it sweeps down from the snow-covered Apennines and strikes the city with its cold breath rendered all the more unpleasant by contrast with the usual genial Roman breeze. Such outbreaks on the part of the Tramontana are popularly supposed to last three days, and fortunately this limit is not often exceeded. But at other times and much more frequently it blows so gently as to be almost imperceptible, and only the crispness of the air and the brilliancy of a cloudless sky tell us that it is "Tramontana weather". This, which is locally spoken of as "Roman weather," *par excellence*, may be said to be the rule during spring and autumn, and it is difficult

to imagine anything more delicious or more exhilarating.

However divided opinion may be regarding the qualities of the winds in Rome, no one questions the beneficent effects of the sunshine, a conviction of the hygienic powers of which is deeply rooted in the minds of all, and is well expressed in the oft-quoted Italian proverb, "*Dove entra il sole, non entra il medico*". The first thought of the visitor in choosing a room or flat should be to find a sunny one. Houses in Italian cities are nearly all ill supplied with fire-places, and excepting the hotels still fewer are furnished with "central heating"; but even when apartments can be artificially warmed it is always advisable to select those with sun. To procure the advantage of additional warmth and cheerfulness it is well worth while to pay the higher price always demanded for a "south room," but as this term is apt to be interpreted in too elastic a manner by a landlord, one ought to make sure that the windows really face somewhere between south-east and south-west, and that they are not shut out from a view of the sky by high buildings opposite.

It may seem superfluous to insist upon matters so simple and so well understood by every experienced sojourner in Italy as those I have mentioned, but it is remarkable how often the

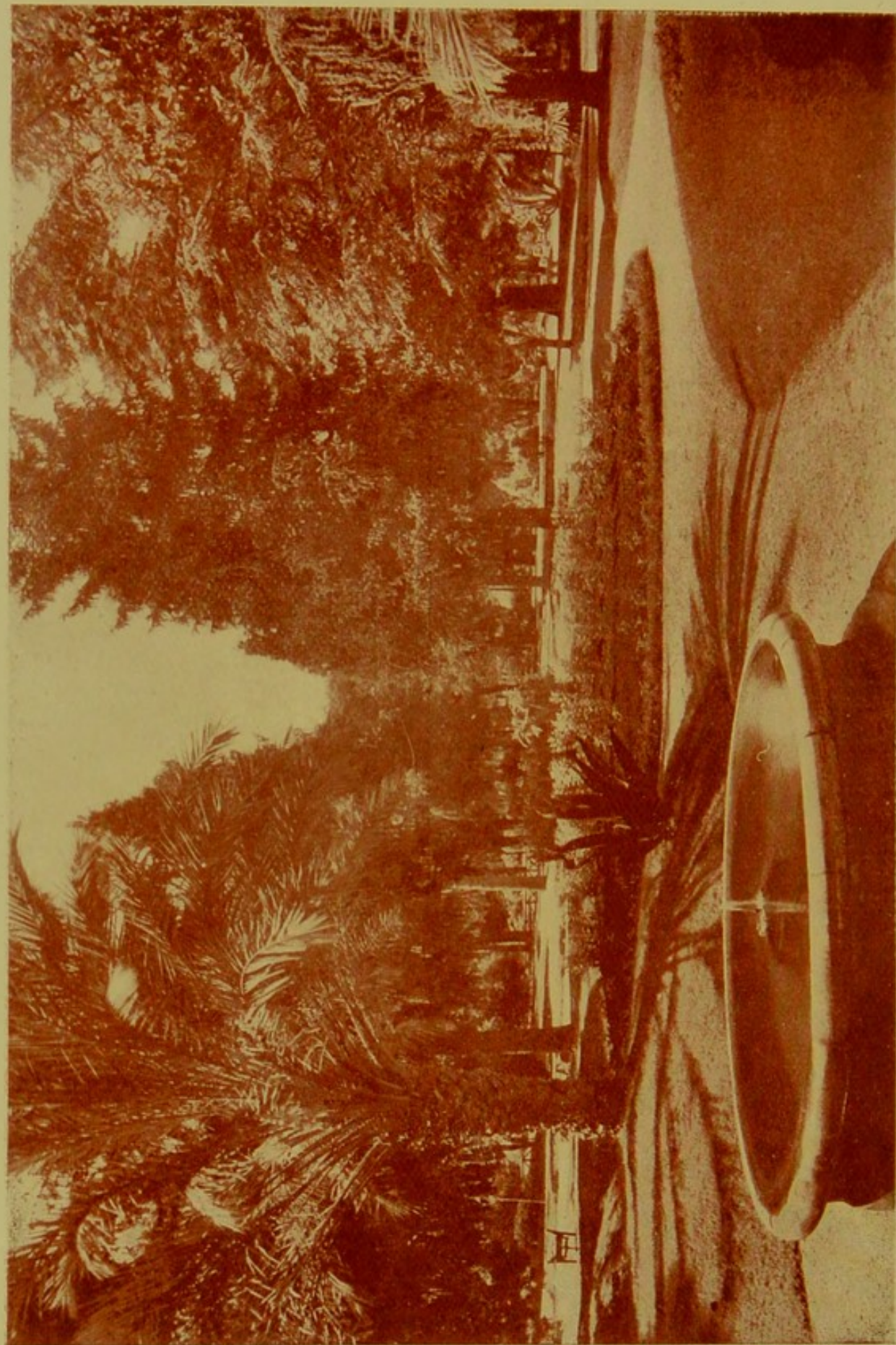
new-comer fails to realise their importance, and how constantly he disregards precautions which are essential to his comfort and welfare.

There are many other subjects on which as an old resident possessing some special experience I am tempted to touch, but the ground has been so well covered by Dr. Welsford in the chapters which follow that I need not further anticipate or amplify what he has to say. It only remains for me once more to recommend very warmly to the attention of the would-be visitor this up-to-date and reliable exposition of the numerous amenities of Rome, and to augur for it such a wide success as will help to dissipate once for all the prejudices and misapprehensions which still deter the traveller from a pilgrimage to the Eternal City.

G. S. BROCK.

6 CORSO D'ITALIA, ROME,
February, 1907.





D. ANDERSON, PHOTOGRAPHER, ROME.

PASSEGGIATA MARGHERITA.

CHAPTER I.

THE CLIMATE OF ROME.

THE Capital of United Italy, the city to which millions look as to the Mecca of their faith, has many and varied claims to be considered an ideal winter resort for those who seek in the South of Europe a refuge from the cold fogs of northern winters, and a valuable health resort for certain invalids.

It may be said of such a well-known city as Rome that about it everything that could be written has been written, but no work has lately been published on the hygienic advantages of Rome, and little notice has been taken of the recent improvements which have resulted in rendering Rome of to-day as healthy as any city in Europe. We propose in the following pages to demonstrate the effect which these improvements have had upon the general health of the inhabitants, and to correct certain hasty judgments and generalisations which are even in these days widely prevalent.

As one example we may take the condemnation of Rome as a health resort owing to the presence of malaria in the city. Even in recently published books, the superstition with regard to the existence of malaria, which is supposed to devastate the city, is perpetuated, and is fostered among the public by the reading of classic

novels written many years ago, when this disease did actually exist within the walls, and although it long ago disappeared from Rome the city is still often spoken of as if it could present few attractions for the invalid and the weak.

Whatever may have been the record of Rome in past times, in the present day it is one of the healthiest among the capitals of Europe. Although Rome cannot claim to be a suitable residence for all invalids—a claim that no health resort can justly make,—it will be found to be an ideal place for some, and can offer more attractions than most cities to those who desire to spend the winter months pleasantly and in comfort, secure of enjoying the sunshine which the cold skies of their native land cannot give them.

Whilst we are chiefly concerned with the climatic and hygienic conditions of Rome, we must also keep in mind the many other advantages which it possesses as a place of residence, and the unique attractions it offers to the thousands of visitors who annually repair to its shrines and admire the wonderful heritage which has come down to the city from the ages.

Many excellent books have been written in which the story of Rome and of its buildings is set forth, and intending visitors who wish to appreciate the wealth of artistic treasures accumulated in the city will find for their guidance no lack of books to choose from. Rome is not a city that can be exhausted in a week or a fortnight;—one of the interests which Rome possesses lies in the fact that the more its sights are visited, the more will be revealed to those who have eyes to see and minds to appreciate.

Artists deplore the many changes which have taken

place during the past thirty years, and the modernisation of many quarters of the city. It is undoubtedly true that these improvements have been attended with the sacrifice of much that was beautiful, and that many mistakes were made during the building mania of the eighties, which ended so disastrously for most of those concerned. But Rome, when she became the capital of United Italy, could not remain undeveloped ; a transformation was inevitable as her population increased very rapidly, and houses had to be built for the accommodation of the new-comers ; and during the few years when the building craze was at its height much ruthless destruction of ancient and interesting buildings took place, and some remarkably ugly and badly built houses were erected upon many once beautiful spots.

Considering the peculiar position of the Italian people, awaking suddenly to a realisation of national life, and looking forward to a future in marked contrast to the dark past from which they had emerged, a past filled with war and bloodshed, it was natural that the reverence for the monuments of antiquity, linked in their minds with that past, should not be so deep as it is in us and in the Roman people of the present day. The result of the sudden outburst of the Romans into modernity was an unnecessary sacrifice of much that was beautiful and of much that was interesting in their city.

During this period of change great harm was done to many districts of Rome, whose ugly modern dwellings contrast unfavourably with the beautiful gardens upon which they were built, but the greater part of old Rome remains, and the Roman authorities of the present day are not likely to repeat the mistakes of their predecessors. Care is now taken to keep intact the heritage of

the city, and during the past ten years many genuine improvements have been effected, and the city has been made more beautiful and more habitable by the widening of the streets and the creation of open spaces.

In criticising the work of modernisation we must keep in mind the needs of a city, and it must not be forgotten that whilst old Rome was undoubtedly more admirable from an artistic standpoint than modern Rome, it was at the same time more unhealthy and uncomfortable, and that most of the improvements which have been adversely criticised by artists have been welcomed by those who have to spend their lives in the city. The Tiber was more picturesque when its banks were covered with old houses crowding irregularly to the water's edge, than it is now when it flows between stone embankments of mathematical precision, but these old picturesque houses were hotbeds of disease, and the periodical inundations of the lower parts of the city which the embankments prevent, were the cause of intense suffering and loss to the inhabitants, so that whatever was sacrificed from an artist's standpoint has been more than counterbalanced by the improvement in the health and comfort of the inhabitants.

Probably Rome was never more beautiful than as a dead city during the middle ages, when the city was full of deserted and awe-inspiring ruins, and still retained much of its ancient glory, but no one can seriously contend that modern Rome is not an improvement upon the Rome of those days.

The history of Rome has been one of change. During the 2,500 years of its existence the city has undergone many vicissitudes, and has repeatedly built itself up on its ancient ruins;—there is not a square foot of its soil

which does not bear eloquent testimony to the glories of its past.

Changes and alterations must take place, and in spite of the transformation which it is undergoing Rome will always remain the most interesting and picturesque of the capitals of Europe, and the opening up of its resources will render available to visitors a wealth of treasures that no other city can boast of possessing.

GEOGRAPHY.

The river Tiber intersects from north to south the city of Rome which lies mainly upon its left bank. The city contains a population of nearly half a million, which has been doubled since thirty years ago Rome became the capital of United Italy, and the buildings cover not only four of the far-famed Seven Hills and their intervening valleys but extend over three others. On the left bank the city is surrounded by a wall, about ten miles in length, which is pierced by fourteen gates. This wall was begun by the Emperor Aurelian and dates principally from 271 to 276 A.D. Although the northern part of the city is thickly populated, vineyards and gardens still exist within the walls on the Palatine, Cœlian and Aventine hills which retain their old charm and beauty. The city is situated in lat. $41^{\circ} 53' 54''$ N. and long. $12^{\circ} 27' 12''$ E. of Greenwich, in the middle of an extensive undulating plain, of alluvial and marine origin, whose surface is broken by isolated hills, extending from Lake Linaro on the north to Monte Circeo on the south for a distance of eighty-five miles, in breadth averaging twenty-five miles and occupying the space between the Apennines and the sea. The true Campagna, or Agro Romano, extends from Monte Cimino on the

north to the Alban Mountains and was once highly cultivated, with numerous and prosperous towns, but is now a dreary malaria-ridden district inhabited by a scanty population living in a few scattered villages. Although the scourge has been mitigated in recent years by the measures which have been adopted for the protection of the inhabitants, it is sufficiently serious in parts to hinder the cultivation of the ground, but it is not the only cause of the Campagna remaining an uncultivated waste around a prosperous city.

The average height of the city above sea level is 107 feet, but there is a considerable difference between the high and the low districts. The summit of the Janiculum is 268·7 feet above sea level, while the river banks are only 54 feet. The well-known Piazza di Spagna, which has been for years the centre of the visitors' quarter, is 69 feet above sea level, and above it rises the Pincian Hill to a height of 165 feet, affording shelter from the cold north-east winds to the houses built in its lee.

The geographical situation of Rome affects its climate. The proximity of the city to the sea, which is some fourteen miles distant, gives to the climate a marine character, and protection from the winds is yielded by the mountains, which are at such a distance that, while the force of the winds is broken, the city is not sheltered enough to make its air relaxing. The Campagna, deserted and abandoned, desolate in its sadness, surrounds the city for miles, permitting the sea breezes to reach it pure and uncontaminated by the deleterious products of man's activity. The nature of the site upon which Rome is built affords a choice of sheltered and open positions, and its climate, possessing both inland and

marine characters, is well adapted for the restoration of the physical forces of those weakened by illness, and for the maintenance of a healthy and vigorous population.

GEOLOGY.*

Rome lies in the middle of a volcanic region, whose fires have only in comparatively recent times become extinct. During the Tertiary period the whole of the Campagna was covered by the sea and formed a bay with several islands. Many active submarine volcanoes existed, and when in course of time the land rose above sea level, the lava and ashes poured out from the craters, spread over the new land and helped to raise it still higher above the sea. Dense torrential rains wore down its surface and the débris was spread widely as alluvium. The torrents thus formed joined into two principal streams which are known to-day as the Tiber and the Anio. These rivers once extended over the whole of their wide basins, but as the beds of the rivers became hollowed out, the waters retired from the outlying parts, leaving alluvial deposits behind them.

In the Roman Campagna are found marine stratified rock of Pleiocene origin, mostly marls and sands, and volcanic matter of varied nature together with alluvium, disposed in an irregular and complicated manner.

Contraction of the terrestrial crust produced numerous elevations, which formed the primordial hills of the Campagna. Some have remained uncovered and consist of variously laid stratifications of gravel, sand and Pleiocene clays, but in most the Tertiary soil has been

* An interesting account of the geology of the region and of the old drainage works is to be found in Professor Tommasi-Crudeli's book, *Il Clima di Roma*.

overlaid, entirely or in part, by matter erupted from the volcanoes whose extinct craters are to this day recognisable. In Rome the Janiculum and the Vatican are uncovered hills, but the famous Seven Hills as well as the Pincian are overlaid with volcanic matter.

During the Quaternary period the Tiber excavated its bed, and the mass of gravel and sand which came from the Apennines and was carried down by the river became heaped up in places into hills. The activity of the volcanoes of the district has ceased within historical times, and this occurred in the more northern centre of activity earlier than in the more recent and southerly. From the traditions which have come down to us, it would appear that the occasion of the founding of Rome was some volcanic activity in the Alban Mountains, which drove the inhabitants of the district to seek a new abode. Many of the lakes of the Campagna are old craters, and all the evidence of activity that exists in the present day consists in exhalations of carbonic or sulphurous acid and the presence of mineral springs. The tufa, which is a characteristic product of the Roman soil, was formerly supposed to arise from the action of sea water on volcanic matter, but this theory has been abandoned; it is still believed, however, that some of the tufas may have arisen from the action of the subsoil water upon pozzolana.

In the Roman hills, the subsoil of which is composed of pumice stone, of sand, of pebble or of lava, the rain water, after passing through the superficial strata, is absorbed by the pumice or percolates through the numerous vertical fissures in the lava. Such hills, however, are the exception on the Agro Romano, where the strata lying immediately below the surface are in

general impermeable, and everywhere over the Campagna the subsoil water is abundant, constituting vast reservoirs from which Rome draws its abundant and unequalled supply. In ancient times the Campagna was extensively drained, so that the ground water flowed away into its natural channels without hindrance, and was not allowed to lie upon the surface to form marshes, as it does now in many places. Remains of these drains have been brought to light in all parts of the Campagna, but in the general ruin which followed the fall of the Roman Empire they were blocked and the land in many parts became waterlogged.

Owing to its geological formation Rome is fairly dry and well drained, and the summits and sides of its hills afford excellent building sites. Only the parts of the city adjacent to the river are in any degree damp, and even these districts are now much drier in consequence of the embankment of the Tiber. Rome has been repeatedly built upon the ruins of her older buildings; the subsoil has been broken up by foundations and permeated by drains and pipes to such a degree that the whole area has been rendered dry by the subsoil water finding a ready outflow.

Some districts, which were damp when they were covered with vineyards and gardens, are now built over and are among the healthiest and best quarters of the city.

TEMPERATURE.

The temperature is always worthy of careful study, as it is one of the most important factors which regulate the climate of a locality. The mean annual temperature of Rome, derived from observations extending over the

last forty years, is found to be 59.5° F., very nearly the same as the mean annual temperature of Nice (60.3°) and only one degree below that of Naples. The mean annual temperature of Florence is 57.7° F. and that of Venice 56.3° F.

The mean annual temperature of Rome varies only from 57.9° F. to 60.6° F.

During the decennium 1866 to 1875 the average was 59.4

| | | | | |
|------|--------------|---|---|--------|
| from | 1876 to 1885 | „ | „ | 59.7 |
| from | 1886 to 1895 | „ | „ | 59.5 |
| from | 1896 to 1905 | „ | „ | 59.6 |

The temperature of Rome is intermediate between that of southern cities, such as Naples and Palermo, which enjoy a climate resembling that of North Africa, and that of cities like Milan, Venice and Florence, of which the climate is transalpine.

Mean seasonal temperatures :—

| | WINTER. | SUMMER. |
|--------------------|---------|---------|
| Rome | 45.5 | 74.4 |
| Naples | 48.2 | 73.7 |
| Florence | 42.2 | 73.7 |
| Venice | 38.8 | 73.5 |
| Milan | 36.1 | 73.5 |

The mean winter temperature of Rome is a little lower than that of Nice (48° F.) and is higher than that of Florence and the other northern Italian towns. The temperature may fall a little below freezing point for a few nights during the winter, but as a rule not more than five or six degrees of frost are registered. The lowest temperature recorded in Rome of recent years occurred in 1880, when the thermometer fell one night to 22.2° F.

In Florence in 1871 the temperature fell to 13.2° F.,

and much lower temperatures have been registered there than in Rome. Classical writers tell of severe winters in Rome, when ice was seen on the Tiber, and many animals and men perished of cold, but such an event has not occurred in recent times. The cold is dry, bracing and invigorating, and is in marked contrast to the damp cold of the English climate.

During the autumn the average temperature is 61.7° F., which is higher than the average for the spring, namely 57.2° F.

The Roman climate during both these seasons is usually very pleasant, and the spring weather lasts well on into May. After the middle of June Rome begins to be too warm to be pleasant, but in the summer the heat, though often very trying, is tempered by a cool breeze which blows every afternoon from the sea.

The following table gives the average temperatures for the different months in Fahrenheit degrees:—

| | | | |
|----------|------|-----------|------|
| January | 45.6 | July | 76.2 |
| February | 46.9 | August | 75.3 |
| March | 50.5 | September | 69.2 |
| April | 57.0 | October | 62.4 |
| May | 62.4 | November | 53.4 |
| June | 71.6 | December | 47.4 |

From this table it will be seen that January is the coldest and July and August the hottest months of the year.

The daily variations of temperature are important, because visitors who do not make due allowance for them often suffer from colds. Generally the mornings are fresher and cooler than the evenings, and the temperature at midday varies little from that at 3 P.M.

The difference between the maximum and minimum temperatures during the day is sometimes considerable,

and may amount to over eighteen degrees. During the winter months it is pleasantly warm in the middle of the day when the sun is shining brightly, but in the early morning and late afternoon the temperature often falls considerably, and it may become quite cold.

Although the temperature as measured by the thermometer is never very low in Rome, visitors often complain of the cold, and for this there are several reasons. During the six weeks or two months of winter weather it is often distinctly cold in Rome, and there is a marked difference between the sun and the shade temperatures. The streets of Rome in the older quarters are in general narrow, and are flanked by high houses receiving in consequence very little sunshine, so that the air becomes chilly. Another reason for the chilliness of which visitors complain is the insufficient warming of the apartments. The floors are all of cement or similar material and are often covered with thin carpets, and the rooms are warmed either by stoves or open fireplaces in which wood is burned, and unless the apartment has a south aspect it becomes very cold. Those who live in apartments with a north aspect, on which the sun does not shine, are liable to become thoroughly chilled indoors, and feel the cold very much. This may not be of great consequence to those who are robust, but in the case of invalids and elderly persons attention must be paid to the aspect of the apartment, and one with a northerly aspect should not be chosen. The variations of temperature are often sudden and marked during the winter and early spring months, and care should be taken to wear sufficiently warm clothing, while the under-garments should be made of woollen

material. Generally quite as warm clothing will be required during the winter in Rome as in England, but of course for a much shorter time. The apartments should be adequately heated, but when the aspect is towards the south or west, and there is nothing to obstruct the free entrance of the sun's rays, a fire is not often required. The Romans themselves are not given to heating their apartments, and believe that the English practice of heating the living rooms is injurious to health. Instead of putting on their warmest clothes out of doors, they often don their extra wraps when they enter the house, and sit in rooms with a cold and sunless aspect without any artificial heating, other than perhaps a small charcoal brazier. Probably the maintenance of a high temperature indoors by means of hot-water pipes or steam heating, which has come into vogue of late years in the hotels, is injurious;—certainly the temperature maintained in many of the hotels is much too high, but this is no argument against a rational warming of the living rooms, and whatever the Romans may say the practice of warming the rooms is not only conducive to health but is much more pleasant than the chilly Italian custom.

One important precaution which visitors should adopt is the wearing of warm footgear. The cement floors are cold, unless they are covered with thick carpets or wood flooring. Warmly lined house shoes should be used during the winter months, with fairly thick soles, and for outdoor wear the English plan of inserting indiarubber between the two leather soles of the boot, on some such principle as that adopted in the article sold in London as "Scafe's Patent," may be recommended. The rubber soles protect the feet from

the cold of the cement floors and when there is much walking to be done are restful.

The cold weather lasts for only a few weeks in Rome, and notwithstanding the occasional sudden changes, when proper clothing is worn and when care is taken to ensure the adequate warming of the living rooms even delicate persons have no reason to dread the winter, for the cold is often fresh and invigorating and accompanied by bright sunshine.

Many of the hotels in Rome have adopted steam heating, and delicate persons who require a uniform temperature to be maintained indoors should live in hotels rather than in apartments, but in the case of the latter if the aspect is southerly and the sun shines on the apartment for some hours during each day, a pleasant uniform temperature can be maintained without difficulty.

RELATIVE HUMIDITY.

The air of Rome, by reason of its high temperature, retains a large amount of water in the form of vapour, and its precipitation as mist or fog is slight, and much less abundant than in cold countries. The presence of this water vapour in the air limits radiation and makes the temperature more equable. The absolute humidity during the winter months averages 5·8 mm., and during the summer 12·4, with a total annual mean of 9·1 mm.

The relative humidity is low, the annual mean being 63.

The maximum occurs in November, December and January, and the minimum in July and August.

The official figures for the winter and summer are 70 and 54 respectively.

The following table affords a comparison with other Italian cities :—

Relative humidity :—

| | WINTER. | SUMMER. | MEAN ANNUAL. |
|----------------|---------|---------|--------------|
| Rome | 70 | 54 | 63 |
| Florence . . . | 73 | 53 | 64 |
| Naples | 71 | 64 | 68 |
| Venice | 80 | 68 | 75 |
| Palermo . . . | 74 | 64 | 69 |

The relative humidity varies during the day, being raised in the morning and evening, especially at sunset when the temperature suddenly falls.

BAROMETRIC PRESSURE.

The variations in barometric pressure are not very marked during the different seasons of the year. The following are the mean heights for the different seasons reduced to 0° C. and mean sea level :—

| | | | |
|--------|--------|--------|--------|
| Winter | 764·46 | Summer | 763·26 |
| Spring | 762·06 | Autumn | 763·66 |

The average for the year is 763·36.

The differences which occur during the day are insignificant.

During a long series of observations extending over many years, the highest recorded pressure amounted to 782 and the lowest to 736 mm.

THE RAINFALL.

Rome has her share of rain and cloudy days, but it is anything but a rainy city, and in fact has one of the lowest rainfalls in Italy.

The following are the official averages of the rainfall in inches registered during a period of twenty years :—

| | AVERAGE ANNUAL RAIN- FALL (20 YEARS). | AVERAGE WINTER RAINFALL. | AVERAGE SUMMER RAINFALL. |
|----------|------------------------------------------|-----------------------------|-----------------------------|
| Rome | 34.9 | 9.8 | 3.0 |
| Turin | 34 | 5.0 | 9.79 |
| Milan | 40.9 | 7.83 | 9.8 |
| Genoa | 51 | 13.4 | 6.7 |
| Florence | 33.4 | 8.18 | 5.7 |
| Naples | 33.3 | 11.0 | 2.3 |
| Palermo | 28.5 | 11.5 | 1.1 |

In other records the annual rainfall is given as 31.2 inches, divided into the following seasonal averages:—

| | | | |
|--------|-----|--------|------|
| Winter | 8.1 | Summer | 3.4 |
| Spring | 7.4 | Autumn | 12.3 |

The greatest rainfall takes place as a rule in October, at the end of the summer, but these autumn rains may fall early or late. July is the driest month.

Days of continuous rain are rare in Rome; the rain usually comes down in drenching showers, and during the intervals visitors are able to get about without discomfort or inconvenience, and it is not often accompanied by cold.

According to Hann's *Lehrbuch der Meteorologie* (1906), the rainfall is distributed as follows:—

| | | | | | | | | |
|-------|------|-------|------|-------|------|------|------|-----------|
| Jan. | 2.88 | April | 2.32 | July | 0.64 | Oct. | 4.10 | Annual |
| Feb. | 2.32 | May | 2.16 | Aug. | 1.10 | Nov. | 4.45 | Rainfall, |
| March | 2.48 | June | 1.50 | Sept. | 2.71 | Dec. | 3.26 | 29.92 |

The north wind or Tramontana usually brings cold dry weather with bright sunny skies, whilst the rain is associated with the south winds. The peculiarly damp cold weather of England is rarely experienced in Rome, and although the annual average of rainy days is over one hundred, during those rainy days there are many breaks of sunshine and bright skies.

The ground dries up very quickly, and there is little

mud, as most of the Roman streets are paved with stone.

The following table gives an approximate enumeration of rainy and fine days, according to seasons:—

| | CLEAR SUNNY DAYS. | RAINY DAYS. | CLOUDY DAYS. |
|--------|-------------------|-------------|--------------|
| Winter | 36 | 27 | 27 |
| Spring | 34 | 32 | 26 |
| Summer | 51 | 29 | 12 |
| Autumn | 34 | 34 | 23 |

Very little advantage is to be gained by comparing the rainfall of different cities according to the number of rainy days which have occurred during any given year, since different observers have different ideas as to what constitutes a rainy or a cloudy day.

Rome is a sunny city; and during the winter enjoys as much sunshine as any city on the Riviera. The clear bright skies and stimulating atmosphere are very conducive to health, and during the winter, when the temperature in the shade is low, the sun often has great power.

Visitors should always remember the marked difference which exists between the sun and shade temperatures. Chills may easily be caught by walking in the sun and passing into a cold shade when the body is overheated.

The Italians do not walk in the sun if they can avoid it, and in this respect visitors should follow their example, as the sun is sometimes very powerful, and the sudden transition to cold is often dangerous. However, a little discretion with regard to this point will preserve the visitor from harm. On cold winter days the presence of the sun is very welcome and can be enjoyed without fear of evil consequences.

It is in the springtime, when the sun is waxing hot and the shade temperatures are still low, that the greatest care must be taken, for pneumonia is a disease not unknown in Rome.

On entering churches and galleries, even in the warm weather, care should be taken to protect the body from chill by donning a wrap of some kind, for the interiors are often very cold.

Less snow falls in Rome than in any other Italian city of the same or of a higher latitude. During many years there is no fall of snow at all, and even during severe winters the total fall rarely exceeds four inches. A little ice occasionally may be seen in the fountains in the early morning.

Thunderstorms sometimes visit the city, and are most frequent at the end of summer. The annual average of such storms is twenty, and they are seldom violent.

PREVAILING WINDS.

Among the most important factors of a climate are the force and direction of the prevailing winds, and the amount of shelter afforded by the neighbouring mountains or hills.

Pliny has left a description of the weather which prevailed in his day, and his account applies fairly well to the meteorological conditions of the present day.

Pliny describes the west winds, the Zephyrs, which commence to blow in the spring and mitigate the cold of the winter, and the Subsolanus or east wind, which begins to blow in May, and is followed by the Austral or south wind. In the time of greatest heat during the

summer the Corus or north-west wind predominates, and during the winter the north-east wind.

Pliny also studied the temperature and the degree of humidity of these winds. The coldest winds are the strong north and north-west winds. In summer they clear the sky of clouds, but in the winter they may condense the aqueous vapour of the atmosphere, bringing rain and snow. The wet winds are the Austral or African, *i.e.*, the south and south-west; the driest are the Corus and the Volturno, *i.e.*, the north-west and south-east.

The wind of the dog-days is the south, whilst the south-east and west winds are generally temperate. The healthiest wind is the north-north-east.

One obvious discrepancy will be noticed in Pliny's account. The south-east wind which comes from the Mediterranean and is called the Scirocco is not as Pliny asserts a dry wind, but is decidedly rainy. The Scirocco is oppressive and is considered unhealthy, but is not so in reality. Although people often complain that they feel limp and exhausted after a long spell of the Scirocco, they do not fall ill. The Tramontana, which is bracing and cold, causes far more illness than the Scirocco. Fortunately for Rome this wind has not the same force and character as in more northerly regions. By the time it reaches Rome from the Alps, it has become a dry, stimulating and purifying wind, having parted on its way with most of its moisture, and generally brings clear skies and bracing weather. To a certain extent Rome is sheltered by mountains to the north and north-east, which greatly modify the force of this wind.

The south wind, often called the Scirocco, comes

from the hot wastes of Africa across the Mediterranean, and reaches the city laden with moisture. It is a warm and enervating wind generally accompanied by rain, and after blowing for some days has a very relaxing influence.

It is much disliked by the Romans, who consider that Scirocco weather is unhealthy, but as we have already pointed out this is not the case.

During the winter months the south winds and the Tramontana contend for mastery, and the warmth of the first mitigates the cold of the second. The Roman climate owes its mildness to the south winds, as it owes its bracing qualities to the Tramontana.

These are the two principal winds, and the intermediate winds combine their qualities in varying degree.

During the summer in the afternoon a cool sea breeze springs up which mitigates the heat and makes the evenings fairly cool; still the city during the summer months is too warm to be enjoyable, and all who are able to do so go to the country or to the seaside to escape the heat.

The advent of the Tramontana is welcomed, as it is brisk and bright, and soon clears away the effects of the Scirocco.

MONTHLY RECORD OF PREVAILING WINDS IN 1905.

| | | | |
|-------|-------------------|-------|-----------------|
| Jan. | N.N.E. and N.N.W. | July | N.N.E. and S.W. |
| Feb. | N.N.E. and S.W. | Aug. | S.W. and W. |
| March | S. and N.N.E. | Sept. | W. and S.W. |
| April | S.W. and N.E. | Oct. | N.W. and S. |
| May | S.W. | Nov. | S.W. and N.E. |
| June | S.W. and W. | Dec. | N.N.E. |

The prevailing winds are the following in order of frequency :—

1. The north wind (Boreas or Tramontana) prevails during the winter and autumn. It occasionally blows with some force, but is usually a light breeze. It brings bright sunny weather and is cold and bracing, but when it follows a continued rainless south wind it may bring rain. This wet north wind never lasts for more than a day or two.

2. The south wind (Austral) is mild and soft. It causes a fall of the barometer and usually brings rain. It is the predominating wind of spring.

3. The west (Ponente) prevails in the summer months and comes with delightful freshness from the sea. It is usually a dry wind, although sometimes rainy weather accompanies it, and when this happens a warm south wind is sure to have prevailed before it. The south-west wind (Libeccio) in summer is a wet wind.

4. The east wind (Levante) generally brings change of weather.

5. The south-east wind (Scirocco) is an infrequent wind. It is hot, oppressive and wet, and when it blows strongly sometimes brings to the city sand from the African deserts.

The term Scirocco is often applied to any wind between south-east and south-west.

Rome is not a windy city. The average velocity of the wind during the year is only five miles per hour, which is described in the Beaufort scale of wind force as light air, and the maximum is rarely over forty miles.

The stronger winds generally blow during the summer months.

Very strong winds are not common in Rome. The Tramontana may blow strongly and coldly at times, but

not often for more than two or three days. As a rule the Tramontana brings delightful weather. Some of the Scirocco winds may be blustering and unpleasant, but really windy days are few in number. In this respect Rome offers a marked contrast to the Riviera, where the winds are frequently very trying.

If we add to the average low velocity of the wind the comparative absence of dust due to the nature of the Roman roads, we have in Rome two conditions very favourable to invalids and to the general well-being of the inhabitants.

TABLE OF PREVAILING WINDS, WITH THEIR RELATIVE FREQUENCY IN A THOUSAND TIMES (YOUNG).

| | N. or Tramontana. | N.E. Greco. | E. Levante. | S.E. Scirocco. | S. Mezzogiorno. | S.W. Libeccio. | W. Ponente. | N.W. Maestro. |
|------------|----------------------|-------------|-------------|----------------|-----------------|----------------|-------------|---------------|
| Winter | 564 | 45 | 68 | 27 | 188 | 31 | 63 | 14 |
| Spring | 291 | 22 | 44 | 19 | 303 | 90 | 206 | 25 |
| Summer | 239 | 19 | 20 | 7 | 245 | 151 | 291 | 28 |
| Autumn | 388 | 32 | 68 | 23 | 249 | 72 | 143 | 25 |
| Whole Year | 370 | 30 | 50 | 19 | 246 | 86 | 176 | 23 |

The air of Rome is singularly pure. Isolated as Rome is in a sparsely inhabited district, with no factory chimneys to foul the air, the domestic consumption of fuel being small and limited to charcoal and wood, the air is not laden with those products of combustion and respiration which in most cities deleteriously affect invalids. The proximity of Rome to the sea gives the

city an air which is pleasantly charged with moisture and ozone, and owing to its purity and richness in ozone is well suited to those suffering from bronchial affections.

The winds which blow through the city do not raise clouds of dust, but are strong enough to ventilate the streets and houses, and the inhabitants of the city enjoy an air which is singularly fresh and aseptic.

The purity of the atmosphere is shown by the length of time in which ordinary wearing apparel remains clean.

THE ROMAN CLIMATE.

From the description of the Roman climate it may be inferred that it compares favourably with that of other health resorts, and has several advantages which are peculiarly its own. But the general impression about Rome does not appear to accord with the facts. For this there are many reasons. Apart from the fact that this bad impression is often given to intending visitors by interested detractors, in former days Rome was neither well drained nor well administered, and the death rate was high, so that, in spite of its climate, it could not be considered a healthy city. The proximity of malarial localities helped to give Rome a bad name at a time when it was believed that the malarial poison could be carried by the wind, and a special form of fever, called Roman fever, was supposed to attack unwary visitors who came to visit its numerous sights. To this day the superstition survives that the Roman diseases have some quality not possessed by diseases in other localities, and that the old Roman fever must in some way or other complicate all other fevers.

The days of bad sanitation and bad administration are past, for, although the Roman municipal authorities are not perfect, an efficient control is maintained over the city, and the management of its affairs improves year by year. Whatever may have been the artistic loss from the recent improvements, the gain in health to the community has been very great, and at the present time Rome compares favourably from a hygienic standpoint with other cities, not even excepting those of England. The myth of Roman fever will gradually become forgotten when the fact is generally appreciated that there is no malaria in the city, and that it cannot be conveyed by the wind, since it is entirely a disease of mosquitos, which are not transported to any great distance by wind.

But although Rome is salubrious, the reputation which it gained in the days of its evil doing still clings to the city, and has affected its position as a health resort. Although the absence of malaria may be admitted, there remains an undercurrent of prejudice against Rome as an unhealthy city. This opinion is not confined to the uninstructed traveller, but similar statements are frequently made by members of the medical profession, who have not realised the great changes which have taken place during the past ten or twenty years. When we come to consider the physical well-being of the Roman population, we shall see that these statements are not in accordance with facts, for a healthy population cannot exist in an unhealthy city, and the people are on the whole remarkably healthy. This may be especially seen in the poorer classes, who, though living in very unhygienic surroundings, enjoy a comparative immunity from sickness, which can only

be explained by the purity and salubrity of the air of the city.

The climate of Rome is pleasant and mild during the winter, for the cold is mitigated by the Scirocco, and is never severe or of long duration. Sir H. Weber and Dr. Foster state that "The climate of Rome should not be called relaxing, it may be said to take an intermediate place between Pau and the Riviera". During the winter it is bracing, but not excessively so, and it is only at the end of the summer, after the Scirocco has been blowing for some time, that the climate becomes enervating and relaxing.

The geniality of the climate is aided by the rarity of cold winds, and is proved by the fact that palms and other subtropical plants thrive in the public gardens of the city, not only in sheltered quarters, but also in those which are higher and more exposed.

The winter in Rome is short, lasting only from December to February, when spring may be said to begin.

During this short winter, fine sunny days are frequent, and although the cold may be felt the temperature does not often fall much below freezing point. There are few days when delicate persons cannot go out in the open air for several hours.

Those who come to Rome must not expect to escape the cold entirely; they should be provided with warm clothes, especially with woollen underwear, and, if delicate, should always live in sunny apartments, for the spells of cold are, though invigorating, sometimes sharp.

The latter part of the summer is not an agreeable time in the city. The heat is oppressive and the

Scirocco makes the air heavy and irritating. The two worst months are August and September.

From July to the beginning of October the Campagna is afflicted with malaria, but within the walls the disease practically only exists in the hospitals to which the inhabitants of the Campagna come for medical assistance. Visitors during the summer have no cause for nervousness, so long as they return from their excursions into the Campagna before sunset.

The relative humidity of Rome is lower than that of many other cities; fogs are infrequent, and when they occur are usually localised to the valley of the Tiber.

The climate is variable to a certain degree, but its variations may be foreseen, and its peculiarities are soon comprehended by visitors, who quickly learn to take the necessary precautions. The variability of the climate has the advantage of tempering the burning heat of the summer day by the coolness of the night, and the cold of the winter is mitigated by the occasional prevalence of the mild south wind.

The refreshingly cool nights of the summer and the absence of strong winds combine to make Rome cooler in the summer and warmer in the winter than many other health resorts, and the winter climate, with its bright and invigorating sunshine, agrees well with those who are not robust in health.

VEGETATION.

The mildness of the climate of Central Italy, which extends between the isotherms 15° and 16° C., is evidenced by the character of the prevailing vegetation. It is the zone of the olive tree, whose leaves give a

touch of sadness to the landscape. It is the land of transition between a hot climate, such as that of Southern Italy, and the temperate climate of the north, and the seasons are of nearly equal duration, with contrasts of heat and cold, and variability of wind and temperature.

In Central Italy the products of temperate climates flourish, and vineyards and mulberry trees are everywhere found.

The Apennines extend down the centre and modify the climate on either side of the ridge. These mountains do not as a rule present the contrasts of the high peaks and deep valleys of the Alps; they are chiefly undulating hills, without the perpetual snow and ice of those districts.

The vegetation is that of the Alps, but owing to the latitude it extends to a higher elevation. Up to 350 feet willows, poplars, almond, fig and mulberry trees grow freely, and vineyards are seen in the valleys and on the lower slopes of the mountain's base. The vegetation in the plain approaches a subtropical type, but from 350 to 1,000 feet the vegetation becomes more characteristic of a temperate climate. This is the zone of transition, in which olive trees and holm oaks flourish.

From 1,000 feet to 3,000 feet forest trees are numerous. Oaks, chestnuts, and fruit trees form forests and orchards.

From 3,000 feet to 4,500 feet the forest vegetation is gradually characterised by beeches, pines and firs, and above 5,000 feet the few trees which are found are mainly the pine, the juniper and the savin.

Still higher, up to 6,000 feet, herbaceous plants and

bushes occur, but above this height the grasses are scanty and stunted, and the vegetation assumes more an Alpine type;—eagles fly from their eyries and the chamois are found in the fastnesses.

Finally only lichens are found, and the flora becomes entirely Alpine.

CHAPTER II.

ROME AS A RESIDENTIAL CITY.

VISITORS will be disappointed if they expect to find in Rome a mediæval city, for in some respects it is very modern. During the past thirty years entire quarters have been transformed, and broad streets, with electric trams running through them, occupy the sites of vanished villas and gardens. The buildings which adorn these streets are in many cases good examples of modern architecture. Many of the old streets have been widened and open spaces created, and Rome is being gradually transformed into a city worthy of its position as the capital of a great and rising nation. It avails little to deplore the modernisation of Rome, for the change is inevitable, and is even desirable, provided that the modern buildings are not unworthy of the city and that the Roman authorities remain alive to the necessity of preserving the ancient monuments which are their heritage.

At the present time the municipal authorities show commendable zeal in saving from destruction the treasures of the past, and while possibly the excavation of such places as the Forum and Palatine deprives them of some of their charm from an artistic standpoint, it adds to the interest which they possess and enables

the visitor to tread the streets that were trodden by the conquerors of the world, and to roam through the palaces once inhabited by men whose names have been familiar to us from our schooldays.

According to existing plans, the future city will be one in which many open spaces will afford abundant breathing room, and in which broad streets will allow the sunshine to reach the pavements, but at the same time the memorials of the past will be carefully preserved from destruction, and will be made more accessible by the creation of adequate carriage ways.

In the present day, however, the visitor will find intact the greater part of old Rome, with its narrow tortuous streets paved with lava blocks and with enormous tenement houses crowded with inmates. The hand of the restorer is not everywhere evident.

The land in the direction of the Palatine and Aventine is still sparsely inhabited, vineyards and gardens yet exist within the walls, and cover the sites of the houses and palaces of Imperial times, and it will be a long time before this vacant land is built over.

By degrees Rome is extending beyond the walls into the Campagna, and now that tramways have increased the means of communication between the different quarters, suburbs will arise which will relieve the congestion of the central districts. Several steam and electric tramways enable the visitor to undertake expeditions into the Campagna with ease and comfort, and make more accessible many interesting spots which formerly could only be reached by carriage.

The development of Rome has been attended by a notable improvement in its salubrity, for the more the sunshine which is so freely given to Rome is allowed to

flood the streets, the better it will be for all living things within the city. The quaint narrow streets with the high houses of mediæval times were cold and cheerless, and the mortality rate among the inhabitants was very high. Modern cities are universally built with wide airy streets, even in much lower latitudes and where the sunshine is even more abundant than in Rome. Modern streets and houses can be made to please the eye, and most of us are Philistine enough to prefer them for our own habitation. We deplore the modern hotel, but we like its comforts.

The cleanliness of the majority of the Roman streets is remarkable. Few continental cities are so thoroughly scavenged, although the work is done in primitive fashion with broom and pail. There is little dust or mud, because the streets are paved with lava blocks in the older quarters.

WATER SUPPLY.

The subsoil water is abundant and was used until 1884 by the inhabitants. The surface water was found to be very impure, the well water containing ammonia and nitrites and other evidence of sewage contamination, and in that year all the urban wells were closed.

Rome enjoys an inexhaustible supply of pure water brought from the hills of the neighbouring districts by aqueducts, which were once regarded as among the wonders of the world. Some of these aqueducts existed during republican days, and in Trajan's time their number amounted to fourteen.

These great aqueducts conveyed to the city the enormous quantity of 328,000,000 gallons of water *per diem*, supplying not only the domestic wants of the in-

habitants, but also their extensive baths and numerous fountains.

During the successive invasions which followed the fall of the Empire, these aqueducts were destroyed, and during the middle ages the scanty population had recourse to the water of the river and to surface wells.

At a later date some of the aqueducts were repaired, and Rome was supplied with water from a distance, and now, as of old, the city is entirely dependent upon the aqueducts.

There are only four aqueducts in use, but these yield a supply of nearly 51,000,000 gallons of water *per diem*, which allows a daily supply of some 112 gallons per head. This is a more liberal supply than is found in any other city. In London the daily average is less than 40 gallons, in Glasgow it is about 50, and in Norwich $14\frac{1}{2}$ gallons. In Florence the daily supply per head is 17 gallons, in Genoa 44, in Naples 20, in Turin 13, in Venice 14.

This splendid supply is a great boon, and as the city grows can be increased indefinitely. Sufficient water is supplied to satisfy the domestic requirements of the citizens, and plenty of water remains for the flushing of sewers and for the fountains which adorn nearly every square of importance.

The four aqueducts carry into the city the following water supplies:—

1. The famous Water of Trevi, also known by the name of the *Acqua Vergine*, was brought into Rome by Augustus from the farm of Salone, near the Anio, by means of an aqueduct nearly thirteen miles in length. This water supplies the well-known fountain in the Piazza di Spagna, and the fountain of the Trevi, into

which visitors cast their coins in hope of a speedy return to the city, and is remarkably pure and clear. It is well aerated and entirely without odour, and is moderately hard, having a total hardness of 12·8 degrees, of which 1·8 is permanent. It yields a daily supply of nearly 17,000,000 gallons, and has a constant temperature of 59° F.

2. The *Acqua Felice* was brought to Rome by Alexander Severus to supply his baths, from a property close to the village of Colonna in the Tusculum Hills, by means of an aqueduct twenty-two miles in length. The aqueduct was restored by Sixtus V., from whom the water takes its name, by utilising the ruins of the aqueducts of Marcia and Claudia.

This water is also very pure, well aerated, clear and odourless. It has a constant temperature of 60·8° F., and is the hardest of the Roman waters, with a total hardness of 20·5 degrees, of which 1·7 is permanent. It is too hard to be a good domestic water. The daily amount supplied is 4,500,000 gallons.

3. The *Acqua Paola* is named after Paul V., by whose order it was brought to Rome from Lake Bracciano. It unites near Anguillara with the *Acqua Trajana*, which was brought to Rome by the Emperor Trajan, from springs near Vicarello.

It is not always clear, containing vegetable contamination, derived from the leaves and grasses which fall upon the surface of the lake.

It contains only 7·7 degrees of hardness, of which 1·5 is permanent, and is the softest of the four waters. The water of the fountains in the Piazza San Pietro is derived from this source, and most of it is used to flush the sewers.

The temperature of this water is not so constant as that of the other waters, and is often high during the summer.

The quantity of water supplied to Rome from this source amounts to nearly 12,000,000 gallons *per diem*.

4. The *Acqua Marcia* comes from a source thirty-eight miles distant from Rome, three miles to the right of the *Via Valeria*, and was first conveyed into the city in the year 608 of Rome. The old aqueduct was destroyed by the barbarian invaders, and its ruins were utilised in restoring the aqueduct for the *Acqua Felice*.

The new aqueduct was built in 1870; it starts from certain springs, called *Serene*, in the valley of the *Anio* near *Marano*, and delivers into the city over 18,000,000 gallons daily.

The water is very clear, colourless and odourless, and is well aerated. It has a constant temperature of 51·8° F., and contains 18·2 degrees of hardness, of which 4·5 are permanent. Although hard it is remarkably free from contamination.

Only the *Acqua Marcia* and *Acqua Vergine* are used for domestic purposes, the other two water supplies being used for the fountains and other public service.

Although no city is so well supplied with pure water as Rome, in many houses the water is supplied from mains into cisterns; when this is the case there is danger of contamination if the storage arrangements are faulty.

Visitors who take apartments should examine the cisterns, to satisfy themselves that they are clean and

covered over, and that the overflow pipe does not communicate with the house drains.

The universal supply of water on the constant system, and the discontinuance of storage of the water in cisterns, are measures for the future which will make the system of water supply perfect.

The water supply of Rome is remarkably pure bacteriologically as it comes from the mains.

MINERAL WATERS.

Rome possesses two mineral springs, whose waters are celebrated for the cure of various disorders. Other mineral springs may be reached either by train or tramway at a distance from the city. An excellent guide to the Mineral Waters and Baths of Italy, written by Cav. Dr. P. Schivardi, is published by the firm of Treves Bros. of Milan, and from its pages we have abstracted the following descriptions of the waters.

ROMAN SPRINGS.

1. **L'Acqua Santa** is near the so-called Grotto of the Nymph Egeria. It is in a little valley, about two and a half miles from the Porta San Giovanni, along the Via Appia Nuova, a little way beyond the intersection of that road with the Military Road. The spring has been in great repute since 1688. The water is very limpid, without odour, and has a slightly acid taste. The specific gravity is 1.002. Temperature of the water, 65° F.

It issues from two openings and passes by a subterranean conduit to an oval basin, but the old bathing establishment no longer exists.

Analysis. One litre of the water contains :—

| | | |
|----------------------|----------|---------|
| Free CO ₂ | c.c. 267 | |
| Bicarbonate of soda | grammes | 0·12191 |
| „ „ calcium | „ | 0·46167 |
| „ „ potassium | „ | 0·12447 |
| „ „ magnesia | „ | 0·16218 |
| Chloride of sodium | „ | 0·04329 |
| Nitrate of potash | „ | 0·02890 |
| Sulphate of potash | „ | 0·02945 |
| Alum | „ | 0·00445 |
| Silicon | „ | 0·08491 |
| | | <hr/> |
| | | 1·06123 |

According to Moschini this water is useful in diseases accompanied by irritation and weakness of the gastric organs, and in hyper-excitability of the nervous system, as well as in catarrhal conditions of the urinary organs.

It is useful also in some cases of skin disease, and in cases of gravel, and of stone in the kidney.

2. L'Acqua Acetosa rises at the foot of Monte Parioli, close to the bend of the river Tiber. It is easily reached from the Porta del Popolo, from which the road branches to the right past the Villa Papa Giulio. It issues from three openings and falls into three separate basins. The water of the middle one is the most acid.

The water is very limpid, with an acid and salt taste. In the summer the temperature is 60° F. The reaction of the water is acid, but being due to carbonic acid gas the acidity soon passes off. It deposits lime freely.

Analysis. G. FELICIANI, 1895.

One litre of the water contains :—

| | | |
|-----------------------|----------|---------------|
| Free CO ₂ | c.c. 356 | |
| Chloride of sodium | grammes | 0.26694 |
| „ „ potash | „ | 0.19891 |
| „ „ lithium | „ | 0.01146 |
| „ „ magnesia | „ | 0.15461 |
| Nitrate of potash | „ | 0.04763 |
| Biborate of sodium | „ | 0.01904 |
| Bicarbonate of sodium | „ | 0.64537 |
| „ „ calcium | „ | 0.84111 |
| Sulphate of calcium | „ | 0.14527 |
| Silicon | „ | 0.03703 |
| Oxygen absorbed | „ | 0.00016 |
| | | <hr/> 2.36754 |

It is sold everywhere in Rome as a drinking water, and is recommended for chlorosis, constipation and glandular enlargements.

For gouty persons a walk to the spring in the morning to drink the waters would be most beneficial.

The spring is not used so much as its properties deserve.

Acque Albule. These waters are so called because of their milk-white colour when in mass. They rise near Tivoli, about 140 feet above the level of the sea, and can be reached from Rome by steam tramway or train. Long before the lake formed by these waters is reached, its near presence is evident from the strong sulphurous smell. One hundred yards from the lake are the ruins of ancient baths supposed to be those of Queen Zenobia. In 1549 Cardinal d'Este cut a canal through which the water flows over the travertine bed to the Anio. He also lessened the periphery of the lake, which has a major diameter of 225 yards and a minor diameter of half that distance, and a depth of nearly 200 feet.

The springs open into a lake which is called the Lake

of the Floating Islands. These islands were formed of bituminous matter with dust and grasses, but the increased velocity of the water caused by the narrowing of the lake prevents their formation at the present time. Near to this lake, which is often called Il lago della Regina, is a smaller lake. The total amount of water furnished by these springs amounts to 60,000,000 gallons *per diem*.

The water is clear, transparent and effervescent, and large and small bubbles of gas are constantly forming.

The water has a distinct smell of sulphuretted hydrogen and a sulphurous and bitter taste. The reaction is alkaline. The temperature of the water is 75° F., even during the winter.

Analysis. S. CAMILLO, 1897.

One litre of the water contains:—

| | | |
|------------------------------------------|---------|--------|
| Carbonic acid gas | c.c. | 643·9 |
| Sulphuretted hydrogen gas | „ | 7·81 |
| Nitrogen | „ | 17·20 |
| Chloride of sodium | grammes | 0·1759 |
| „ „ potassium | „ | 0·0235 |
| „ „ magnesium | „ | 0·0958 |
| Sulphide of sodium | „ | 0·1088 |
| „ „ calcium | „ | 0·7171 |
| „ „ magnesium | „ | 0·2664 |
| Carbonate of sodium | „ | 0·0312 |
| „ „ calcium | „ | 0·7435 |
| „ „ magnesium | „ | 0·1239 |
| Traces of lithium, iodine, arsenic, etc. | | |

These waters have a special value in many cutaneous diseases. They are also used with advantage for granular pharyngitis, and the water is used not only externally in the form of baths, but also as a beverage, and as a gargle or spray for the throat.

The waters are of value in disorders of the urinary

system, in gravel, in calculous disorders and in diseases of the bladder.

They have become noted for gout, of which the attacks become shorter, less frequent and painful under the use of the waters. The skin begins to act well, the appetite returns, and the patient improves in general health.

Generally all chronic catarrhs of the mucous membrane are very much benefited.

A complete and modern bathing establishment, situated in picturesque grounds, provides every convenience for the treatment of patients, and is under medical direction. There are several large open-air swimming baths, which are well patronised during the summer, and a visit to these baths forms a delightful excursion on a hot day, as the water is invigorating and the surroundings are beautiful.

At Stigliano, near Civitavecchia, is another establishment of baths, which is however little frequented. The water is very abundant and comes from six mineral springs, of which one has a temperature of 133° F. The water contains a considerable amount of sulphuretted hydrogen, and is used for skin diseases, chronic rheumatism, gout, neuralgia and catarrhal affections. Strumous cases do well at this place.

At Civitavecchia, the seaport of Rome and forty miles distant, are found some valuable mineral springs, and the ruins of ancient baths attest their former popularity.

There are three distant springs some three miles from the town. The first is called the Sferracavalli, and is not made use of, as it is the farthest away.

The second spring is found among the ruins of the

baths, which were destroyed by the Saracens in 823 and 833 of our era; and the third is called the Ficoncella, the water of which is carried to Civitavecchia in barrels.

The water of the second spring is limpid and colourless. It reddens litmus paper, but this resumes its original colour on drying. The temperature of the water is $108\cdot5^{\circ}$ F.

The water of the Ficoncella is very limpid, without colour, of pungent taste, with a strong odour of sulphuretted hydrogen; it is acid and bitter. The temperature of the water is 130° F.

Both these waters contain the same substances.

Analysis. CANNIZZARO, 1882.

One litre of the Ficoncella contains:—

Gases : 100 parts in volume at the spring.

| | | |
|-------------------|-------|-------|
| Carbonic acid gas | parts | 83·9 |
| Nitrogen | „ | 16·1 |
| | | <hr/> |
| | | 100·0 |

| | | |
|----------------------------------------------|---------|--------|
| Carbonic acid in combination | grammes | 0·2656 |
| Sulphuric acid | „ | 1·3417 |
| Chlorine | „ | 0·0345 |
| Sesquioxide of iron and phosphate of calcium | „ | 0·0013 |
| Calcium | „ | 0·5893 |
| Magnesium | „ | 0·0786 |
| Potassium | „ | 0·1195 |
| Sodium | „ | 0·0422 |
| | | <hr/> |
| | | 2·4730 |

A little farther away are other springs used only by the peasants.

Such are the sulphur water of Palazzi, and a kind of natural hot-air bath with sulphurous emanations which is called the Grotto of the Serpent.

The water is used principally for baths.

There is a good establishment in an excellent position, and sea bathing can also be enjoyed.

The waters are used for arthritic complaints, and for stiffness resulting from traumatism. They are also recommended for neuralgia and for some nervous disorders.

The water of **Fiuggi** is sold in bottles and has a great local reputation. It comes from a spring some distance from Rome on the road to Naples. It is a limpid, odourless water and contains little solid matter.

Analysis.

One litre contains:—

| | | |
|-----------------------|---------|---------------|
| Chloride of sodium | grammes | 0·01209 |
| Nitrate of potash | „ | 0·00727 |
| Carbonate of potash | „ | 0·00092 |
| Sulphate of calcium | „ | 0·00555 |
| Carbonate of calcium | „ | 0·01159 |
| Chloride of magnesia | „ | 0·00114 |
| Carbonate of magnesia | „ | 0·00945 |
| Silica | „ | 0·01073 |
| | | <hr/> 0·05894 |

With very slight traces of other minerals.

It is an excellent drinking water, is very soft, and has remarkable solvent powers, especially upon uric acid deposits.

This has been shown not only clinically but also experimentally.

The water is indicated in all calculous cases, in catarrhal conditions of the urinary passages, and in the various manifestations of the uric acid diathesis.

It is also useful in gout and articular rheumatism.

SEWERAGE.

The site of Rome was rendered dry from very ancient times by extensive drainage works. The cloacæ or drains

were originally intended for subsoil water, and were built of pervious material. It was not until the time of Furius Camillus that the drainage of houses was allowed to flow into them. When Rome fell upon evil days the great sewerage system was neglected and the drains became choked and ruinous, but so massively were some of them built that they still exist, and, as in the case of the Cloaca Maxima, fulfil the purpose for which they were constructed. The soil became contaminated from the sewers receiving house drainage, and the surface wells upon which the city depended during the middle ages became dangerous to health.

The principle of allowing sewage to pass into the Tiber, through brick sewers intended originally for subsoil water, was entirely wrong, and since 1870 a new system of sewerage has been completed by means of which the sewage of the city, carried away in pipes constructed of impermeable material, is prevented from fouling the soil.

The sewage is conveyed into two large collectors, one on either bank of the river, which conduct it below the city before discharging it into the Tiber. These new drains and sewers have been constructed on modern principles and are well ventilated. They are regularly flushed and the system is well managed.

Rome now compares favourably with any modern city in the means adopted for removal of the sewage. The old drains, which like the Cloaca Maxima are still in use, carry away only the subsoil water.

ACCOMMODATION FOR VISITORS.

During the past twenty years Rome has been provided with excellent accommodation for visitors. During

the season thousands visit Rome, and for them have been built palatial hotels, furnished luxuriously and admirably managed. Few cities can boast of better hotels either from the point of view of comfort or of sanitation. Besides the hotels which cater for the richer visitors, there are many hotels which if not so luxurious as the larger, afford excellent accommodation for visitors of moderate means.

In addition there are numerous pensions, which are well patronised and well spoken of.

The hotel charges in Rome are moderate, but are raised in the height of the season. Pension terms may be obtained at all the hotels, and vary from 8s. to 20s. *per diem* according to circumstances. In the pensions the average rate varies from 6s. to 10s. *per diem*.

Favourable terms can usually be arranged by those who propose staying the whole winter, and the visitor will find it often more advantageous to stay in a hotel or a pension than to take a furnished apartment.

The choice of apartments, as lodgings and flats are called, is a more difficult problem. Unfurnished flats in the best residential quarters are not easy to find, as all the best are seized by Italian landladies at the end of the season, and are let furnished to foreigners.

The best time to find an unfurnished flat is in May or June, or even later.

The visitor who proposes to spend the winter in Rome, unless he decides to stay in a hotel or pension, usually looks out for a furnished apartment, and in October he will generally have a fair choice.

The first consideration is the neighbourhood in which he proposes to live. The Piazza di Spagna

is the centre of the visitors' quarter, and at one time practically all the English residents lived in its neighbourhood.

This district, which includes the well-known Via Babuino, is low lying and is sheltered by the Pincian Hill, and is often preferred by delicate persons to the more bracing and higher quarters of the city. The houses are old, especially those built on the Piazza, and the drainage is often defective.

The visitor who wishes to spend the winter in this district would therefore do well to select one of the excellent hotels or pensions which are situated in or near the Piazza, and possess all the advantages of this protected site without the risk of doubtful drainage. The rents of apartments in this neighbourhood are often unreasonably high in view of the accommodation afforded. There are, however, some very good apartments to be obtained at a moderate rent, but they are soon let, and the visitor who arrives late rarely has any chance of obtaining them.

The Via Sistina and the Via Gregoriana are higher than the Piazza di Spagna. The Via Sistina extends from the Trinità de' Monti to the Piazza Barberini, and was once the fashionable residential neighbourhood, but it is not now so well patronised. This street is narrow, and the height of the houses prevents the sun from reaching the windows of the lower floors, but these streets, owing to their central position, will always be favoured by visitors.

Winter residents tend to go farther afield every year, and many now live in the new Ludovisi quarter, which is high and bracing, and in which are broad streets with well-built modern houses.

This quarter contains several very fine hotels, and is one of the most fashionable parts of Rome.

Excellent apartments at a lower rent may be found in the Via Nazionale, the Via Venti Settembre, and in the better districts near S. Maria Maggiore, and these quarters may be recommended as healthy and airy.

Another favourite residential situation is the neighbourhood of the Piazza Esedra, where several fine hotels are to be found.

Outside the Porta Pia extends the Via Nomentana, which contains a number of handsome houses forming the nucleus of a new suburb. A number of fine houses have also been built between this street and the Villa Borghese, which are gradually being taken up.

Before long this district will probably become a favourite residential quarter.

A new quarter containing some excellent houses is growing between the Piazza del Popolo and St. Peter's. This low-lying quarter is open and airy, and has plenty of sunshine.

SELECTION.

In selecting an apartment several points should be attended to. It is very necessary to live in a sunny apartment, especially if the visitor is delicate, and therefore it is important to select a south or south-east aspect, and, if one of the lower floors is chosen, to see that the houses opposite do not keep the apartment in the shade.

Some flats, if not warmed by sunshine, are remarkably cold, principally on account of the stone floors, which, unless covered with warm floor covering such as parquet or felt, thoroughly chill the feet. For this

reason it is essential during the winter to be provided with warmly lined house shoes, and for outdoor use the rubber soles which we have already mentioned are of great service. Generally speaking, the flats which face the north are undesirable for those who do not possess strong constitutions, especially if the heating arrangements are inadequate. Italians usually do not heat their rooms, partly because fuel is dear, and partly because they have a belief that colds are contracted by passing from heated rooms into the open air. The cold weather in Rome is not often severe enough to be unpleasant or to call for large fires, but it may be keenly felt because of the chilliness of the rooms.

Few rooms are provided with open fireplaces, but stoves are in general use, and are efficient and comfortable. The Italian *Scaldini* should be avoided as dangerous. As a rule the hotels and pensions in Rome are adequately warmed, and in many some system of steam heating is installed.

It is desirable in choosing an apartment to select one of the upper floors, especially if the house contains a lift, because they receive more air and sunshine than the lower storeys. The ground floor is generally unsuited for residence, and the same is true of the entresol or mezzanino.

The sanitary arrangements should be investigated by some one competent to advise in the matter. Many flats in the older quarters have very defective arrangements, and even in some newly built houses the sanitation is not perfect. The abominable old Italian closets are now rarely seen, but many landlords seem to think that the apartment is in good sanitary condition if it is provided with a modern closet and a water waste pre-

venter, which arrangement they are pleased to call *il sistema inglese*.

Domestic sanitation in Rome does not come up to the English standard, and we have seen specimens of plumbing which transgress every principle of sanitary science.

It is universally recognised that the house drain should be disconnected from the sewer by a properly constructed trap, and that it should be ventilated by an inlet and outlet of sufficient diameter, in order that drain air may not become pent up under pressure and escape into the house through the traps. Another cardinal rule requires that all waste pipes shall discharge into the open air over gully traps. In few Roman houses are these elementary rules followed, and the average plumber seems to have no other aim in life than to connect his waste pipes with the drain, often without the interposition of a trap. His faith in the efficacy of a siphon trap is pathetic, and he apparently has yet to learn that true safety lies only in efficient ventilation.

In choosing an apartment the following main points should be attended to:—

1. That the closets are of modern type, with water waste preventers.
2. That the house drain is disconnected from the sewer and is properly ventilated.
3. That the cistern is clean and covered, and that the overflow pipe goes into the open air and not into a drain.
4. That the bath or sink waste is not connected directly with the house drain.

The hotels of Rome are generally quite up to the English standard in the matter of their sanitary arrange-

ments. In some cases the sanitary work has been planned and carried out by London firms. Whatever may be the deficiencies in some of the apartments very little fault can be found with the hotels, and if visitors would always insist upon having good sanitation in their apartments the Roman owners will awaken to the necessity of putting all their houses in order. Even now many of the apartments have quite satisfactory sanitary arrangements, and there is no reason why the same standard of perfection which exists in the hotels should not prevail universally.

It may be well to draw attention to the fact that whenever any defect in the sanitation of an apartment, which is likely to affect prejudicially the health of a tenant, is reported to the municipal authority, immediate action is taken, and that statutory powers exist under which landlords can be compelled to comply with municipal regulations.

The visitor will be well advised in general to avoid quite newly built houses, for the material of which they are built often takes a considerable time to dry, and the rooms are consequently chilly. He should also avoid a damp low-lying site or a house in a narrow street, where the high houses on either side intercept the sun, and especially one with a small courtyard, where the air stagnates and the sun never enters. It is essential to have plenty of air on all sides and not to live under the shadow of hills or high edifices. The best residential sites are on the hills; especially may be recommended the newer districts which are at a considerable elevation and in which the streets are wide and the houses airy.

The price of apartments varies according to their

size and situation and generally is lower than the rent paid in good residential quarters in London, and lower than the rate which rules in Paris, Berlin or Vienna.

It is usually possible to obtain a small furnished flat in a good quarter during the season for £12 or £15 per month, but for large flats much higher prices will be asked. If a flat is taken for a few weeks during the height of the season the price is raised. House rents in Rome have increased recently owing to the growth of the population, and owing to the reluctance of the inhabitants to live outside the walls, so that, whilst there are plenty of empty houses in the outskirts which may be obtained at low rates, the residential parts of the city are congested, and expensive rates prevail.

This state of affairs will not endure, now that better means of communication exist between the different parts of the city, and it is only a question of time before rents will fall.

Rome, however, will never be a city of cheap rents, for the high rates and taxes will always maintain them above those of other cities, which have not spent so much money upon improvements.

The capital of a country is always more highly rented than provincial towns, but on the other hand has more to offer its inhabitants and visitors.

An unfurnished flat of eight rooms in a good residential quarter may still be obtained for from £80 to £120 per year, and the larger flats would be rented at a proportional rate according to size and situation. It is desirable always to take legal advice before signing an agreement about apartments; if any one is so imprudent as not to do so he will regret it.

We may add that by application to the International Bureau, 59 Piazza di Spagna, which is managed by an English lady, visitors will obtain all the information that they may require about flats, servants and living.

THE FOOD SUPPLY.

The food supply of Rome is good, and it may be satisfactory to the visitor to know that municipal supervision of food-stuffs is efficiently carried out. The meat is killed in the public abattoir and inspected by a staff of veterinary officers. No meat is allowed to be sold unless it has been passed as sound and stamped accordingly.

In this respect Rome is in advance of London.

The mutton is not very good, but the lamb is excellent. The beef is good, but often tough, and it is not so well fed or of such good flavour as English beef. Pork is largely consumed and is generally well fed.

Anthrax, trichinosis and similar diseases are unknown in the district, and all the meat which is stamped is guaranteed to be from sound animals.

Game and poultry are plentiful and excellent. Fish is abundant and of fairly good quality, but the fishmongers have not the same facilities as those of London for keeping fish, and the visitor must take care that the fish he buys is fresh.

The milch cows are rigorously inspected by the municipal veterinary officers, and every precaution is taken to prevent the sale of tuberculous milk.

The art of adulteration is however not unknown to the Roman milkman, who is no more spotless in this respect than his London confrère.

The supply of fruit and vegetables is varied and

abundant. Except during the height of the season fruit and vegetables are cheaper than in England.

Visitors will be well advised to adapt themselves to Italian cooking, which is very good, and not to expect their Italian cooks to provide English dishes. If they will do this, they will find that they are better in health for the change, and that the expense of living is much reduced.

The Italian wines possess as a rule more body than the French. The ordinary *vin du pays* is cheap, but is unmaturing and often causes digestive disorders. The visitor will do well to avoid the commoner qualities of Italian wine, but he will find a varied choice of the better kinds which are wholesome and well matured. The local wines are frequently adulterated with the heavier wines which come from the south, but when they are pure some of these wines are excellent and wholesome, although many people find that the Italian wines are generally too sharp.

Among the best known of the *Vini dei Castelli Romani* are Frascati, Velletri, Genzano, Marino, Albano, Ariccia and Civita Lavinia.

These wines should be drunk in the villages where they are made in order that they may be fully appreciated. The wines sold in Rome under these names are generally sophisticated.

The Tuscan wines are in great request, and as the supply is limited are often adulterated with other wines. When a good Tuscan wine such as Chianti can be obtained pure it is a very wholesome and sound wine.

Capri is another favourite wine. A wine called Est-Est which comes from Montefiascone is very good and can be bought in Rome.

Marsala is also drunk in Rome as a dessert wine.

Italian champagne is very reasonable in price, and fairly good brands, such as Carpanè-Malvolti or Conegliano, can be recommended.

The servant difficulty is not so serious in Rome as elsewhere. Capable and hard-working domestics can be obtained, who, however, require training before they learn English ways. For a small family one servant is sufficient, who thinks nothing of keeping the flat in order and cooking the meals, and doing the marketing. The lady of the house has only to exercise supervision. Living in this way is not dear. During the season food is rather more expensive than in England, but life is on a simpler scale. The good nature of the domestics is a pleasant change to those accustomed to deal with English maids. The wages of a good servant vary between 20s. and 40s. per month. There is no special Italian Act dealing with the mutual relations between employer and servant; but the custom in Rome is to engage a servant by the month with a fortnight's notice on either side. The notice should be given before the middle of the month for which the servant was engaged.

OCCUPATIONS AND AMUSEMENTS.

Rome offers many attractions to the visitor fond of sight-seeing, and is not a city that can be seen in one hurried visit. The visitor who spends a winter in Rome will not find time hang heavily upon his hands as is the case in many winter resorts. Whether the winter be good or bad there is always enough to do and enough to see.

Only after a long acquaintance with Rome can any one pretend to a knowledge of her priceless treasures. In Rome the visitor can admire or criticise the archi-

itecture of the past and of the present, and will find temples and churches filled with artistic treasures in nearly every street.

In the museums he will find masterpieces of Greek and Roman sculpture—in the public and private galleries he will see the greatest works of foreign and Italian painters. He can visit palaces which vividly recall the past, villas and gardens of surpassing beauty, and he may tread again the very streets once trodden by the feet of the conquerors of the world.

He may visit the remains of palaces built by emperors nearly two thousand years ago, and people their ruined halls with the personages whose features will become familiar to him from their busts. Those who come for serious study will find great libraries open to them, containing manuscripts and printed works on every subject. To the intelligent visitor life in Rome is interesting in the highest degree; there the past, the present and the future are mingled together. Here a past Rome of ancient and mediæval origin, there the modern buildings of a utilitarian age, and yet again the creations of men who believe in a future Rome as glorious as the past and who are working out their dreams in stone.

The churches, which are to be found everywhere, will always interest those who enter their portals. Their grand interiors, their artistic treasures, their solemn services and festivals can never fail to impress the visitor, even if he be of an alien faith.

PROTESTANT CHURCHES.

The spiritual wants of the visitor who does not belong to the Roman Catholic Church are met by the following churches:—

1. All Saints (Church of England), Via Babuino 154. Services at 8.30 A.M., 11 A.M. and 4 P.M. on Sundays.

2. Trinity Church (Church of England), Piazza San Silvestro, opposite the Post Office. Services 11 A.M. and 3 P.M.

3. American Episcopal Church of St. Paul, Via Nazionale. Services 8.30 A.M., 10.45 A.M. and 4 P.M.

4. Scottish Presbyterian Church, Via Venti Settembre 7. Services 11 A.M. and 3 P.M.

5. Methodist Episcopal Church, at the corner of Via Venti Settembre and Via Firenze. Services are conducted in English and Italian.

6. Wesleyan Methodist Church, Via della Scrofa 64.

The street life of Rome is interesting in itself. The crowds of animated and vivacious people, the absence of dirt which so often repels in other Italian cities, and the general good temper and courtesy of the inhabitants combine to make the streets of Rome agreeable and enlivening.

Shopping is an important question for the visitor. In all the principal shops fixed prices are beginning to be the rule, and the purchaser is spared the annoyance of bargaining, which so often results to the disadvantage of the stranger who is unaccustomed to haggling, or unwilling to waste his time.

Rome is noted for several arts, such as mosaic working and cameo cutting. The sculpture is also excellent, and many beautiful specimens of modern work can be seen in the principal shopping centres.

Bookbinding is another Roman industry, and some examples of this work excel in artistic merit.

Another small industry is the manufacture of arti-

ficial pearls, which can be seen in all its stages in several establishments. The real Roman pearls are made from alabaster powder, and differ from the French, which consist of glass spheres filled with composition; these are frequently palmed off on the unwary as Roman pearls.

Buying from that Roman pest, the street vendor, is never advisable. The prices demanded are twice or thrice what the articles are worth, and it is better that the visitor should spend his money in establishments which have a reputation to maintain.

There is a very good circulating library and bookshop at 22 Piazza di Spagna, kept by an English lady, Miss Wilson. Here the visitor can find all the best books upon Rome.

Piale's circulating library and bookshop is at No. 1 Piazza di Spagna. This establishment is also a favourite one with visitors, and the library is well filled.

Rome possesses theatres and opera houses in which performances of the highest class are given; during the season there is plenty of gaiety, and those who come to the city with good introductions will find as much social life as they desire.

There are three important Anglo-Saxon archæological institutions in Rome.

The British and American Archæological Society, Via San Nicolò da Tolentino 72, is an association for the promotion of the study of archæology. There is a good library and lectures are arranged during the season. In the spring expeditions to various interesting centres in the Campagna are made every week. Visitors can join either as members or as associates.

The British School of Archæology (Palazzo Odescal-

chi) forms a research centre for students. The American School (Via Vicenza 5) is a similar centre, in which also courses of lectures are given during the session. Both schools possess very good libraries.

During the season several lecturers take parties of visitors round the Forum and other places of interest. The lectures are advertised in the local press, and are frequently very interesting. This plan of visiting the remains of ancient Rome may be recommended to those who are desirous of learning the history of the monuments, and whose time is limited.

HUNTING.

A pack of hounds is maintained, and during the winter the meet takes place three times a week, at some spot not more than four or five miles outside the gates.

The hunt is well supported, and excellent runs are obtained over the Campagna.

Good riding horses can be hired from the livery stables.

GOLF CLUB.

The links are at Acqua Santa (Via Appia Nuova), two and a half miles beyond the Porta San Giovanni. There is an excellent nine-hole course of nearly 3,000 yards. The links can be reached by rail from Rome (Central Station) in ten minutes, by driving (twenty-five minutes from City; cab fare 3 francs), or by taking the Frascati tram to Salita degli Spiriti, and thence walking a distance of about one mile. Arrangements have been made by which visitors to Rome can be admitted. A professional is always in attendance for lessons or play. In addition, there are two grass tennis courts and a croquet lawn.

MOTORS AND THEIR ACCOMMODATION.

Rome is amply provided with well-equipped motor garages where visitors travelling by motor will find all necessary facilities. Motors can be brought into the country temporarily for a period of three months, which can be extended to six, on deposit of the duty, which is returned on leaving the country. Motorists should be careful not to lose the custom-house receipt, without which the duty is not recoverable.

Excellent motors can be hired in Rome at a reasonable price by the day.

Rome is a good centre for motorists and bicyclists, many delightful excursions in the Campagna being open to them. Bicyclists can bring their bicycles into the country on depositing the amount of the duty, which is returned to them on leaving. They will find it advantageous to belong to the Cyclists' Touring Club, and should make themselves acquainted with the regulations in force.

RACING.

The chief race meetings near Rome are held at Tor di Quinto in March and at Le Capannelle in April.

EXCURSIONS, ETC.

During the two winter months the visitor will probably prefer to remain within the city, but in the autumn and spring the environs of Rome will afford him many delightful excursions, which are now made easy by the electric and steam tramways which run from Rome to the various interesting localities of the Campagna.

There is a need in Rome for a central meeting-place by which social intercourse between residents and visitors

will be promoted. A proposal is on foot to establish an Anglo-American club for ladies and gentlemen, which will be open to all visitors. Such a club if well managed would be of material help in making a sojourn in the city more enjoyable.

TIME TO ARRIVE.

The best time to arrive in Rome is after the autumn rains, in the middle or the latter half of October. During this month the weather may be showery, but the temperature is delightful, and many enjoyable excursions may be undertaken into the country.

The hotels are not full at this time, and the visitor is made very welcome. Both October and November are delightful months in which to visit Rome. The visitor who intends to spend the winter has the advantage of a greater choice of apartments, and can instal himself in comfort before the season begins. Those who are in delicate health should always arrive in good time, and should not postpone their departure from England until the cold weather begins. The journey from England, comfortable as it has been made of recent years, is long and, if the weather is cold, trying to invalids.

The best time for the journey is October or November.

Much has been written of the delays and inconvenience of the Italian railways, but a great deal is being done by Government to improve the service.

The railways have recently been acquired by the State, and in consequence of the change a temporary dislocation of the goods traffic has occurred.

The passenger traffic has not been seriously interrupted, and it is hoped that within a short time the whole system will be in perfect working order.

The journey from London to Rome takes about forty hours and has been made comfortable and easy, especially by the express trains.

No one, even in delicate health, will find the journey too trying, as it can be broken at several points. Fast trains run daily, and during the season special trains called *trains de luxe* run regularly.

The tourist season begins about Christmas time and lasts until after Easter. During this season the hotels are crowded and apartments are difficult to find. It is, therefore, all the more necessary for delicate visitors to arrive before the rush and to make their arrangements in good time.

It is also a mistake to leave the genial climate of Rome too early in the spring. The weather is delightful and the bright sun invigorates the whole body. Leaving the warm Roman climate to arrive too soon in England, where the spring weather is often cold and damp, is to incur the risk of undoing the good that has been derived from the winter's stay.

Those who visit Rome merely for pleasure may arrive or leave when they please, but if they come to Rome only during the tourist season they miss the best part of the year. Invalids or delicate persons should time their arrival and departure so as to obtain the maximum benefit which the climate affords.

Throughout May the weather is delightful and temperate, and although most visitors and residents have flitted by the end of the month, those who do not mind a little heat are well advised to remain until the middle of June and to see Rome resplendent in the glories of the early summer.

CHAPTER III.

THE HEALTH OF ROME.

The crude death rate, that is to say, the number of deaths per thousand inhabitants which occur annually, is of little value when the general salubrity of a district has to be estimated, as many sources of error exist to vitiate the statistics, and unless these errors are recognised wrong conclusions will be drawn.

The general death rate is influenced by the movements of the population, by the presence of large institutions in the district, such as hospitals, asylums and poor-houses, by the age and sex distribution of the population and by the birth rate. In the case of a city like Rome, which is visited annually by thousands of foreigners, many of whom come in search of health, and which is the only large centre to which the population of the surrounding districts can resort for medical assistance, the general death rate is increased by the deaths within the walls of temporary visitors and immigrants.

Unless allowance is made for these disturbing elements, which is not easy to do in the case of a migratory population, considerable fallacies must occur in the statistics.

In the different districts of London the presence of public institutions is allowed for; the deaths of inmates drawn from outside areas are deducted, and

the deaths of inhabitants occurring in institutions outside the district are added. The rate with these corrections is known as the Recorded Death Rate.

In Rome only the deaths of persons living outside the city and dying within the walls have to be allowed for, since there are no institutions outside Rome to which its inhabitants may resort, so that the fallacies in the crude death rate are all to the detriment of the city. If with this disadvantage the annual death rate of Rome still compares favourably with those of other large cities, it is an additional argument in favour of the salubrity of the city.

All general death rates must be corrected for age and sex distribution. Females live longer than males, and a population containing a larger proportion of females than another would have the lower death rate, even if both cities were equally healthy.

Infant mortality is everywhere very high, and the liability to die reaches the minimum between the ages of ten and fifteen, and afterwards steadily increases for the remainder of life, so that of two populations the one containing a larger proportion of infants and old people will have a higher death rate than the other, irrespective of their salubrity.

In England and Wales a correction is made for the age and sex distribution of the population of any given town by getting out the ratio which the recorded death rate bears to an arbitrary standard, calculated on the hypothesis that deaths at each age period in each sex occur at the same rate as in England and Wales during the previous decennium, and multiplying the recorded death rate by the factor thus obtained.

This corrected death rate enables comparison to be

drawn between different towns free from the disturbing elements of age and sex, but in comparing the death rates of cities in different countries no common standard for comparison has yet been adopted, and we are obliged to fall back upon the gross or recorded annual death rate, which is subject to many fallacies.

Formerly the gross death rate of Rome was high.

Before 1870 the statistics available give only approximate data, but they show that the death rate was often over 30 per mille.

The following table is interesting and should be compared with modern figures.

| YEAR. | POPULATION. | BIRTHS. | DEATHS. | MORTALITY PER 1000. |
|-------|--------------|---------|---------|------------------------|
| 1860 | 184,049 | 5,907 | 5,764 | 31·3 |
| 1861 | 194,587 | 5,374 | 5,013 | 25·7 |
| 1862 | 197,078 | 5,701 | 5,402 | 27·4 |
| 1863 | 201,161 | 5,323 | 5,742 | 28·5 |
| 1864 | 203,896 | 5,305 | 6,028 | 29·5 |
| 1865 | 207,338 | 5,766 | 6,466 | 31·1 |
| 1866 | 210,701 | 5,262 | 4,997 | 22·7 |
| 1867 | 215,573 | 5,739 | 6,049 | 28·1 |
| 1868 | 217,378 | 5,119 | 8,489 | 39·0 |
| 1869 | 220,532 | 5,276 | 5,874 | 26·6 |
| YEAR. | POPULATION.* | BIRTHS. | DEATHS. | MORTALITY PER 1000. |
| 1896 | 473,296 | 11,469 | 9,080 | 19·2 |
| 1897 | 480,542 | 11,545 | 8,149 | 17 |
| 1898 | 495,288 | 11,253 | 8,947 | 18·1 |
| 1899 | 448,860 | 11,575 | 8,839 | 19·7 |
| 1900 | 457,569 | 11,573 | 9,937 | 21·7 |
| 1901 | 467,840 | 11,530 | 9,390 | 20·1 |
| 1902 | 480,928 | 12,061 | 9,744 | 20·3 |
| 1903 | 493,976 | 12,108 | 9,776 | 19·8 |
| 1904 | 507,106 | 12,197 | 9,956 | 19·6 |
| 1905 | 520,196 | 12,162 | 10,698 | 20·6 |

* In this table, which I owe to the courtesy of Professor R. Santoliquido, Director-General of the Public Health Department, the number of the population given refers to the Commune of Rome. The actual number of inhabitants within the city is about 475,000.

During the past decennium the birth rate has averaged 24·3 and the death rate 19·6 per 1,000 inhabitants. Comparison with other Italian cities affords further evidence of the healthiness of Rome, so far as the crude annual death rate can be adduced as evidence.

| | 1882-1891. | 1894-1903. | 1904. | 1905. |
|----------|------------|------------|-------|-------|
| Rome | 25·58 | 19·6 | 19·6 | 20·6 |
| Naples | 30·08 | 26·8 | 25·1 | 24·9 |
| Milan | 28·06 | 22·1 | 19·1 | 20·5 |
| Turin | 26·17 | 19·6 | 18·7 | 20·0 |
| Florence | 26·47 | 22·5 | 22·1 | 23·5 |

The Zymotic death rate is often adduced as evidence in considering the healthiness of a district, although it is open to many fallacies.

So far as the zymotic death rate is concerned Rome compares favourably with London.

The zymotic diseases are small-pox, measles, scarlet fever, diphtheria, whooping-cough, diarrhoea and enteric fever.

Formerly small-pox was not infrequent within the walls of Rome, but for several years vaccination and re-vaccination have been made compulsory, and the regulations are efficiently carried out, with the result that this disease has disappeared and is seen only occasionally when imported into the city.

The death rate of measles fell to ·3 per mille in 1905, and of scarlatina to ·007.

The death rate from scarlatina from 1896 to 1905 was 0·01 per mille.

Scarlatina is a disease which has periodical cycles of activity and is dependent upon atmospheric and telluric conditions, which have been so far little understood.

The mortality from measles is especially severe

among infants during the first two years of life, and is often more a measure of overcrowding and general neglect than of the virulence of the disease.

The measles rate for Rome is lower than that for London and other large English cities, and in all these cases could be reduced if some practical means could be adopted for the isolation of the sick and the limitation of the spread of infection.

The diphtheria rate was only '11 per mille from 1896 to 1905, which is lower than that of England. Serum is readily available, and its increased use will lead to a further diminution in the mortality.

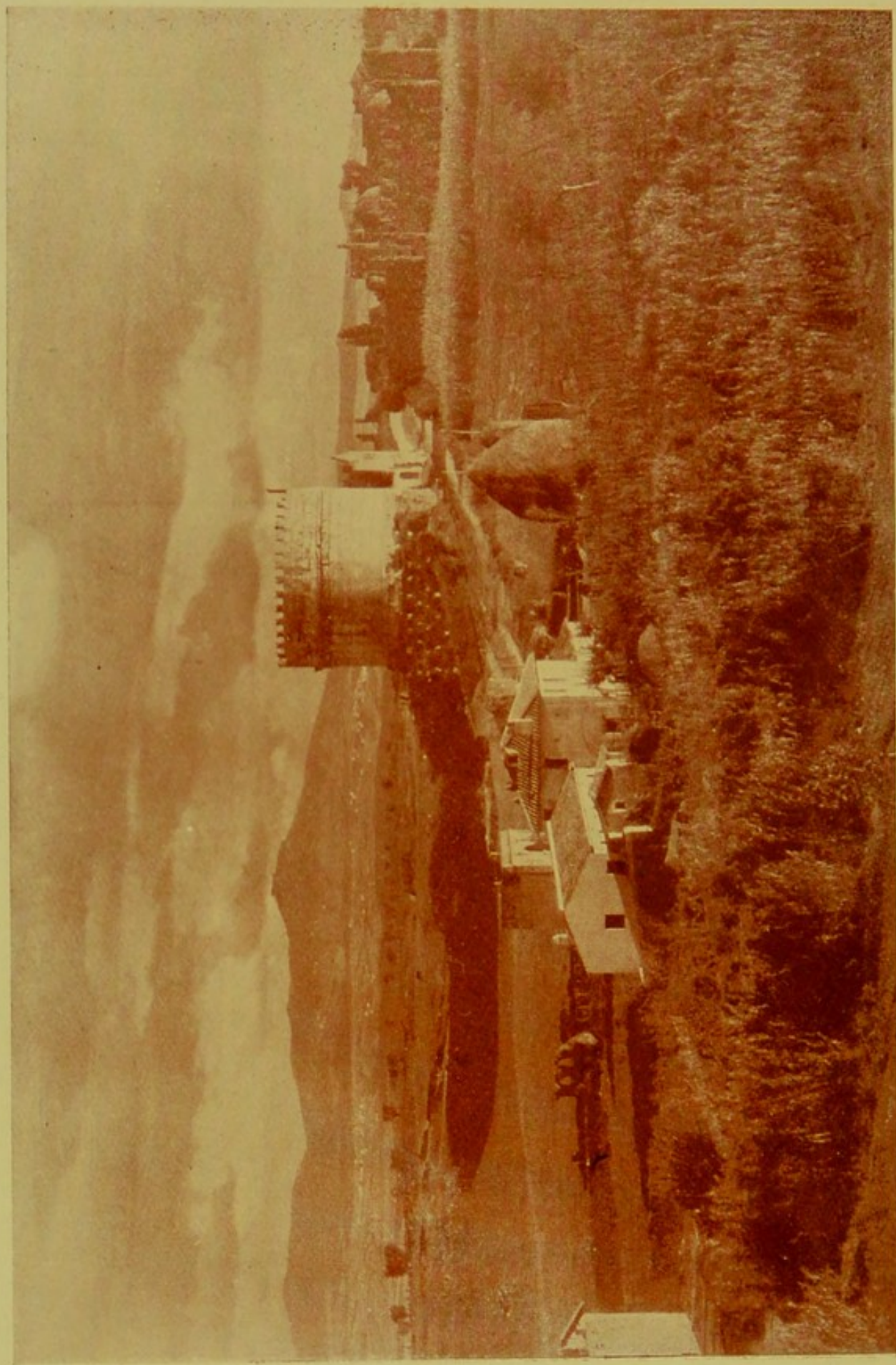
We now have to deal with an important disease, typhoid or enteric fever, the prevalence of which is a direct measure of the sanitary condition of the district, and many unjustifiable statements have been made about the existence of this disease in Rome.

In former years Rome was an insanitary city, perhaps as bad as any in Europe, but the problem of the sanitation of the city has engaged the serious attention of the authorities, and extensive works have been undertaken during the past twenty years to remedy the defects. The city is now adequately provided with sewers, which are efficiently flushed, and the sewage of the town is conveyed to a distance before it is discharged into the Tiber below the city, while a water supply of excellent quality and superabundant in quantity has been provided, which is bacteriologically pure.

The result is that the enteric fever rate has fallen in a marked manner, and will progressively diminish as the old houses are remodelled or rebuilt, and their drainage improved.

There is no special danger to visitors of contracting





D. ANDERSON, PHOTOGRAPHER, ROME
TOMB OF CECILIA METELLA ON THE APPIAN WAY.

enteric fever in Rome. In proportion to the population Rome has more badly drained houses than London, and in both places it is the insanitary house which is dangerous, but reasonable care in seeing that the drains of the dwelling-house are in accordance with modern ideas will protect the householder from the danger of contracting enteric. In the hotels and better class pensions the sanitary arrangements are good, and visitors can live in these well-appointed houses without anxiety; but those who think of taking an apartment would be well advised to have the sanitation overlooked by some one competent to advise in the matter. There are apartments to be obtained with fairly good sanitary arrangements, and it is an easy matter to avoid those that are defective.

The incidence of the disease falls principally upon the poorer classes, who are crowded in very insanitary tenement houses, but the visitor runs practically no more risk in Rome than in London.

In fact, the experience of the physicians practising in Rome is that enteric fever is not often seen among visitors, or among residents who live under hygienic conditions and take reasonable precautions. The typhoid death rate among the Anglo-American community is practically nil.

One precaution which should be taken by visitors in Rome is to avoid eating salads or uncooked vegetables, which are liable to be contaminated with water fouled by sewage.

Oysters are also unsafe, as the oyster beds are in some cases liable to pollution, and infection may rise from that source.

The following table shows the position which Rome

holds as to typhoid mortality in comparison with other large cities—the mean annual death rate from 1891-1900 being taken as the standard of comparison.

| | | | |
|----------------|------|------------|------|
| Havre | ·974 | Portsmouth | ·242 |
| St. Petersburg | ·943 | Naples | ·242 |
| Palermo | ·767 | Glasgow | ·241 |
| Marseilles | ·751 | Hull | ·229 |
| Madrid | ·684 | Norwich | ·229 |
| Rouen | ·623 | Manchester | ·225 |
| Dublin | ·533 | Brussels | ·215 |
| Nantes | ·460 | Birmingham | ·197 |
| Moscow | ·454 | Paris | ·193 |
| Lisbon | ·433 | Bradford | ·161 |
| Liverpool | ·342 | Edinburgh | ·155 |
| Genoa | ·309 | London | ·135 |
| Venice | ·301 | Hamburg | ·123 |
| Turin | ·296 | Geneva | ·116 |
| Rome | ·294 | Copenhagen | ·092 |
| Sheffield | ·294 | Berlin | ·084 |
| Nottingham | ·284 | Vienna | ·057 |
| Bordeaux | ·273 | | |

According to this table Rome has a lower enteric fever death rate than many English cities, such as Dublin and Liverpool; the rate is the same as that of Sheffield and Nottingham, and slightly higher than that of Portsmouth and Glasgow. No one would hesitate to go to Dublin or Liverpool because of enteric fever, and there is less cause for anxiety in Rome. In all large cities there are at certain seasons cases of enteric fever, which occur principally among the poorer classes, since it is impossible to induce them to observe hygienic precautions, but Rome is not exceptionally dangerous in this respect.

Enteric fever occurs principally at the end of the summer and during the autumn, and during the quin-

quennium 1901-1905 the mortality from this disease has averaged .38 per mille.

The general use of cisterns for water storage introduces the risk of contamination of the water supply in individual houses, especially when the overflow pipe is not properly disconnected. Rome enjoys an abundant and pure water supply, and if the constant system of water supply were adopted and the use of house cisterns given up, Rome would soon be as free from typhoid as London is at the present time.

Seeing that the water supplied to Rome is nearly four times greater in amount per inhabitant than in London, there is no justification for the retention of the intermittent system of water supply and for the use of cisterns in houses.

MALARIA.

Perhaps one of the most prevalent superstitions about Rome is that it is a malarial city, and statements are freely made about a disease called Roman fever which are apparently based upon historical romances written many years ago, and which give a more or less accurate picture of the conditions which prevailed in the early part of last century.

One curious fact about malaria is that superstitions are apt to become prevalent in every country with regard to the disease and its peculiarities, as every doctor knows who has practised in malarial districts. In Rome it takes the form of a belief that the diseases which occur in the city are in some way different from the same diseases which occur elsewhere, having assumed a peculiar complexion from the locality. This quaint fancy crops up in many unexpected quarters, and although it

is perfectly unfounded it is held with remarkable tenacity. Some speak of this peculiarity of diseases in Rome with pride as if it should be regarded as a distinction, and the idea is derived from the old belief that the presence of malaria in and about the city was due to a miasm, which was exhaled from the ground and poisoned the air.

In discussing malaria in Rome the fact that Rome has been improved by the widening of the streets, new buildings, and extensive sanitary works, is generally ignored, and as few persons care to have their early prepossessions corrected it will be long before the real facts are widely admitted.

Malaria does not exist at the present time in the city of Rome as an endemic disease.

During the past ten years the whole problem of malaria has been solved by the discovery of the *rôle* which certain kinds of mosquito play in the transmission of the disease. Malaria is not due, as its name implies, to bad air nor to a miasm proceeding from an infected soil, which may be conveyed by the wind, but is a disease peculiar to certain kinds of mosquito, the anopheletes, which they transmit to man by their bites. Wherever there is stagnant water breeding places exist for mosquitos, and if a particular kind of mosquito is present and is infected the district becomes malarial.

The discovery of these facts has altered all our views concerning the means to be taken for the removal of this terrible scourge, and has already produced great results in rendering many once unhealthy districts fit for the habitation of man.

The difficulties which have to be encountered de-

pend upon the magnitude of the work which is required. To thoroughly drain a large area, so as to leave no stagnant water on the surface for mosquitos to breed in, or, where this is not possible, to treat all collections of stagnant water in such a way that the larvæ cannot live therein, requires in many cases an enormous expenditure of work, but now that the real nature of malaria is known the efforts of those who are working at the problem are directed on right lines, and in course of time malaria will become in most of its present haunts as rare a disease as it is now in Rome.

During Imperial days the Campagna supported a large and prosperous population engaged principally in agricultural pursuits, and the rich nobles of Rome built in many now intensely malarial spots villas to which they resorted for relaxation and change of air. Fever no doubt existed to some extent in many parts of the Campagna, but it was not then the pestiferous region which it became in after-times. Owing to its geographical and geological conditions, the Campagna contains a vast sheet of subterranean water, which drains away with difficulty into its natural channels, and the old Romans succeeded by a complex drainage system, remains of which are being brought to light over the whole region, in rendering the Campagna dry and healthy. When the Empire fell and the country became the prey of barbarian invaders and the scene of constant internecine warfare, the cultivation of the land was neglected. The drainage system, upon which the salubrity of the district depended, became choked and destroyed, with the result that the land was waterlogged and infested with mosquitos, which carried the scourge that has depopulated the whole countryside.

During the past twenty years much has been done to drain the Campagna, and the work has been attended with considerable success; throughout the Campagna there has been a marked diminution of malaria, especially since the introduction of wire gauze into the houses and the gratuitous distribution of quinine have become general.

One of the most striking illustrations of what can be done in improving an unhealthy locality is shown at Tre Fontane, where at one time the Trappist monks were unable to spend the summer on account of the deadliness of the climate. The monks say that not only can they now spend the summer there without contracting fever, but that mosquitos, which formerly were a plague, are comparatively rare and that the deadly anopheles is only occasionally seen. This beneficial result they attribute to the eucalyptus trees which have been planted around their monastery, but we may with more reason attribute it to the drainage and cultivation of the ground, which have caused the disappearance of pools of stagnant water, and to the protection of the monastery by the use of wire gauze windows.

The following table, which gives the mortality from malaria in the Province of Rome per thousand inhabitants during recent years affords incontestable proof of the value of the measures which have been adopted in the campaign against malaria. In 1901 the campaign had become systematised in the light of the recent discoveries of the true mode of transmission of the disease, and from this date a marked and continued drop in the mortality will be noted.

| | | |
|---------|--------------------------------------------|------|
| In 1888 | the mortality per thousand inhabitants was | ·982 |
| In 1898 | „ „ „ „ „ „ | ·484 |
| In 1899 | „ „ „ „ „ „ | ·451 |
| In 1900 | „ „ „ „ „ „ | ·610 |
| In 1901 | „ „ „ „ „ „ | ·391 |
| In 1902 | „ „ „ „ „ „ | ·264 |
| In 1903 | „ „ „ „ „ „ | ·228 |
| In 1904 | „ „ „ „ „ „ | ·206 |

As long as it was believed that malaria was due to the poisoning of the air by a miasm proceeding from the ground, the idea prevailed that Rome could be infected by the wind blowing over malarial districts. For this reason doubtless it was believed that diseases in Rome derived some peculiar quality not possessed by the same diseases in other countries. Because it was thought that trees could condense this miasm and thus render the city unhealthy, many of the beautiful trees, which once adorned the city, were cut down.

We know now that this sacrifice was unnecessary, but twenty years ago the cause of malaria was unknown, and men can only act according to the knowledge of their times.

Mosquitos do not like winds, and take shelter when a breeze is blowing. They are not transported to any great distance by the wind, and do not fly more than a short way from the puddles in which they develop.

As mosquitos are the sole agents in the transmission of malaria, the old theory that wind may convey malaria is not in accordance with the facts, and with this must go the theory dear to the soul of every patriotic Roman that the diseases of Rome are in some way peculiar and possess qualities not to be found in other countries.

Rome was regarded as comparatively healthy even in the days when malaria was found in the city. Malarial

foci existed in the uninhabited parts, especially in the Villa Borghese, around the Coliseum, on the Esquiline and Quirinal Hills, and wherever there was much open ground; but now that many of these parts have been covered with streets and houses the malaria has disappeared. The drainage which has been effected in the city prevents the accumulation of stagnant water, in which mosquitos may breed, and few mosquitos can exist in Rome during the summer and none in the winter. Although malarial cases are constantly being brought into Rome from the Campagna, the disease does not spread in the city, and rare indeed are the cases which occur among the inhabitants.

As Rome contains the only hospitals which can be used by the population of the Campagna during the summer when malaria is at its height, nearly all the severe cases of fever occurring in that district are brought into the city, and the death rate of Rome from malaria is really that of the Campagna proper.

In 1881 there were 650 deaths from malaria in the Roman hospitals, in 1891 only 254, and from this date a steady diminution in the number will be noticed every year. This is shown in the following table:—

| YEAR. | NO. OF DEATHS FROM MALARIA. | YEAR. | NO. OF DEATHS FROM MALARIA |
|-------|--------------------------------|-------|-------------------------------|
| 1892 | 139 | 1899 | 87 |
| 1893 | 189 | 1900 | 123 |
| 1894 | 140 | 1901 | 76 |
| 1895 | 189 | 1902 | 53 |
| 1896 | 137 | 1903 | 46 |
| 1897 | 73 | 1904 | 55 |
| 1898 | 170 | 1905 | 65 |

The incidence of malaria is principally upon agriculturists, shepherds and herdsmen, and upon those whose

duties take them into the open country. Some of the inhabitants of Rome work in the Campagna during the summer, and are consequently liable to infection. In the outskirts of the city there may be here and there small malarial foci, but there are none inside the walls.

This striking diminution in mortality, notwithstanding an increase in the population, affords overwhelming evidence of the efficacy of the measures which have been recently taken to render the Campagna healthy, and to protect the inhabitants from the fever.

During the malarial season the Government has organised well-equipped services for the relief of the inhabitants of the Campagna. Quinine is distributed gratis and is used freely as a prophylactic, and the sick are attended to at the different stations and if seriously ill are taken to hospital. The diminution of the number of cases of malaria which has been very marked during recent years throughout the Campagna is due in great measure to the good organisation and efficiency of these ambulance services.

We scarcely need further consider the question of malaria in Rome, since it is no longer endemic in the city. Occasionally cases may occur from stray infected anopheletes which in some way or other have been carried into the city from outside, but even such cases are rare. The Roman fever of the novels has become a myth, and we trust that this superstition will now receive decent burial.

Malaria is entirely dependent upon the presence of the anopheles mosquito, and can only be transmitted to man by its bite. The fever is prevalent in the Campagna from the beginning of July to the end of September. During this season it is not safe to visit the Campagna

except in the daytime. Mosquitos are nocturnal insects, and commence to feed at sunset, so that it is unsafe to be out of doors during the evening.

The inhabitants of the Campagna now to a large extent live in houses protected by wire-gauze windows and doors, which render them mosquito-proof. With this precaution the cool evening breeze may be enjoyed, and there is no reason to exclude it. The idea that night air is injurious is firmly fixed in the minds of the inhabitants of Italy, and is another of the superstitions to which the belief in the miasmatic origin of malaria has given rise. This pernicious idea is fostered among visitors by current guide-books which urge the traveller to close his windows at night when in Italy, as if Nature did not intend that we should breathe the pure air of the skies both by day and night.

This practice of sleeping in a room with the windows closed lowers the general health by a chronic poisoning with the products of respiration, and is to be condemned. At night the windows should be open so that the sleeping apartment is sufficiently ventilated.

The idea that night air is poisonous is a myth, while the practice of sleeping with windows open does not cause chills, but on the contrary keeps the patient in health. If the weather is cold additional cover is necessary on the bed, and the fresh air of the night can be enjoyed without discomfort.

It is not necessary to create a draught through the sleeping apartment in order to ensure ventilation.

• In the case of elderly persons and invalids draughts are to be avoided, and this can be done by the exercise of a little common sense. Opponents of fresh air seem to assume that there is no middle course between the

creation of a hurricane and the maintenance of a foetid atmosphere.

In malarial districts it is necessary to have the windows protected by wire gauze, when the windows may be opened with impunity. In Rome this precaution is unnecessary.

When the first spell of cold occurs, the mosquitos begin their hibernation and remain dormant through the winter, so that the traveller may roam through all the worst malarial districts from October to June without the slightest risk of contracting the disease.

TUBERCULOSIS.

Rome once enjoyed a reputation as a health resort for cases of pulmonary tuberculosis, but has fallen out of favour, partly owing to the insanitary conditions which prevailed in the city in former days, and partly to the advent of the newer and more advertised health resorts.

A residence in Rome cannot be recommended in all cases of pulmonary phthisis, but in some it would be found beneficial, and to this point we shall return in a subsequent chapter. Here we have to consider the extent of the prevalence of pulmonary phthisis and tuberculous disorders among the inhabitants of the city, before we can deal with the question of the suitability of Rome as a health resort for those suffering from these diseases.

It is difficult to estimate among the tuberculous cases which are registered as having died in Rome the proportion of those who contracted the disease in the city, for Rome is a great resort for those who are seriously ill in the surrounding districts, and the

only place where they can obtain medical care. The statistics are also misleading, since many morbid conditions not due to the tubercle bacillus are included under the definite heading of "tabes".

The prevalence of pulmonary phthisis in a district is an expression of overcrowding and defective hygiene rather than of climatic causes, and in a city like Rome, in the poorer quarters of which the overcrowding and want of hygienic precautions are very evident, pulmonary tuberculosis must exist and spread to some extent.

The inhabitants of cities always suffer more from phthisis than those who live in the country, and a close relation exists between the density of population and phthisis mortality, which is due to the co-operation of several causes, chief among which are stagnation and impurity of the air. The heaviest incidence is upon the poorer classes, especially upon those who live in narrow streets, alleys and courts.

Conditions inside the house, such as overcrowding and want of ventilation, are even more potent, and experience has shown that with ampler air space the mortality from phthisis diminishes.

A visit to the poorer quarters of Rome makes clear the reason of the presence of phthisis, although the city has the advantage of possessing pure air and a healthy site, where amelioration rapidly occurs under normal conditions.

The poor live under very insanitary conditions in the city, often in dark unventilated ground-floor rooms and in cellars, and some of the poorer quarters are in the low-lying districts close to the Tiber. These quarters are crowded with narrow lanes, flanked by

high tenement houses crowded with poor people from the roof to the cellar. Proper ventilation of these houses is impossible, and owing to the common dislike of fresh air the windows are kept closed, and a general condition of dirt and squalor prevails. The warmth of the sun never penetrates to the street, since the height of the houses keeps the roadway always in the shade, and all conditions are present which favour the development and spread of phthisis.

When, however, our attention is directed to the better-class quarters, especially to those which have lately sprung up on the higher sites, we find different conditions. Broad streets, well-built and airy houses, plenty of sunshine and a well-drained soil render the development of phthisis impossible. Where good hygienic conditions prevail phthisis does not spread, and in the genial climate of Rome many cases show marked improvement.

But although there is a large population living under unsatisfactory and unhygienic conditions, the phthisis rate in Rome is comparatively low, and this may be fairly attributed to the purity of the air and the favourable climate.

The phthisis death rate of Rome includes not only cases occurring in the inhabitants of the city, but also those cases of infection which have occurred in the surrounding district.

The annual death rate from pulmonary tuberculosis and from disseminated tubercle of other organs from 1901-1905 averaged 1·86 per mille.

The following table gives the number of deaths which occurred in the city from the various zymotic diseases during the sixteen years from 1890 to 1905 :—

| | SMALL- POX. | MEASLES. | SCAR- LATINA. | WHOOPI- NG COUGH. | TYPHOID FEVER. | DIPH- THERIA. | TUBER- CULOSIS. |
|------|----------------|----------|------------------|----------------------|-------------------|------------------|--------------------|
| 1890 | 11 | 172 | 12 | 48 | 141 | 229 | 1312 |
| 1891 | 3 | 364 | 9 | 58 | 157 | 237 | 1411 |
| 1892 | 3 | 49 | 19 | 16 | 116 | 144 | 1583 |
| 1893 | 7 | 270 | 17 | 32 | 153 | 122 | 1464 |
| 1894 | 1 | 129 | 13 | 40 | 136 | 47 | 1382 |
| 1895 | 3 | 211 | 20 | 19 | 106 | 37 | 1528 |
| 1896 | — | 187 | 4 | 23 | 131 | 42 | 1439 |
| 1897 | 1 | 101 | 4 | 29 | 87 | 19 | 1292 |
| 1898 | 3 | 131 | 4 | 30 | 171 | 30 | 1111 |
| 1899 | 1 | 33 | 4 | 48 | 193 | 37 | 1237 |
| 1900 | 4 | 253 | 1 | 9 | 248 | 60 | 1236 |
| 1901 | 3 | 13 | 2 | 38 | 195 | 41 | 1197 |
| 1902 | 5 | 388 | 8 | 39 | 145 | 75 | 1232 |
| 1903 | 2 | 60 | 10 | 48 | 206 | 38 | 1195 |
| 1904 | 1 | 167 | 8 | 29 | 203 | 72 | 1268 |
| 1905 | 1 | 154 | 3 | 33 | 185 | 49 | 1207 |

The deaths from tuberculosis include not only deaths from pulmonary phthisis, but those from tuberculous diseases of other organs and also "tabes".

Rickets is not so frequently seen in Rome as in London, although the hygienic conditions under which the children of the poorer classes live are in general worse in the former than in the latter city.

Infant mortality is not higher in Rome than in many other cities. In 1905 the deaths of infants under one year of age were 152 per 1,000 births.

In Rome as in England infant mortality is most marked among the lower classes, who improperly feed their children, and a large percentage of the deaths among young children is due to disorders of the digestive system occasioned by unsuitable food. During the summer epidemic diarrhoea occurs among young children, and occasions a high mortality. This disease is always prevalent when the temperature of the soil ex-

ceeds 56° F., and it is a specific disease which is met with in all countries under certain conditions of temperature and weather. The children in Italy suffer more than do the children in England, because the summer temperature is usually higher, and because they are not so well nursed.

In this disease milk is often the vehicle of infection and acts like a veritable poison. Neglect and carelessness favour the onset of the disease, but the children of the richer classes, who are as a rule well looked after, are not exempt.

OTHER DISEASES.

Chlorosis and Anæmia. These diseases are comparatively rare in Rome, especially the chlorosis of the marked type that is common in England.

This may be a racial peculiarity, but the climate has much to do with the relative immunity from chlorosis, and with the rapid improvement which occurs in anæmic cases after their arrival in the city.

Many Italian women are sallow and become more or less anæmic from the lack of fresh air, for they do not to any great extent take exercise in the open air, and live too much in rooms of which the windows are usually closed. The result is a chronic poisoning with the products of respiration, together with, in many cases, sewer air from faulty drains, which leads to a condition of chronic debility. Where these conditions are absent chlorosis and anæmia are relatively rare.

Chronic bronchitis and other chronic diseases of the respiratory organs are benefited by the Roman climate, and are rarely met with among the inhabitants, but acute disease, such as **pneumonia**, is unfortunately prevalent at certain seasons. The liability to these acute

diseases of the respiratory organs is most marked at the change of season, at the beginning of spring and of autumn, and especially after the Tramontana has been blowing for a considerable time.

Although the Roman is sensitive to cold and complains of cold when to the visitor from more northern climates the weather merely seems brisk and pleasant, he makes no provision, or at best a most inadequate one, for the heating of his apartment during the winter.

The cold of a Roman winter is never very severe ; but the Roman constitution becomes enervated in the summer, especially during the prevalence of the Scirocco, and its power of resistance is lowered. When they are not warmed during the winter the Roman houses are chilly, and the liability of the sensitive Roman frame to acute pulmonary diseases is not surprising.

Visitors to Rome during the winter should not follow the customs of the Romans in this respect, and must not omit to warm their living rooms. Very little firing as a rule is required, but the rooms must be kept from becoming chilly, and warm footgear should always be worn both in the house and out of doors.

In nearly all the hotels and pensions the rooms are kept at a pleasant temperature, so that visitors who prefer to spend the winter in these houses are under the best conditions to keep well and to avoid chill.

Chronic nasal catarrh is not as common in Rome as it is in England, and the ordinary cold in the head, which is one of the afflictions of life, is generally mild when it does occur, and soon yields to treatment.

Abdominal complaints are common in the summer. Diarrhœa often occurs among visitors, sometimes from the change in the food and sometimes from chill.

This liability to diarrhoea is most marked in the summer, and unless proper clothing is worn the sudden changes of temperature in the winter may easily cause temporary catarrhs of the intestine, sometimes accompanied by slight jaundice.

As a certain variability in the temperature is to be expected, warm woollen underclothing should be worn, and the wearing of a flannel belt over the regions of the liver and spleen is a wise practice.

These slight attacks are frequently caused by imprudence on the part of visitors, who are tempted on their first arrival to fatigue themselves unduly by sight-seeing.

The attacks are rarely serious and may be avoided by taking reasonable care in respect of clothing, diet, and exercise. It is sometimes difficult to convince the visitor of the necessity of taking care of himself, and, when he suffers in consequence of obvious neglect of the requirements of his frame, he frequently blames the climate of Rome for the results of his own imprudence.

Colitis is not common, and dysentery is now very uncommon. Apart from the liability to temporary intestinal disturbances, Rome is in nothing peculiar in respect of the general incidence of bowel complaints.

Acute rheumatism, now generally recognised to be a specific disease, occurs in Rome as elsewhere, but it presents no peculiar features.

Chronic rheumatism and **rheumatoid arthritis** are rare. Neither the climatic nor the general conditions of the city favour rheumatic affections.

Gout is a disease which is less prevalent among the Romans than in England, but is not uncommon.

Skin diseases, mainly of parasitic origin, are com-

monly found among the poorer inhabitants. Eczema, lichen and psoriasis are the most common.

Echthyma is often noticed on poor children. The various kinds of ringworm, including favus, are not uncommon. Lupus is met with in various forms. During the hot season erythema is not uncommon, and visitors often suffer from prickly heat.

Eye diseases among the poorer inhabitants are common. Ophthalmia is a frequent cause of blindness. Trachoma occurs in Rome but not to the same extent as in some other Italian cities.

Arterio-sclerosis and other vascular disorders are very common in Rome. Apoplexy seems to be relatively frequent among the richer inhabitants, who indulge freely in proteid food and take little exercise.

The principal diseases of the Romans may be estimated from the usual causes of death, as shown in the following table—the percentage in each case being of total deaths in 1903.

| | Per cent. |
|----------------------------------------------------------|-----------|
| Immaturity, Congenital Weakness, Pulmonary Atelectasis . | ·6 |
| Disseminated and Pulmonary Tuberculosis | 9·12 |
| Senile Marasmus | 2·7 |
| Acute Bronchitis | 3·1 |
| Arterial Disease | 2·3 |
| Diarrhœa, Enteritis, Ulcer of Stomach | 9·1 |
| Chronic Bronchitis | 1·4 |
| Apoplexy | 5·3 |
| Kidney Disease | 4·1 |
| Pneumonia | 6·7 |
| Cerebral and Spinal Meningitis | 2· |
| Enteric Fever | 2·1 |
| Acute Broncho-pneumonia | 5·7 |
| Convulsions | 3·2 |
| Syphilis | 1·3 |
| Heart Disease | ·7 |
| Malignant Disease | 4·1 |

The following table which shows the death rates per thousand inhabitants from the more common diseases will afford a general idea of the relative prevalence of disease in the more important cities and communes of Italy according to recent official statistics:—

| | Population. | Typhoid Fever. | Malaria. | Syphilis. | Congenital Atrophy. | Acute Bronchitis. | Chronic Bronchitis. | Pneumonia. | Acute Broncho- pneumonia. | Tuberculous Diseases of Lungs and other Organs. | Heart Disease. | Apoplexy and Cerebral Congestion. | Diarrhoea, Enteritis, Cholera, Nostras, etc. | Chronic Alcoholism. |
|----------|-------------|-------------------|----------|-----------|------------------------|----------------------|------------------------|------------|---------------------------------|----------------------------------------------------------|-------------------|-----------------------------------------|-------------------------------------------------------|------------------------|
| Rome. | 480,928 | .3 | .11 | .34 | .68 | .73 | .26 | 1.21 | 1.26 | 2.56 | 1.45 | 1.08 | 1.66 | .01 |
| Naples | 569,259 | .16 | .03 | .32 | .45 | 2.43 | .49 | 1.07 | 2.15 | 1.96 | 2.5 | 1.14 | 2.56 | — |
| Milan. | 510,236 | .58 | .03 | .19 | 1.04 | .8 | .1 | 1.53 | 1.06 | 2.83 | 1.47 | 1.23 | 1.74 | .01 |
| Turin. | 343,526 | .21 | — | .1 | .9 | .52 | .22 | 1.34 | 1.3 | 2.4 | 2.12 | 1.16 | 1.69 | .01 |
| Palermo | 315,621 | .39 | .09 | .04 | 1.12 | 1.76 | .26 | 1.16 | .44 | 1.82 | 1.31 | .77 | 3.19 | — |
| Genoa | 239,941 | .18 | .01 | .14 | 1.02 | .85 | .15 | 1.25 | 2.27 | 3.0 | 2.13 | 1.05 | 1.63 | .02 |
| Florence | 208,815 | .37 | .01 | .09 | 1.16 | 1.0 | .24 | 1.37 | 1.35 | 2.91 | 2.72 | 1.47 | 1.44 | .01 |
| Bologna | 154,578 | .4 | .01 | .06 | 1.44 | .7 | .17 | 1.07 | 1.26 | 2.48 | 2.17 | 1.2 | 1.84 | .01 |
| Venice | 153,228 | .35 | .01 | .09 | 1.42 | 1.34 | .13 | 1.12 | 1.6 | 2.75 | 2.0 | 1.31 | 2.15 | .07 |
| Padua | 83,117 | .53 | .01 | .05 | 2.18 | .46 | .23 | .67 | 1.29 | 2.73 | 1.78 | 1.28 | 2.08 | .01 |
| Verona | 74,705 | .54 | — | .23 | 1.54 | 1.14 | .16 | 1.02 | 1.37 | 2.4 | 2.41 | 1.31 | 1.77 | .07 |
| Ravenna | 64,297 | .2 | .08 | — | 2.13 | .81 | .06 | 1.23 | .44 | 1.71 | 1.65 | 1.17 | 2.02 | .02 |
| Pisa | 61,927 | .55 | .06 | .06 | .95 | 1.29 | .24 | 1.16 | 1.68 | 2.91 | 2.03 | 1.26 | 1.63 | .02 |
| Catania | 154,562 | .38 | .023 | .16 | 1.26 | 2.19 | .25 | .94 | .7 | 1.5 | 1.4 | .93 | 5.31 | .05 |
| Ferrara | 83,265 | .38 | .034 | .11 | 2.19 | 1.65 | .12 | .67 | .84 | 2.28 | 1.2 | 1.61 | 1.92 | .02 |
| Trapani | 61,845 | .53 | 1.33 | .13 | .47 | 1.12 | .19 | 1.05 | .36 | 1.0 | .78 | .84 | 2.28 | — |

Nervous disorders call for no particular notice ; headache of nervous origin and megrim are complained of during the prevalence of the Scirocco, which tends to render the whole nervous system irritable and sensitive.

Cases of **insomnia** are usually much benefited by the Roman climate, and very few cases of insomnia among residents or visitors are ascribed to climatic conditions.

Diabetes is a comparatively rare disease among the inhabitants.

Bright's disease is by no means unknown among the Romans, but is relatively not so common as in England. The climate usually suits patients suffering from Bright's disease, who are often much improved in health after a short residence in the city.

The population of Rome has fluctuated in a very marked manner since the city was founded by a band of Alban shepherds 2,500 years ago. The history of Rome is that of modern civilisation, and her title of Eternal City is appropriate, for she has endured through the ages in spite of wars, sackings, burnings, pestilences and famines, rising again and again from her ashes and dominating the world at one time by her temporal power, at another by her spiritual influence, and the city has given her laws and her religion to nearly the half of mankind.

The number of her inhabitants has fluctuated in proportion to her prosperity. In her golden days the whole area within the Aurelian wall was densely populated, and the number of her inhabitants probably exceeded a million ; during the middle ages her fortunes ebbed and her population dwindled to 30,000, but since 1800 the number of her inhabitants has steadily increased from 135,000 to over half a million.

During the past thirty years the population has been doubled.

In spite of all the vicissitudes of fortune to which Rome has been subject the inhabitants have maintained a type to which new-comers gradually become assimilated ; showing how climate can modify the physical and moral qualities of individuals.

The Romans are in general dark, with black hair and good teeth, and have a good presence which is noticeable even among the lower classes.

The physiognomy of the Roman women is dignified, and the type of the Roman matron familiar to us from ancient busts is often seen in the streets.

The Romans have good manners and a pleasant, frank address. The people are democratic and command the respect of those who come in contact with them. In business matters they are capable, and there are few who could have solved the problem of the renaissance of their city more satisfactorily than the present generation, and for them no doubt a bright and prosperous future is in store.

CHAPTER IV.

ROME AS A HEALTH RESORT.

WE have now to consider the cases of illness for which the climate of Rome would be suitable.

The Roman climate resembles that of the Riviera, with some differences which are in its favour. In both cases the proximity of the Mediterranean, which is a vast reservoir of heat, modifies the rigours of the winter, and the mean temperatures of the winter and spring are practically the same in both, with very similar peculiarities. Thus in Rome and on the Riviera the difference between sun and shade temperatures is marked, and visitors must adopt suitable precautions. The diurnal variations of temperature exert a tonic effect and are fairly regular, while seasonal variations are not excessive. There is a similar but in Rome a much less sudden and marked fall of temperature at sunset with a subsequent rise a little later.

The protection from cold winds is more complete in Rome than on the Riviera. Strong winds, which are so much in evidence on the Riviera, are conspicuous by their rarity in Rome.

The Tramontana, which is dreaded by visitors on the Riviera, is welcomed in Rome, for it brings bright,

cheerful, healthy weather, although at times it is cold and unpleasant.

Nowhere in Rome will be seen the clouds of dust which are the torment of invalids in the South of France.

Rome enjoys as much sunshine as the Riviera. From October to June there are on the average over 100 clear, sunny, cloudless days, and Rome can boast of being a city of sunshine.

The mean annual rainfall is approximately the same as that of the Riviera; the average number of wet days and the average winter rainfall are approximately the same. In both places continued broken weather is rarely met with; on rainy days the rain comes down generally in sharp showers with intervals of bright sunshine. Few indeed are the days in either place on which the visitor cannot go out.

In former days Rome was considered a health resort of the first order, especially for those suffering from pulmonary tuberculosis; but, owing to the insanitary condition and unsatisfactory accommodation of the city, it gradually fell into disfavour and other health resorts became fashionable.

But during the past twenty years Rome has been converted from an insanitary city into one of the healthiest in Europe; and the pure air, which is its priceless possession, can be now enjoyed without risk, and there is every reason to believe that as the new conditions of Rome are more fully realised it will regain its old reputation among doctors and patients, especially as the Riviera, which for a time seemed to be drifting out of fashion, is again deservedly attracting a large number of visitors.

The old prejudice against Rome is slowly dying out among doctors, and in some of the more recent works on climate Rome is again being spoken of in favourable terms. Dr. Tibbles in his work on *Food and Hygiene* (1907) says quite truly that "when all the qualities of Rome are taken into account, it is considered one of the best climates for an invalid who can take plenty of out-of-door exercise".

One of the advantages which Rome possesses, and which is not shared by many other health resorts, is the abundant variety of healthful occupations and recreations which it offers, and those who have experienced the unutterable tedium of life in most winter resorts will appreciate what this implies. The accommodation for invalids which is now available in Rome cannot be surpassed, and Rome can fearlessly invite comparison with any other continental resort. No climate and no health resort are equally suitable for all invalids, and life in a town, even though it has plenty of open spaces and air, with sheltered and with bracing districts, may not be so beneficial as life in the country.

Rome has so much to offer that the visitor who comes in search of health must exercise due discretion, and must bear in mind the Italian proverb, *Chi va piano va sano*. The delicate visitor must not attempt to rush the sights or fatigue himself by trying to "do" Rome, and if in spite of warnings he persists in tiring himself out he must not blame Rome for the result of his own imprudence. From his arrival the invalid visitor would be well advised to put himself under medical guidance and to do what his doctor tells him.

It is unreasonable to consider Rome unsuited to invalids because the city is attractive, for nothing is more

simple than to arrange the sight-seeing in accordance with the powers of the visitor.*

Still, there is great temptation to the visitor, especially if he is making a short stay, to over-fatigue himself, and much of the illness that is seen among visitors in Rome is due to this cause. A holiday spent in endeavouring to see all the sights of Rome in a fortnight cannot be productive of anything but harm, and visitors are well advised to be content with seeing what they can comfortably and without fatigue and to leave the rest for their next visit to Rome. If this rule were generally followed, and if visitors would remember that the variations of temperature are sometimes sudden in Rome and guard against the risk of chills by wearing suitable clothing, there would be little heard of the sicknesses of Rome.

PHTHISIS.

Sir James Clarke, who many years ago was a great authority upon the climatic treatment of diseases, especially those affecting the lungs, and who well knew the peculiarities of Rome, wrote in reference to phthisis: "I have known many persons who left England with such manifest symptoms of disease as to afford ground for serious apprehension; these symptoms continued during their journey, but totally disappeared after a short residence in Rome," and also that "Rome is very beneficial in bronchial affections, especially in cases where the diseased organs have suffered from great irritability".

If such a favourable account could be given of Rome

* In a recent treatise on Health Resorts the delicate visitor is warned against Rome, solely upon the ground that the attractions which the city offers may prove too much for his power of self-restraint. The warning, while a compliment to the city, is too emphatic, as the average visitor to Rome is not devoid of intelligence.

in the days when the city was lacking in sanitation and accommodation, when malaria was prevalent within the walls during the summer, and when the accommodation for visitors was confined to the lower quarters, such as the Piazza di Spagna and the Via Sistina, what results may we not confidently anticipate now that the city has been remodelled, and the higher districts have become available for residence and covered with wide open streets, splendid houses and hotels with large airy well-warmed rooms, affording every luxury and comfort?

But in spite of the comparative absence of dust and strong winds the climate is not suitable for all cases of pulmonary tuberculosis.

Dr. Taussig, who formerly practised in Rome, wrote in 1870 on the subject as follows:—

“What we have observed as to the physical condition of the Romans and of the rarity with which scrofula occurs in this country would lead us also to conclude that pulmonary phthisis would be found less frequently here than elsewhere, and this opinion would be confirmed if we had data by which we could compare the number of phthisical persons in Rome with that in other cities.

“The situation of Rome nearly at the level of the sea, the absence of strong winds, the little dust, the Scirocco which softens the cold, the uniform temperature maintained inside the apartments, the soothing qualities of the atmosphere, the calm of life, the facility offered for daily exercise in the open air, all these factors contribute to render Rome most suitable for those suffering from lung diseases.

“We have abundant practical proof of the correctness of these theoretical reasonings—the experience of foreigners who arriving here in the first stages of their

illness find the climate genial, and return for several winters, the better to profit from the benefits afforded.

“I do not speak of cases in which hectic fever is already established nor of acute phthisis—in my experience these cases do not do well in Rome, but are accelerated in their downward course and more quickly reach their fatal termination.”

The climate of Rome is well suited for cases of chronic phthisis, complicated with bronchitis and emphysema, provided that there is no very active mischief. Some cases of early phthisis do not do well in elevated regions and require a climate which is not too bracing or too relaxing. Such cases, especially if complicated with albuminuria, but in which the lung destruction is not very great, and cases in which there is much nervous irritability, often derive benefit from a stay in Rome.

Dr. Huggard says that “for quiescent tubercle in fairly robust patients Rome is not unsuitable”. Acute and subacute cases of phthisis should not be sent to Rome, or in fact anywhere else. They are best treated at home or in sanatoria.

Generally speaking, those cases which derive benefit from the climate of the Riviera also do well in Rome, which is less windy and dusty, and in which very good accommodation is available, while the attractions of Rome are far more conducive to health than the social dissipation into which so many persons plunge who go to some other health resorts.

A city is not a suitable place to which to send persons suffering from active tuberculous disease, but patients with quiescent mischief in whom the disease has become arrested will probably derive benefit from the climate provided that they do not take up their residence in the

low-lying and crowded parts of Rome. Such cases should live in the higher districts of Rome such as the Ludovisi quarter, and around the Piazza Esedra, in airy sunny apartments or in one of the excellent hotels which are to be found there, or better still in the new nursing home of the Blue Sisters on the Coelian Hill.

Persons suffering from pulmonary tuberculosis should be under medical care, and if they value their chances of recovery should attend to the advice of their physician, who should arrange their lives for them. It is impossible to lay down hard and fast rules; a careful physician can often warn a patient in time if the climate is not likely to be suitable, and in all cases can direct him so that he may obtain the maximum of benefit that the climate can afford.

BRONCHIAL AFFECTIONS.

Rome will be found generally suitable for cases of chronic bronchial catarrh and other chronic catarrhal affections of the respiratory organs, especially when attended with much expectoration.

The pure air which is not too dry nor too cold exerts a sedative and restorative effect upon the inflamed tubes and even during the winter, which lasts for two months in Rome, the bronchitic subject can usually get out of doors every day.

He must take due precautions to avoid the chill of the late afternoon and be within doors by 3 P.M.; even this will allow him several hours of open-air life.

Rapid cure of these chronic affections is not to be expected, but great improvement will follow a residence in an appropriate quarter of Rome.

Old bronchial patients often find the more sedative

air of the low-lying quarters more beneficial to them than the more bracing air of the higher districts.

ASTHMA.

Asthmatic patients generally feel well in Rome, but in the nervous form of the disease no precise data can be given. Each case is a law unto itself, and only experience will discover the climate that will be the most beneficial. There is no reason why Rome should not be advantageous.

In the catarrhal form of asthma, which is caused by or associated with attacks of bronchial catarrh, especially in senile cases attended with much expectoration, the Roman climate will usually prove very beneficial.

GOUT AND RHEUMATISM.

Gouty and rheumatic cases generally derive much benefit from a residence in Rome.

The dry soil, the low relative humidity and the genial climate combine to make Rome very suitable in such cases. Occasionally marked improvement occurs rapidly after arrival in cases of chronic rheumatism, if not of too long standing. It is important to select an appropriate quarter of Rome, and to choose a sheltered and dry part for residence.

BRIGHT'S DISEASE.

Patients recovering from nephritis derive benefit from the climate of Rome, and the same may be said of those suffering from chronic Bright's disease. Such patients should live in warm sunny apartments, or in sunny rooms in one of the many excellent hotels of the

city, and should adopt proper precautions against chills, such as the wearing of warm woollen underclothing.

During the winter months a change to a more southerly health resort may be desirable if the weather becomes cold, but as these patients are usually under medical supervision, any necessary change would be advised by the physician, who would also regulate the mode of living that is requisite. The genial climate, combined with the excellent accommodation that is available, makes Rome very suitable for such cases.

DIABETES.

Diabetics nearly always find the climate advantageous, and the disease is uncommon among the inhabitants of the city. Severe cases are not suitable for treatment away from home and do not bear travelling very well, but patients less seriously ill, who often become restless and require a change, may be sent here.

ANÆMIA AND DEBILITY.

The restorative effects of the Roman climate are very valuable for the anæmic and debilitated, especially after recovery from acute illness. The many interests of Rome engage the mind, and the bracing air and the absence of excitement combine to make it an ideal place for convalescents.

Chlorotic cases derive marked benefit from a residence in Rome.

NERVOUS DEPRESSION AND NEURASTHENIA.

A change to Rome may be advised in the case of nervous and debilitated persons suffering from depression following a period of overwork.

In such cases it is necessary to provide some kind of occupation which will interest the patient without fatiguing him. To send a patient suffering from nervous depression to a health resort, where the main occupation of the visitors is to kill time, is a mistake, and to a patient who is intelligent, as so many of these cases are, Rome can be confidently recommended.

CLIMACTERIC PERIOD.

Women during the climacteric period often suffer from nervous depression and are suitable cases to send to Rome.

INSOMNIA.

Cases of insomnia generally derive benefit from a stay in the city, if a sheltered and quiet locality is chosen for residence.

The more bracing parts might be found too stimulating, and the lower and more sedative districts, such as the neighbourhood of the Piazza di Spagna, should be selected for residence.

SENILITY.

Old people require sunshine and quiet occupation. For them Rome is an ideal city. They can have every comfort and can enjoy a greater share of active life than in a colder climate.

Intellectual interests surround them and the climate will prevent or retard the onset of debility. All the climatic conditions which are favourable to the prolongation of the life of aged persons are present in Rome.

GENERAL CONSIDERATIONS.

The invalid and visitor who intends to come to Rome will desire to know what facilities exist for his welfare in the event of illness. Nothing is more dreary than a period of sickness in a strange country far away from compatriots and friends, but this eventuality the visitor to Italy need not take into account. In Rome eight English and American physicians practise. Under a sensible arrangement the members of the medical profession of both Italy and England are allowed to become registered in both countries, and are free to practise. Several Italian physicians are upon the English register, and Italians in London are able to obtain the services of their compatriots in times of illness. This is a boon which can only be fully realised by those who have been unfortunate enough to fall ill in a foreign country, far from their own people.

There is indeed something in that much abused phrase of a doctor knowing his patient's constitution. The art of medicine does not consist only in the administration of drugs, but includes the regulation of the habits of life upon a hygienic basis. The English and the Americans have become a fresh air loving race, their ways of living, their habits and ideas often differ fundamentally from those of other nations, and treatment which might be appropriate for the latter is not necessarily that which is most suitable to the former.

In England and America the science of hygiene is far in advance of that of other countries, and the practice of medicine tends every year to depend more upon the enforcement of sound hygienic rules than upon the administration of drugs.

English-trained nurses can be obtained throughout Italy, and in Rome there are two English nursing homes, in which the visitor will find every comfort.

The Little Company of Mary, an English Roman Catholic nursing sisterhood, locally known as the Blue Sisters, has been established in Rome for twenty-five years. Trained nurses are sent out to hotels or apartments, and patients are received in their new nursing home at 6 Via S. Stefano Rotondo, where they are attended by their own physicians.

This home has recently been built upon an open site commanding magnificent views of the Campagna and of the distant Alban Hills. When completed there will be accommodation for a large number of patients, and the building has been designed to provide every comfort and convenience for invalids, with all the latest modern arrangements. Provision has been made not only for those who are suffering from acute disorders, but also for those who require sanatorium treatment. Necessitous cases are received by the Sisters without payment, and the charges are made in accordance with the means of the patients.

The Anglo-American Nursing Home is at 265 Via Nomentana, where patients are received for treatment and are attended by their own physicians.

A staff of English-trained nurses is available in cases of illness in hotels and apartments.

The institution was founded in 1899 under the patronage of the British and American Ambassadors and of some of the most influential British and American residents in Rome, to provide qualified certificated nurses to those in need of them, and to establish a hospital where British and Americans, in case of serious

illness, could be nursed. The Home is under the direction of a committee, and two free beds are open to poor persons of British or American nationality, who are unable to pay the usual fees.

To meet a want which has been felt very much in Rome both the Blue Sisters and the Anglo-American Home are about to build small isolation blocks in which visitors who have the ill-luck to fall ill with infectious disease may be nursed.

Instead of having only the public hospital to go to visitors will be received in these blocks, and provision is being made so that each patient will have his own room and a special nurse, and will be under the best conditions to regain his health, while he will be completely isolated.

Whether poor or rich the English and American visitor will find that every care will be given him when he is stricken with illness. Those who are well-to-do are expected to pay in accordance with their means, but the poorer visitor will receive the same kindness and attention, and the help given will not be offered in any unpleasing form.

There are several good English chemists, whose pharmacies are in every way up to the English standard. Foreign specialities are dearer than in England, because of the high duty, but the charges for medicine are thoroughly reasonable.

The following are among the principal establishments in Rome :—

Baker & Co., P. di Spagna 41-42 (P. d. Terme 92).

Bartels, G. & Co., Piazza Barberini 49.

Evans, J., Via Condotti.

Roberts & Co., Corso Umberto I 417-418.

Wall, W. A., Via San Nicola da Tolentino 1.

There are several establishments for the treatment of disease by physical methods. The Kinesiterapico Institute in the Via Plinio is one of the most complete in Europe, and contains baths of all kinds, a well-arranged room for mechanical treatment on the Zander system, and rooms for treatment by light and electricity.

In concluding this review of the many advantages possessed by Rome as a winter residence and health resort, I may quote again from Dr. Taussig, whose words are still as much to the point as when they were written many years ago.

“Before ending, I wish to add that I am not ignorant of the fact that several tourists and even some writers have criticised unfavourably the Roman climate. The latter, I imagine, have not taken the trouble to learn its peculiarities, or to become acquainted with the different circumstances which render a stay in this city preferable to a visit to other health resorts. With regard to the former I maintain that their opinion has been formed by casual and accidental impressions. The temporary continuance of bad weather, or of the Scirocco, or a season exceptionally cold or rainy has been, I believe, the reason for their unfavourable opinion.

“A little patience and experience, and especially willingness to recognise the real truth, and not to be put off by ill-considered statements, will soon make the foreign observer familiar with the climate, and instead of yielding to temporary impressions he will be convinced by ample evidence that the temperature is mild and that the sky is generally clear and sunny. And how can the vegetation of Rome be explained, which is always so luxuriant even in the winter, if the detractors of the Roman climate are not in the wrong?

“How could the palm-trees of Syria and Africa flourish in the gardens of Rome if the climate is not good?

“Its winter is tempered by sunshine and mitigated by the Scirocco, its winds are softened by the mountains and the nearness of the sea, its soil and its pavements prevent dust. These theoretical advantages are proved by the general good health of the population, by the rarity of scrofula and phthisis, and by the well-known longevity of its inhabitants.

“Rome is not exempt from sicknesses, but not one is endemic. I have already spoken of the variability of the temperature, which may occasionally be sudden, but this peculiarity has only to be known to be rendered harmless by the adoption of suitable precautions. I have defended the people of the city who have been so often accused of indolence, and I have shown that they can be active and hard-working where opportunity and encouragement are not lacking. I have alluded to the influence which this temperate climate exerts upon the physical constitution and the moral and intellectual character of the inhabitants, and I leave the final decision to the impartial visitor who comes to the Eternal City.”

The following list of books on Rome, other than guide-books, for which I am indebted to Mr. W. Miller, will be found useful to visitors:—

| | | | |
|--------|------------------------|------------------------------|--------------------|
| HARE : | <i>Walks in Rome.</i> | New edition by Mr. Baddeley. | } Topo- graphy. |
| HARE : | <i>Days near Rome.</i> | Ditto. | |

| | | | |
|----------------|--------------------------------------------------------|------------------------------|------------|
| MOMMSEN : | <i>History of Rome,</i> | Dickson's translation. | } History. |
| MERIVALE : | <i>Romans under the Empire.</i> | | |
| GIBBON : | <i>Decline and Fall.</i> | | |
| Mr. CRAWFORD : | <i>Ave Roma Immortalis.</i> | | |
| AMPÈRE : | <i>L'histoire romaine à Rome.</i> | | |
| AMPÈRE : | <i>L'Empire romain à Rome.</i> | | |
| GREGOROVIVS : | <i>History of the City of Rome in the Middle Ages,</i> | translated by Mrs. Hamilton. | |
| BARRY : | <i>The Papal Monarchy.</i> | | |

| | | |
|----------------|---------------------------|------------|
| ZOLA : | <i>Rome.</i> | } Fiction. |
| BOURGET : | <i>Cosmopolis.</i> | |
| Miss ROBERTS : | <i>Mademoiselle Mori.</i> | |
| Mr. CRAWFORD : | Nearly all his novels. | |
| BAGOT : | Ditto. | |

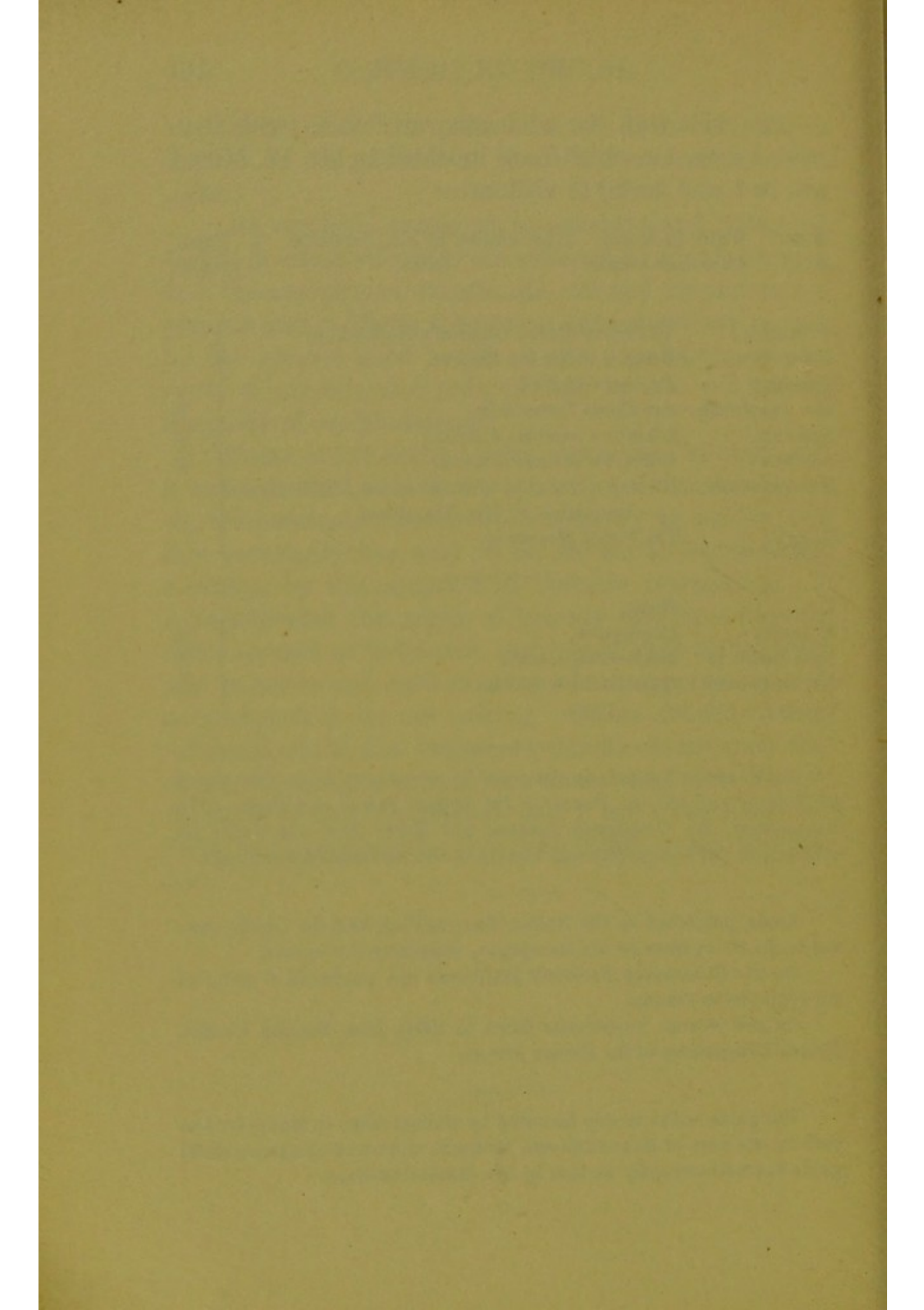
Dr. T. ASHBY's papers on the classical topography of the Campagna in Vols. I. and III. of *Papers of the British School* and Professor G. TOMASSETTI, *La Campagna Romana nel Medio Evo*, are works for students of the topography and history of the surroundings of Rome.

Lazio, published by the Italian Touring Club, and the *Guida Abate* are books for cyclists on the Campagna, especially the former.

On the Catacombs Professor MARUCCHI has published a series of monographs in Italian.

On the Forum (discoveries down to 1904), Mrs. BURTON BROWN, *Recent Excavations in the Roman Forum*.

The guide-books mostly favoured by visitors when in Rome are the well-known ones of BAEDEKER and MURRAY, and an excellent practical guide has been recently written by Mr. REYNOLDS-BALL.



INDEX.

- | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Abdominal Complaints, 80. Accommodation for Visitors, 42. Acetosa Acqua, 36. Air of Rome, 22. Albule Acque, 37. Amusements, 52. Anæmia, 79, 94. Anglo - American Nursing - Home, 97. Apartments, 43. Aqueducts, 31. Archæological Societies, 55. Arterio-sclerosis, 82. Asthma, 93. Aurelian Wall, 5.</p> <p>Barometric Pressure, 15. Birth Rate of Rome, 63. Blue Sisters, 97. Bookbinding, 54. Bright's Disease, 84, 93. Bronchitis, 79, 92. Bureau International, 50.</p> <p>Campagna, 5. Chemists, 98. Chlorosis, 79. Churches, 54. Circulating Libraries, 55. Cisterns, 35, 47, 67. Civitavecchia, 39. Clarke, Sir J., on Rome, 89. Climate, 1, 23, 86. Climacteric Period, 95. Clothing, xviii, 25. Cold, xix.</p> | <p>Colitis, 81. Crude Death Rate, 60.</p> <p>Death Rate of Rome, 63. Deaths from Zymotic Disease, 78. Diabetes, 84, 94. Diarrhœa, 80. Diphtheria, 64. Diseases, Principal Roman, 82. Dysentery, 81.</p> <p>Enteric Fever, 64. Esedra Piazza, 45. Excursions, 57. Eye Diseases, 82.</p> <p>Felice Acqua, 33. Fiuggi Acqua, 41. Food Supply, 50.</p> <p>Geography, 5. Geology, 7. Golf Club, 56. Gout, 81, 93.</p> <p>Health of Rome, 60. Height of City, 6. Hotels, 43. Huggard, Dr., on Rome, 91. Hunting, 56.</p> <p>Infant Mortality, 78. Insomnia, 84, 95.</p> <p>Kinesiterapico Institute, 99.</p> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

- Malaria, 67.
 Marcia Acqua, 34.
 Measles, 63.
 Mineral Waters, 35.
 Mortality from Malaria, 71.
 Mosquitos and Malaria, 68.
 Motors and their Accommodation, 57.

 Nasal Catarrh, 80.
 Nervous Disorders, 84.
 Nervous Depression, 94.
 Neurasthenia, 94.
 Night Air, xv, 74.
 Nurses, 97.

 Occupations, 52.
 Oysters cause of Enteric, xiii, 65.

 Paola Acqua, 33.
 Pensions, 42.
 Phthisis, 75, 89.
 Physicians, English, 96.
 Piazza di Spagna, 43.
 Pliny's Account of the Winds, 18.
 Pneumonia, 79.
 Population, 62, 84.
 Prevailing Winds, 18.
 Price of Apartments, 48.

 Racing, 57.
 Railways, 58.
 Rainfall, 15.
 Recorded Death Rates, 61.
 Relative Humidity, 14.
 Rheumatism, 81, 93.
 Rheumatoid Arthritis, 81.

 Rickets, 78.
 Roman Climate, 23.
 Roman Fever, xiii, 67.
 Roman Weather, xxi.

 Salubriousness of Rome, xii.
 Sanitation, 46.
 Santa Acqua, 35.
 Scarlatina, 63.
 Scirocco, xx.
 Selection of Apartments, 45.
 Senility, 95.
 Sewerage, 41.
 Shopping, 54.
 Sistina, Via, 44.
 Small-pox, 63.
 Stigliano, 39.
 Streets of Rome, 54.
 Sunshine, xxi, 17.

 Table of Death Rates, 62.
 Taussig, Dr., on Rome, 90, 99.
 Temperature, 9.
 Tibbles, Dr., on Rome, 88.
 Time to Arrive, 58.
 Tramontana, xxi.
 Trevi Water, 32.
 Tuberculosis, 75.
 Typhoid Fever, xii, 64.

 Vegetation, 26.
 Velocity of Wind, 21.

 Water Supply, 31.
 Winds, 18.
 Wines, 51.

 Zymotic Death Rate, 63.







