

An historical account of a new method of treating the scurvy at sea : containing ten cases, which shew that this destructive disease may be easily and effectually cured without the aid of fresh vegetable diet / By David MacBride.

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AN
HISTORICAL ACCOUNT
OF A
NEW METHOD
OF TREATING THE
SCURVY at SEA:
CONTAINING
TEN CASES,

Which shew that this destructive DISEASE, may
be easily and effectually CURED, without the
Aid of fresh Vegetable Diet.

By DAVID MACBRIDE, M.D.

L O N D O N :

Printed for A. MILLAR and T. CADELL, in
the Strand. MDCCLXVII.

HISTORICAL ACCOUNT

OF

THE METHOD

OF TEACHING THE

SCIENCE OF

CONTAINING

THE

WHICH IS THE BASIS OF THE SCIENCE OF
TEACHING, AND ESPECIALLY OF THE
TEACHING OF THE SCIENCE OF



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A N
HISTORICAL ACCOUNT
OF A
NEW METHOD
OF TREATING THE
SCURVY at SEA, &c.

IT was an Observation of the celebrated Dr. Mead †, that it is not so easy a Thing to serve the Publick as is commonly imagined; but, said he, they who are acquainted with the several Motives which influence the Actions of Men, and consider that Self-interest, Envy, Pride, and Obstinacy, bear no inconsiderable Share, will readily see the Springs of that seemingly unaccountable Disposition of Mind, which prompts People to despise, neglect,

† In his Preface to the Account of Mr. Sutton's Contrivance for extracting foul Air from Ships.

or even oppose the putting in Practice useful Experiments.

As a Confirmation of the Justness of this Charge, I may fairly be allowed to allege the small Degree of Attention, that, in the Course of more than five Years, I have been able to procure to my Proposal for trying *fresh Wort*, or *Infusion* of *Malt*, as a Substitute for the Juices of fresh Vegetables, in the Cure of the Scurvy *at Sea*.

For as *Wort* is a Liquor perfectly similar, in all its Qualities, to the recent Juices of the sweet Vegetables, which are known, from repeated Experience, most certainly to cure the Scurvy; I naturally inferred, that if taken like them in a Quantity sufficient, it would, in all human Probability, produce the same salutary Effects.

Now as *Malt*, if well dried, and carefully kept in a proper Part of the Ship, may be preserved sound for a great Length of Time, I proposed that it should be carried to Sea, in Order to be brewed into *Wort* as often as it might chance to be wanted,
and

and thus prove a Remedy always in readiness against a most fatal Disease.

This Proposal was originally sent in the Spring of the Year 1762, to Sir *John Pringle*, Dr. *Hunter*, and *Henry Tom*, Esq; then one of the Commissioners for taking care of sick and wounded Seamen: These Gentlemen were so far persuaded of the Reasonableness of the Scheme, and the Probability of its Success, that in consequence of their Application, an Order was obtained, from the Board of Admiralty, to have the *Wort* tried in the Naval Hospitals, at *Portsmouth*, and at *Plymouth*.

But as it was necessary, in order to determine the genuine Effects of the Remedy proposed, that the Patients should, during the Time of the Trial, be entirely debarred from the Use of every Sort of fresh Vegetable, this Restriction was deemed so severe, and looked so like retarding Men's Cures for the sake of Experiment, that it occasioned a general Murmur and Disgust, and of course, put a Stop to the further Prosecution of the Scheme at the Hospitals: Nay the Patients made such a Variety of grievous

Complaints, as to impose on the Gentlemen who had the Superintendency of the Sick at those Places, and make them believe that the *Wort* produced very bad Effects.

The Admiralty, nevertheless, issued a second Order, to have *Malt* carried to Sea, and the *Wort* tried on Ship-board, where no Temptations of fresh Vegetables could offer to make the Men uneasy, and where it was expected the Patients would chearfully submit.

But as no Report of either the good or bad Effects of the *Wort*, was ever returned to the Office, in consequence of this Order, I take for granted that no Attention was paid to it; which may be easily accounted for, from that Aversion to Innovation and Experiment which is so prevalent among the Bulk of Mankind, and especially among Seamen.

Beside these publick Attempts to have a Trial of the *Wort*, I also made some private Applications to such Navy Surgeons as I thought I could influence, but never could
get

get any thing done. Indeed the Peace, which took place soon after, left few or no Opportunities, in the Navy at least, of having the Experiment made, as the Ships, after that Period, were seldom under the necessity of remaining so long at Sea as to become obnoxious to the Scurvy.

A Course of Experiments, in which I engaged about this Time, confirmed me still more and more, in the Opinion that *Wort* would actually cure the Scurvy; accordingly, I drew up all the various Reasons that occurred in favour of this Persuasion, and formed them into an Essay, which was published together with four others, on Medical and Philosophical Subjects, in *May* 1764, under the Title of *Experimental Essays*.

As this Book contains all the Theoretical Reasoning concerning these Matters, I purposely omit saying any thing on that head, but refer such Readers as may wish to be informed, to the Essay above-mentioned;—the present Publication being intended, not only as a Supplement, but also for the Use
of

of Persons, not of the Medical profession, and who may occasionally chance to stand in need, or wish to promote the Use of the Remedy proposed.

Though it be so long since the Proposal was made publick, yet it is only the other Day that I have heard of any Attention having been paid to it, by those who had the Power of making the necessary Trials: At length however I have the Satisfaction of receiving two Accounts, which are so very interesting to the Welfare of a very valuable Set of Men, that I look on it as a Duty to make them publick without Delay, in order that a Disease, hitherto so destructive, may no longer be suffered to carry off such Numbers, when it may easily be guarded against by a Remedy so simple and innocent.

The first Account I received was from the Captain of his Majesty's Ship *Jason*; for this Ship having been ordered to *South America* in *October* 1765, her Commander promised me that the *Wort* should certainly be tried if any Opportunity offered during the Course of the Voyage.

She returned to *England* in the latter end of *March* last, when the Captain wrote me that a Trial had been made, and that the *Wort* had succeeded beyond Expectation; at the same Time, telling that the Surgeon would immediately furnish me with a particular Detail.

Soon after, I received the Surgeon's Letter dated 9th *April* 1767, together with his Journal containing his Practice during the whole Voyage.

These Papers arrived just in Time for me to extract the Cases wherein the *Wort* had been given, and add them, by way of Postscript, to the second Edition of the Book formerly mentioned.

But as the Journal contains a general Account of the State of Weather and Diseases, in a Part of the World hitherto undescribed, I apprehend it must prove acceptable to many Readers, and therefore give it here entire.

A M E -

MEDICAL JOURNAL

KEPT BY

Mr. *ALEXANDER YOUNG,*

*Surgeon of his Majesty's Ship Jason, Captain
John Macbride Commander, from the
30th Day of September 1765, to the
20th of March 1767.*

‘ On the 30th *September* we sailed from
‘ *Long-reach*; from that Time, to the 25th
‘ *October*, there were no Complaints of such
‘ Consequence as to merit a Place in this
‘ Journal.

‘ *October* 25th—We left *England*, and
‘ being happy in meeting with very favour-
‘ able Winds, arrived at *Madeira* in eight
‘ Days.—Our first Complaints on coming
‘ into warm Weather were of the inflam-
‘ matory Kind, but slight, and yielding easily
‘ to the common Methods of Treatment.—

‘ The

‘ The Mercury, in this Run, rose in *Fahrenheit’s* Thermometer from 40 to 72.

‘ From *November* 5th to the 22d—(the
 ‘ Day when we reached the Island of *St.*
 ‘ *Jago*) the Inflammatory Complaints still
 ‘ continued to be the only ones, and none
 ‘ of them fatal. The Mercury, from 72
 ‘ to 80.

‘ From the 22d *November* to the 5th
 ‘ *December* (the day we crossed the Equator,
 ‘ the Mercury rising from 80, to 84) many
 ‘ were seized with Fluxes, attended with
 ‘ violent griping and great Sickness. As
 ‘ these Disorders were supposed to proceed
 ‘ from the *St. Jago* Water, some *Elixir* of
 ‘ *Vitriol* was put into the Scuttle-butts every
 ‘ Morning; which seemed to produce a very
 ‘ good Effect, for the Day we crossed the
 ‘ Line there was only one Man down with
 ‘ the Flux. Every other Precaution was
 ‘ also made use of in order to keep the Peo-
 ‘ ple healthy; the Ship’s Timbers being
 ‘ new, Fires were made between Decks,
 ‘ and she was frequently smoaked with Tar
 ‘ and Brimstone; the Men’s Chests were

‘ examined every Week, and they were
 ‘ obliged always to keep themselves clean
 ‘ under penalty of having their Allowance
 ‘ of Spirits stopt.

‘ The Cure of these Fluxes was accom-
 ‘ plished by bleeding, in the first Place, an
 ‘ Emetic in the Evening, and a Dose of
 ‘ Rhubarb with a few Grains of Nut-
 ‘ meg the ensuing Morning: When the
 ‘ Symptoms did not yield to these Means, I
 ‘ had recourse to the Ipecacuan in small
 ‘ Doses, of four or five Grains, repeated
 ‘ for three or four Times at the Interval of
 ‘ four Hours.

‘ From *December* 5th to the 18th—Fair
 ‘ Weather and little Sickness; the Mercu-
 ‘ ry continued about 79—but this Night,
 ‘ it fell all at once to 69, the Wind chang-
 ‘ ing to the Southward.

‘ From *December* 18th to *January* 8th,
 ‘ 1766, the Day on which we arrived at
 ‘ *Port Egmont* (in the *Falkland Islands*, off
 ‘ the Coast of *Patagonia*, in the Latitude of
 ‘ 52 South) we had a good deal of stormy
 ‘ cold

' cold Weather with Hail, and the Mercur-
 ' ry gradually fell from 69 to 59: We
 ' were, nevertheless, pretty healthy, the
 ' People being in general very well cloathed.
 ' —What Diseases we had, were Fevers of
 ' the Inflammatory Kind, Pleurifies, Rheu-
 ' matisms, and Coughs; all of which yield-
 ' ed to plentiful bleeding, cooling Purges,
 ' and nitrose Medicines;—so that hitherto
 ' we did not lose a Man.

' There were also some Appearances of
 ' the Scurvy, such as painful and bleeding
 ' Gums, loss of the healthy Complexion,
 ' and Lassitude—particularly in one *Willi-*
 ' *am Curtis*, a Joiner by Trade.

' The Captain having some Time ago
 ' made me a Present of a Book written by
 ' his Brother, wherein it is strongly recom-
 ' mended to try *Wort* in the Cure of the
 ' Scurvy, and being provided with a Store
 ' of good *Malt*, I was determin'd to make
 ' use of it the first Opportunity.

' This *Curtis* was about 24 Years of
 ' Age, a poor sickly Creature at best;—

‘ he complained of Lassitude, rotten Gums,
 ‘ stinking Breath, and was generally much
 ‘ bound up in his Belly; he was of a pale-
 ‘ ish green Colour, the Pulse weak, his
 ‘ Flesh wasted away, and so feeble that he
 ‘ could scarcely walk.

‘ I put him on a Course of the *Wort*,
 ‘ and made him drink a Pint of it every
 ‘ Morning; this Course was continued for
 ‘ about a Month, and agreed so well with
 ‘ him, that by the Time we arrived at
 ‘ *Port Egmont* he was tolerably recovered.
 ‘ —It is to be observed however, that
 ‘ the Captain having some Apples and
 ‘ Lemons on Board, the sick Man had eve-
 ‘ ry Day four Apples, and two Lemons so
 ‘ long as they lasted.

‘ From *January* 8th to *February* 5th,
 ‘ Stormy Weather but clear.—In this
 ‘ Time we made a Circuit round the
 ‘ Islands, and finding great Plenty of Wild-
 ‘ fowl, such as Geese, Ducks, and Snipes,
 ‘ and Abundance of *Wild Celery*, and *Sorrel*,
 ‘ our

‘ our People lived well and were perfectly
 ‘ healthy. The Mercury from 59 to 53.

‘ From *February* 5th to *April* 6th—We
 ‘ had high Winds, with *Snow* and *Hail*;
 ‘ but continued healthy.—We caught
 ‘ Plenty of Mullet from one to ten Pounds
 ‘ Weight, and our People lived upon them
 ‘ and the Geese.—The Mercury in the
 ‘ Thermometer from 53 to 46.

‘ From *April* 6th to *June* 1st.—We had
 ‘ much *Rain* and *Snow*, with two or three
 ‘ strong Gales of Wind.—Thermometer
 ‘ from 46 to 39. The Mullet left us in
 ‘ *May*, when their Place was supplied by
 ‘ Smelts of a very large Size; but of these
 ‘ we could seldom get enough to serve the
 ‘ Ship’s Company:—The Geese too were
 ‘ not to be had, at this Time, without
 ‘ much more Trouble than at first; being
 ‘ under the Necessity of sending for them
 ‘ once a Week to *Keppel’s* Island; they
 ‘ were made into Broth, with Rice and
 ‘ Celery, and the Men served twice a Week,
 ‘ with

‘ with each a Quarter of a Goose for his
 ‘ Share.

‘ During this Period we had some few
 ‘ Intermittents, which yielded readily to the
 ‘ Bark, after having premised Vomiting,
 ‘ and the Use of the Saline Mixture: In
 ‘ those Subjects who were of a robust Ha-
 ‘ bit, I sometimes had occasion to bleed—
 ‘ and it was observable in general, that af-
 ‘ ter they had got rid of the Fever they
 ‘ were a long while before they recovered
 ‘ their Strength, their Legs often swelled,
 ‘ their Gums grew spongy, and they ap-
 ‘ peared greatly disposed to the Scurvy—
 ‘ to prevent which it was a Practice to con-
 ‘ tinue the Use of the Bark and Elixir of
 ‘ Vitriol for a considerable Time after all
 ‘ Signs of the Fever had disappeared; and
 ‘ the Invalids were moreover obliged to be-
 ‘ stir themselves, and exercise briskly.

‘ From *June* 1st to *August* the 1st, The
 ‘ Mercury was from 39 to 36, the Weather
 ‘ foggy, with Frost, and Snow at times,
 ‘ but much less than was expected, with
 ‘ little Wind.

‘ In

‘ In this Period happened the only Death
 ‘ we had hitherto experienced, among the
 ‘ whole Crew, consisting of One hundred
 ‘ and Eighty.

‘ June 10th, Mr. *Thomas Harmood*, one
 ‘ of the Master’s Mates, was seized with a
 ‘ Fever which turned out highly putrid :
 ‘ —It ran on for fifteen Days ; however he
 ‘ struggled through, but immediately after-
 ‘ wards fell into the Scurvy.—At first I
 ‘ put him upon taking an Infusion of the
 ‘ Bark in Madeira Wine, together with
 ‘ Elixir of Vitriol, but could not prevail on
 ‘ him to continue this Course.—

‘ Finding him daily lose Ground, I called
 ‘ in Mr. *Meek*, Surgeon of the *Carcass*, on
 ‘ the 13th *July*—at which time, he used
 ‘ to bleed often at the Nose, and also
 ‘ passed Blood by Stool, his Gums were
 ‘ quite rotten, his Breath intolerable—
 ‘ and his Legs all covered over with purple
 ‘ Spots of different Sizes.

‘ We agreed to try him with the *Wort*,
 ‘ but he took only half a Pint of it ; for
 ‘ this

‘ this having given him a Stool, which he
 ‘ much wanted, he would take no more,
 ‘ either of that, or of any thing else in
 ‘ the way of Medicine that could be got for
 ‘ him——the Consequence of which was
 ‘ that on the 20th he died in a miserable
 ‘ Condition.

‘ From the 1st *August* to the 1st *Septem-*
 ‘ *ber*, it was mostly fine Weather for the
 ‘ Season, clear and frosty. The Mercury from
 ‘ 36 to 33.—Several had sore Gums, and
 ‘ a good many drank the *Wort* by way of
 ‘ Preservative.

‘ During this Time many were suddenly
 ‘ seized with fainting Fits accompanied with
 ‘ violent Pain in the Stomach, and great
 ‘ Difficulty of breathing. As these Com-
 ‘ plaints were evidently caused by eating too
 ‘ much Wild-fowl, and using too little Ex-
 ‘ ercise, the Seamen humorously termed
 ‘ this Disease the *Alderman*: None however
 ‘ were carried off by it; immediate bleed-
 ‘ ing, an Emetic, and an Anodyne Draught
 ‘ afterwards with Plenty of warm Drink

‘ to

‘ to encourage sweating, carried off the
 ‘ Complaints usually in the space of two
 ‘ Days.

‘ From *September* 1st to *October* 1st——
 ‘ The Weather was stormy but mostly
 ‘ clear:——the Mercury from 34 to 40.—
 ‘ In this time we went over to the Coast of
 ‘ *Patagonia*, and endeavoured to get into
 ‘ the Straits of *Magellan*, but were blown
 ‘ off; the People all the while remarkably
 ‘ healthy.

‘ From the 1st *October* to the 1st *Novem-*
 ‘ *ber*, most Part, fresh Gales and clear Wea-
 ‘ ther; the People all very healthy. The
 ‘ Fowls began to lay the Beginning of this
 ‘ Month, in such Abundance that from *five*
 ‘ to *fifteen* hundred Eggs were collected eve-
 ‘ ry Day, large, and very good to eat.—
 ‘ The Mercury in the Thermometer from
 ‘ 40 to 49.

‘ From *November* 1st to *December* 1st,
 ‘ fresh Gales, and mostly clear;——all
 ‘ healthy——but we lost one of our petty
 ‘ Officers, Mr. *Coulson*, who was carried off,

‘ as it should seem, by the Stroke of an Apo-
 ‘ plexy :—he had gone about six Miles,
 ‘ across the Hills, to a Place called *Expe-*
 ‘ *riment Sound*, in order to catch Fish ;—
 ‘ and was found the Day following, dead,
 ‘ lying with his Head down the Hill, and
 ‘ black in the Face as if he had been
 ‘ strangled.

‘ From *December* 1st to *January* 16th,
 ‘ 1767.—We had strong Gales and
 ‘ squally Weather with Hail and Snow :---
 ‘ The Mercury from 49 to 56 : The Peo-
 ‘ ple still continued to enjoy good Health,
 ‘ in general, there being no Complaints but
 ‘ what were trifling, nor no Death, but
 ‘ that of the Master at Arms, who died sud-
 ‘ denly, in consequence of excessive drink-
 ‘ ing.

‘ We now set sail on our return to *Eng-*
 ‘ *land*, and from *Port Egmont* to the Lati-
 ‘ tude of 39 South, had fresh Gales, and
 ‘ more or less Rain every Day, the Mer-
 ‘ cury rising gradually from 56 to 72.---
 ‘ From Latitude 39 to 23, we had
 ‘ Calms and constant heavy Rain.—From

‘ 23, to the Island of *Fernando de Norona*,
 ‘ in the Latitude 3. 53. South, fresh Gales
 ‘ and clear Weather—the Winds mostly
 ‘ in the Eastern Quarter.

‘ From *Fernando de Norona* to the Lati-
 ‘ tude of 4 Degrees North, we had little
 ‘ Wind with much Rain.----The Mercury
 ‘ from 72 to 82.

‘ From 4 North to 30, fresh Gales and
 ‘ squally Weather, most Part clear.-----
 ‘ Mercury fell gradually from 82 to 69.

‘ From the Latitude of 30 N. to the
 ‘ *Downes*, we had nothing but stormy
 ‘ Weather, and the Thermometer fell daily
 ‘ from 69 to 45.

‘ In the First Part of our Passage we had
 ‘ several Fluxes---none of which however
 ‘ proved fatal.---The Patients were generally
 ‘ feverish at the Beginning of the Attack,
 ‘ which rendered bleeding necessary.---After
 ‘ that they were puked, had an Anodyne at
 ‘ Night, and the next Day took a Dose of
 ‘ Rhubarb with some Grains of Nutmeg :---

‘ When the Disorder ran out to any length,
 ‘ I gave the Ipecacuan in small Doses, and
 ‘ interposed Opiates occasionally.

‘ We had likewise some Inflammatory
 ‘ Complaints, which yielded to the common
 ‘ Methods of Relief.----

‘ The *Scurvy* also made its Appearance :
 ‘ ----Two Men were put on board us from
 ‘ the *Carcass*, who were scorbutic, and in
 ‘ one of them the Disease complicated with
 ‘ the *Lues Venerea*.----Two of our own
 ‘ People also, who had more or less of the
 ‘ Scurvy all Winter, got considerably well
 ‘ rid of their Complaints during the Spring,
 ‘ but now again were found affected.

‘ Having not as yet had any Opportunity
 ‘ of giving the *Wort* a fair Trial, (for tho’
 ‘ several People drank of it during the
 ‘ Winter for scorbutick Complaints, they
 ‘ used at the same Time the Wild Celery,
 ‘ and never took the *Wort* regularly) I now
 ‘ determined to make the Experiment with
 ‘ these four Patients, and accordingly put
 ‘ them

‘ them on the Course which is proposed,
 ‘ in the Book formerly mentioned.----

‘ They all used the same Diet, viz.----In
 ‘ the Morning, Biscuit boiled with *Wort*
 ‘ and Sugar :----For Dinner at sometimes
 ‘ what could be spared from the Officers
 ‘ Table, at other Times Portable Soup
 ‘ thickened with Barley or Rice, and season-
 ‘ ed with Shallots or Garlick : for Supper,
 ‘ Rice and Currants, Sago, or Salep, with
 ‘ Madeira.

‘ The *Wort* was made fresh every Day,
 ‘ in the Proportion of three Measures of
 ‘ boiling Water to one of the ground Malt;
 ‘ it was allowed to stand close covered till
 ‘ cold, and then strained.----

‘ Here follows a particular Detail of the
 ‘ Effects----and a circumstantial Account of
 ‘ the State of each of the Patients.

‘ *William Larder*, aged 29, formerly of
 ‘ a good Habit of Body.---Feb. 1st, 1767,
 ‘ complains of great Lassitude, that he finds
 ‘ himself fatigued by walking but a little
 ‘ while;

‘ while; his Face is pale and yellowish;
 ‘ his Mouth pretty clean, owing perhaps
 ‘ to the Elixir of Vitriol we daily put in our
 ‘ Water; his Gums are a little swelled and
 ‘ spongy; his Breath is very offensive; his
 ‘ Legs swell, and pit when pressed with the
 ‘ Fingers; they are covered with blue Spots,
 ‘ of different Sizes like Bruises, with two
 ‘ Ulcers, which discharge a thin bloody
 ‘ Ichor, and have a black mortified Appear-
 ‘ ance; his Legs are more swelled at Night
 ‘ than in the Morning; he is generally
 ‘ costive, his Appetite is good, and his Pulse
 ‘ pretty regular.

‘ His Legs are ordered to be stuped with
 ‘ the common Fomentation, and the Ulcers
 ‘ dressed with the common Dressing.

‘ Gave him half a Pint of the *Wort* in
 ‘ the Morning, and half a Pint in the
 ‘ Evening.

‘ 3d, Gave him one Pint in the Morning,
 ‘ and half a Pint in the Evening.

‘ 7th,

‘ 7th, Gave him a Pint Morning and
‘ Evening.

‘ 8th, The *Wort* purged him last Night,
‘ but he took the same Quantity To-day
‘ without having any such Effect.---Finds
‘ himself something better.

‘ 12th, Gave him a Pint in the Morning,
‘ another in the Middle of the Day, and a
‘ Third at Night.

‘ 20th, He looks healthier, his Legs are
‘ not so much swelled, the Ulcers seem in-
‘ clinable to heal, having lost that black
‘ bloody Appearance.

‘ Gave him a Quart of *Wort* in the Morn-
‘ ing, a Pint at Noon, and another at
‘ Night.

‘ 28th, He finds himself greatly better,
‘ the Ulcers being almost healed, and the
‘ Swelling gone, except a little in the Even-
‘ ing; the Skin is peeling off his Legs.

‘ Gave

‘ Gave him a Quart in the Morning, one at
 ‘ Noon, and one at Night.

‘ *March 6th*, Has no Complaint, and
 ‘ returns to his Duty, but continues to drink
 ‘ the *Wort*, the Quantity of which is to be
 ‘ lessened by Degrees, until he leaves it off
 ‘ entirely.’

‘ *John Carrol*, aged 35 Years, formerly
 ‘ healthy; brought a Pox with him from
 ‘ *England*, which has eluded the Force of
 ‘ all the Medicines given him, owing per-
 ‘ haps to the Man’s own Negligence and
 ‘ Intemperance; joined to the Scorbutic
 ‘ Habit which he acquired during the
 ‘ Winter.

‘ He was very ill of the Scurvy during
 ‘ the Winter, but got better by drinking the
 ‘ *Wort*, eating wild Celery, and using Ex-
 ‘ ercise on Shore, the Calves of his Legs
 ‘ were quite indurated, and black at that
 ‘ Time.

‘ *Feb. 1st*, He has now several Ulcers
 ‘ upon him, in his Legs and Arms, which
 ‘ are

' are very offensive; a large hard Swelling
 ' on his Cheek; his Testicles are swelled,
 ' hard, and quite insensible; his Gums are
 ' rotten, black, and bleed frequently; his
 ' Breath stinks horribly; he is quite ema-
 ' ciated, and ready to faint every Step he
 ' takes; he has no Appetite, is greatly de-
 ' jected, and his Pulse very low.

' The Ulcers were dressed dry.

' Gave him half a Pint of the *Wort*, in
 ' the Morning, which immediately brought
 ' on a Looseness with fainting; this however
 ' soon stopped, on his taking some Doses of
 ' the Electarium e Scordio, dissolved in Cin-
 ' namon Water, together with mulled
 ' Wine. Gave him twenty Drops of the
 ' Acid Elixir of Vitriol, along with his
 ' *Wort*; and three Times a Day, a Glas of
 ' the following bitter Wine.

R. Cort. peruvian. crasse pulv. Uncias duas,

———Limonum Sescunciam,

Vini Madeirens : lib. duas. M.

‘ 3d, He is better---gave him half a
 ‘ Pint of *Wort*, twice a Day.

‘ 10th, He finds himself stronger, and not
 ‘ so liable to faint.---The Swelling on his
 ‘ Cheek looks red and inflamed. Applied
 ‘ a Poultice of Oatmeal with a little Oil.

‘ 20th, Stronger,----has a better Appetite,
 ‘ Ulcers look better, the Tumour on his
 ‘ Cheek broke of itself, the Quantity of
 ‘ Matter but small, blackish, and very of-
 ‘ fensive. Gave him a Pint of *Wort* twice
 ‘ a Day.

‘ *March* 1st, Continues mending.----His
 ‘ Cheek has degenerated into a foul looking
 ‘ Ulcer like the rest.----Gave him three
 ‘ Pints of *Wort* in the Day.

‘ 10th, Has almost quite recovered his
 ‘ Strength, and eats heartily.---The Ulcers
 ‘ begin to discharge a thicker Matter, and
 ‘ have not so bad an Appearance.

‘ 16th, Continues to mend.---Gave him
‘ two Quarts of *Wort* in the Day.

‘ 20th, Arrived in the *Downs*.----He is
‘ greatly mended in his Appearance, and
‘ Health in general.----Judged necessary to
‘ let him have the Benefit of the Air on
‘ Shore.’

‘ *William Rogers*, Marine, aged about
‘ 24, of a thin, weakly Habit of Body, has
‘ been sickly all Winter.

‘ *Feb.* 1st, Complains of great Weakness,
‘ Pain, and swelling of his Knees, his Legs
‘ are drawn up so that he cannot stretch
‘ them without Pain, his Face is of a dark,
‘ yellowish Colour, he is quite emaciated,
‘ being scarce any thing but Skin and Bone,
‘ his Pulse low and rather quick, he is ge-
‘ nerally loose.

‘ His Knees were fomented twice a Day
‘ with the common Fomentation, to which
‘ was added, an eighth Part of Vinegar, and
‘ rubbed with a camphorated Liniment.

‘ He likewise took the bitter Wine, and half
 ‘ a Pint of *Wort* twice a Day.

‘ 6th, Gave him half a Pint thrice a
 ‘ Day.

10th, Gave him a Pint twice a Day.

‘ 11th, The *Wort* purged him last Night,
 ‘ but ceased immediately on taking twenty
 ‘ Drops of *Tinctura Thebaica* in two
 ‘ Spoonfuls of Cinnamon Water.

12th, Gave him half a Pint three Times
 ‘ a Day.

‘ 18th, He is much better, can stretch out
 ‘ his Legs, and walk pretty well.---Gave
 ‘ him two Pints and a half in the Day.

‘ 26th, Continues mending.---Gave him
 ‘ a Pint three Times a Day.

‘ *March* 9th, Now finds himself pretty
 ‘ well, and is returned to his Duty, but still
 ‘ continues

‘ continues to drink the *Wort*, in a smaller
‘ Quantity.’

‘ *William Waters*, aged 36, a strong Man
‘ and formerly very healthy, was afflicted
‘ with Scorbutic Complaints all Winter.

‘ *Feb.* 1st, Complains of Weakness, fall-
‘ ing away in his Flesh, and Ulcers in his
‘ Legs; dressed the Ulcers dry, and gave
‘ him three half Pints of the *Wort* in the
‘ Day.

‘ 6th, Gave him a Pint thrice a Day.

‘ 20th, Gave him two Quarts in the
‘ Day.

‘ 28th, Gave him three Quarts in the
‘ Day.

‘ *March* 10th, Ulcers healed up,——has
‘ no Complaint, and looks remarkably fat
‘ and fair.’

‘ R E-

‘ R E M A R K S.

‘ A Looseness seems to be the only Thing
 ‘ to be apprehended from the Use of the
 ‘ *Wort*; but this, it appears, may be avoided
 ‘ by giving a small Quantity at first, and
 ‘ increasing it gradually, as the Patient re-
 ‘ covers Strength; for it is observable, that
 ‘ the *Wort* opens the Belly more or less ac-
 ‘ cording as the Patient is more or less ad-
 ‘ vanced in the Disease---since half a Pint
 ‘ will have a greater Effect in that Way, if
 ‘ given in the last Stage of the Distemper,
 ‘ than four times that Quantity taken in the
 ‘ first:---A few loose Stools, I observed
 ‘ always to be of Service, and when they ex-
 ‘ ceeded, they were easily checked by a
 ‘ proper Use of Opiates and Astringents.’

These Cases, if not altogether conclusive
 with respect to the Antiscorbutic Virtue of
 the *Wort*, must at least be admitted as a full
 Proof, that this Liquor may be taken in
 pretty large Doses, without producing any ill
 Effect.---The following ones however I
 apprehend

apprehend will put the Matter beyond all Dispute, and plainly shew that the *Scurvy* may be *easily* and *effectually* cured by the Means of this Substitute, and entirely *without* the Aid of *fresh Vegetable Diet*.

Dr. Hunter, who with great Humanity made Use of his Influence to have the *Wort* tried some Years ago when I first made the Proposal,---has been so obliging as to transmit, within these few Days, the following Letter, written to me from *Bombay*, by *Mr. James Badenach*, Surgeon of the *Nottingham East India Man*.---It is dated *October 16th, 1766*,---and runs as follows.

‘ S I R,

‘ I hope you will excuse the present freedom of informing you, that having made
 ‘ a small Trial of the *Wort* in the Cure of
 ‘ the *Scurvy* at Sea, on Board the *Nottingham East India Man*, the *Hon. Thomas Howe* Commander; and according to
 ‘ your Request in your Experimental Essays,
 ‘ having noted down, on the Spot, the Particulars of each Case wherein I gave the
 ‘ *Wort*,

‘ *Wort*, I have wrote out six Cafes---being
 ‘ the greatest Number that the small Quan-
 ‘ tity of Malt I had on board allowed me
 ‘ to give it to.

‘ As the Discovery of the *Wort* appears
 ‘ to be a Matter of so much Consequence
 ‘ to the seafaring Part of Mankind, what-
 ‘ ever has the smallest Tendency to promote
 ‘ its general Use ought not to be neglect-
 ‘ ed; upon this Account *Daniel Draper*
 ‘ Esq; one of the Honourable the *East India*
 ‘ Company’s Council at *Bombay*, has been
 ‘ so good as to transmit these six Cafes to
 ‘ Doctor *Hunter* at *London*, and along with
 ‘ them I send this Letter, which I hope you
 ‘ will receive.

‘ If these Cafes may excite others to try
 ‘ the *Wort*, I leave it to you to do whatever
 ‘ you think proper with them.----In the
 ‘ mean time I am, with Respect, &c.

‘ M E D I-

M E D I C A L C A S E S,

Tending to prove the great Utility of fresh
Wort, in the Cure of the Scurvy at Sea.

C A S E F I R S T.

‘ *Charles Wareham*, Seaman, aged about
‘ 22, naturally healthy, came home from
‘ *India* in the *Pococke*, some time before he
‘ went on board the *Nottingham*.

‘ About the Beginning of *March* 1766,
‘ while the *Nottingham* lay at *Gravesend*, he
‘ was seized with a Catarrhal Fever, from
‘ which he did not entirely recover until
‘ we got into the warm Weather about the
‘ Middle of *April*, being by that time a
‘ Month at Sea;---from this Period, till
‘ the Middle of *May*, he continued doing
‘ Duty as an ordinary Seaman.

‘ About the 18th of *May* he complained
‘ of sore Gums, fetid Breath, and had a
‘ Complexion deeply tinged with yellow.

F

‘ I gave

‘ I gave him a lenient Decoction of Ta-
 ‘ marinds and Cream of Tartar, together
 ‘ with a Gargle for his Mouth ; but in spite
 ‘ of these, the Scorbutic Complaints in-
 ‘ creased fast during the Remainder of *May*,
 ‘ and first Week of *June*, so as to render
 ‘ him unfit for Duty and confine him
 ‘ below.

‘ On the 8th of *June*, which was the first
 ‘ Day he took the *Wort*, he had the fol-
 ‘ lowing Scorbutic Symptoms ; his Gums
 ‘ were spongy, swelled, painful, of a livid
 ‘ colour, and bled on the least Touch ;
 ‘ his Breath was so fetid as to be offensive
 ‘ both to himself and Messmates ; he had
 ‘ an uneasy Pain across the Chest, with a
 ‘ Difficulty of breathing, which increased
 ‘ upon the least Exercise ; his Pulse was
 ‘ harder, and a little quicker than natural ;
 ‘ the Heat of his Body was rather below the
 ‘ healthy Standard ; he was costive, and
 ‘ made high coloured Urine, with a greasy
 ‘ Scum on the Surface ; his Legs and
 ‘ Thighs were full of little pimply Erup-
 ‘ tions

' tions and livid Spots ; his Hams were stiff,
 ' and painful ; the Knees a good deal swell-
 ' ed and painful, and his Legs always swelled
 ' towards Night, the Skin being dry : The
 ' Soreness of his Mouth prevented him from
 ' eating solid Food, so that he was often
 ' obliged to fast, contrary to Inclination,
 ' which rendered him very weak and
 ' low.

' This Day, I gave him one Pint of the
 ' fresh made *Wort* boiled up with some
 ' pounded Sea Biscuit into a Panado, and
 ' sweetened this Mess with Sugar, which
 ' was very agreeable and fat easy ; he drank
 ' another Pint acidulated with Elixir of Vi-
 ' triol, in the Course of the Day ; thus he
 ' was provided with both Meat and Drink,
 ' and used nothing else.---The Grains from
 ' whence the *Wort* had been strained off,
 ' were applied as a Poultice to the stiffened
 ' Hams, with the Addition of a little sweet
 ' Oil.

' 9th June---Used the same Diet;---no
 ' Alteration,

‘ 10th---The catching of Breath (as he
 ‘ termed it) abated; sweated a little in the
 ‘ Night. Used the *Wort* and *Panado* as
 ‘ before---to which I added a laxative
 ‘ Bolus.

‘ 11th---The Breathing still better;---
 ‘ the Hams not so painful;---had three
 ‘ loose Stools.---The Quantity of *Wort* in-
 ‘ creased to three Pints in the Day.

‘ 12th---Looseness continues;---the Face
 ‘ more lively coloured; pain of the Breast
 ‘ vanished; the Skin more moist, and the
 ‘ Pains of the Limbs much better.---Persists
 ‘ in the same Course as before.

‘ 13th---In the Night he was a good deal
 ‘ griped, which was succeeded by an Increase
 ‘ of the Looseness;---he continued to take
 ‘ the *Panado*, but was ordered to abstain
 ‘ from drinking the *Wort*, for fear of in-
 ‘ creasing the Purgings too much.---He got
 ‘ a Decoction of the Bark, with Honey of
 ‘ Roses

‘ Roses and Elixir of Vitriol to wash his
 ‘ Mouth with, by way of Gargle.

‘ 14th.---The Looseness continued, but
 ‘ without griping, and all his Complaints
 ‘ were better: used three Pints of the
 ‘ *Wort*.

‘ 15th---All the Pains, both of Breast
 ‘ and Limbs, removed; Eruptions mostly dis-
 ‘ appeared; Mouth clean and Gums not so
 ‘ spongy; he walked about chearfully, and
 ‘ was moderately loose.

‘ 16th.---So well that he thought himself
 ‘ able to go upon Deck to do Duty; but the
 ‘ Weather being rainy he got wet, and be-
 ‘ side, found that strong Exercise hurt his
 ‘ Breast.---Used the *Wort* as before.

‘ 17th.---Did his Duty as a Seaman;---
 ‘ used the same as before.

‘ 18th.---As on the preceding Day.---
 ‘ The small Quantity of Malt, that I had
 ‘ provided,

' provided, being now nearly exhausted, I
 ' was obliged to strike him off from the
 ' further Use of the *Wort* :---The Conse-
 ' quence was, that in a few Days the Symp-
 ' toms returned, for which I had recourse to
 ' the Remedies generally used at Sea, viz.
 ' laxative Boluses and Decoctions, with
 ' the *Pil. Scillit.* :---I likewise tried Sugar
 ' dissolved in four Times its Quantity of
 ' Water, and used much in the same Man-
 ' ner, and in nearly the same Quantity as
 ' the *Wort* ; but all these had little Effect,
 ' the Patient being confined below for near
 ' four Weeks, after the *Wort* was done---
 ' and in nearly the same Condition as be-
 ' fore he first began it.

' On the 16th of *July* we came to an An-
 ' chor at the Island of *Joanna*, where this
 ' Patient, with about forty others, went on
 ' shore, lived in a Tent erected for the
 ' Purpose, and by the Use of fresh Fruits
 ' and Vegetable Soups recovered in five
 ' Days Time.

C A S E S E C O N D.

‘ *John Hyett*, one of the Honourable
 ‘ Company’s Recruits, 21 Years of Age, bred
 ‘ to the Sea.---About the 14th of *June* his
 ‘ Gums became spongy, and he complain-
 ‘ ed of a fixed Pain in the Small of his
 ‘ Back, with wandering Pains all over the
 ‘ Body. --These Symptoms increased till the
 ‘ 18th *June*, when his Gums were livid
 ‘ and swelled; the Breath fetid; the
 ‘ Thighs, Legs, and Hams in great Pain;
 ‘ the Shoulders and Limbs full of purple
 ‘ Eruptions and large Spots; he was cos-
 ‘ tive, and made high-coloured Urine.

‘ This Day he began and took three
 ‘ Pints of the *Wort*, as in the foregoing
 ‘ Case.

‘ 19th, I found the *Wort* had given him
 ‘ two loose Stools without griping;---re-
 ‘ peated the same.

‘ 20th.

‘ 20th.---Every Way much better ; in-
 ‘ creased the Quantity of *Wort* to two
 ‘ Quarts---One Half for Panado and the
 ‘ other for Drink.

‘ 21st.---All the Pains gone;---the Belly
 ‘ continues open, the Mouth is cleaner and
 ‘ the Gums not so sore;---his Colour is
 ‘ more lively, and he has gained Strength :
 ‘ repeated the same.

‘ 22d.---Almost every Complaint vanish-
 ‘ ed, his Mouth and Gums so well that he
 ‘ could eat dry Biscuit, and so much reco-
 ‘ vered in every respect that he went upon
 ‘ Deck.

‘ 23d.----Continued stout.----From this
 ‘ Day till the 26th he remained upon Deck,
 ‘ strong and chearful, but having no more
 ‘ *Wort* he relapsed ; when I had recourse
 ‘ to the usual Remedies, but without Effect,
 ‘ for the Symptoms increased until we arriv-
 ‘ ed at *Joanna*, where he quite recovered in
 ‘ a few Days.

CASE THIRD.

‘ *Thomas Redhead*, a Recruit, 32 Years of
 ‘ Age, his Legs and Ankles swelled, and
 ‘ pitted when pressed by the Fingers; the
 ‘ Skin of them dry, rough, and covered
 ‘ over with purple Spots, which also ex-
 ‘ tended up the Thighs:---His Belly was
 ‘ greatly bound.---

‘ On the 17th *June*, he was purged with
 ‘ a Decoction of *Tamarinds* and Cream of
 ‘ *Tartar*,

‘ 18th.---I gave him three Pints of *Wort*;
 ‘ one Half in *Panado*, the other in *Drink*.

‘ 19th.---Continues open in his Belly;---
 ‘ the Swelling of the Legs and Ankles con-
 ‘ siderably abated;---repeated the *Wort*.

‘ 20th.---Repeated as before.

‘ 21st.---The Swelling gone, and the
 ‘ Spots disappeared. From this Time he

‘ went upon Deck, and worked when re-
 ‘ quired, all the Way to *Joanna*.

C A S E F O U R T H.

‘ *James Vaughan*, a Recruit---19 Years
 ‘ of Age, tall, and naturally healthy.----
 ‘ About the 10th of *June* he began to lose
 ‘ his Strength, complained of sore Gums,
 ‘ and fetid Breath, grew of a fallow Com-
 ‘ plexion, and struck out on the Legs and
 ‘ Arms with purple Eruptions.

‘ These Complaints daily increased, and
 ‘ were joined to others; so that on the 18th,
 ‘ antecedent to the Administration of the
 ‘ *Wort*, he had precisely the following
 ‘ Symptoms.

‘ His Gums were greatly swelled, so as
 ‘ almost to cover the Teeth, were of a
 ‘ livid Colour, loose, spongy, and extreme-
 ‘ ly painful; his Breath very offensive; the
 ‘ Breathing difficult, with a Pain of the
 ‘ Chest

‘ Chest which increased upon the least Mo-
 ‘ tion; his Face bloated, swelled, and
 ‘ when nearly inspected the Cheeks appear-
 ‘ ed of a purplish Hue; he had Pains in
 ‘ the Loins, and in all his Limbs, with in-
 ‘ numerable purple coloured Eruptions, and
 ‘ large Blotches upon the Extremities; his
 ‘ Pulse was hard, small, and quick; he
 ‘ made high coloured Urine, and was ex-
 ‘ tremely costive.

‘ On this Day he began the *Wort*, and
 ‘ took three Pints in the same Manner as
 ‘ before mentioned.

‘ 19th.---Much the same---*Wort* sat easy
 ‘ ---repeated it.

‘ 20th.---Had one loose Stool---but no
 ‘ sensible Alteration, excepting that the Pain
 ‘ which used to be across the Chest, was
 ‘ now shifted to the Side.---Increased the
 ‘ *Wort* to two Quarts, and ordered him to
 ‘ wash his Legs in Vinegar.

‘ 21st.---Has had two loose Stools, and
 ‘ is much better in every Respect; the wan-
 ‘ dering Pains perfectly easy; the Com-
 ‘ plaints affecting the Breath abated; the
 ‘ Swelling and livid Hue of the Counte-
 ‘ nance dispersed.---Continued the *Wort* in
 ‘ the same Quantity as the Day before.

‘ 22d.---The Mouth cleaner, and Gums
 ‘ growing firm; all the Pains vanished, ex-
 ‘ cept an Uneasiness in the left Hip.---Re-
 ‘ peated the *Wort* as before.

‘ 23d.---Sweated a good deal in the Night;
 ‘ ---gave him a laxative Bolus, and an astrin-
 ‘ gent Gargle for his Mouth.

‘ 24th.---Had a good many loose Stools :
 ‘ ---The purple Eruptions and Blotches dis-
 ‘ persed and gone,---the Complexion more
 ‘ lively coloured,---and no Pain or Uneasi-
 ‘ ness of any Part.---Repeated the *Wort*, and
 ‘ gave him the Gargle made of the Decoc-
 ‘ tion of Bark and Elixir of Vitriol.

‘ 25th.---

' 25th.---So well and strong, that he
 ' judged himself able to go upon Deck and
 ' put his Hand to any thing he might be
 ' desired:---Continued the *Wort.*----From
 ' this Time till the End of *June* he remain-
 ' ed healthy---but he grew bad again before
 ' we reached the Island of *Joanna*, where he
 ' recovered along with the rest.

C A S E F I F T H.

' *Francis Turner*, a Recruit, had been long at
 ' Sea, but never Scorbutick before.---About
 ' the 25th of *May* he threw me his left Leg,
 ' on the Calf of which were many Scars of
 ' old Sores, which were now grown of a
 ' livid Colour, and become painful, tense,
 ' and rigid;---his Gums being at the same
 ' Time rotten and spongy, left no Room
 ' to doubt but that he was falling into the
 ' Scurvy:---I made him drink Sea-water,
 ' gave him laxative Decoctions, and desired
 ' him to use a Gargarisin, but all without
 ' any good Effect; for the Complaints daily
 ' increased,

' increased, until at length the old Cicatrices
 ' actually broke out, the Gums grew putrid,
 ' and bled on the least Touch, the Calf of
 ' the left Leg became quite rigid, and both
 ' Hams stiff and painful; his Pulse was small
 ' and hardish, and he was so weak as
 ' scarcely to be able to walk a few Yards.

' The Malt being nearly all used, I first
 ' gave him a Decoction of *Sarsaparilla* for
 ' five Days---which had a visible Effect
 ' upon his left Leg, for it became softer
 ' and better coloured.

' From the 19th of *June* to the 24th,
 ' he consumed three Pints of the *Wort* dai-
 ' ly---which kept him open in his Bowels,
 ' and in this short Time removed the Stiff-
 ' ness and Lividity of the Leg and Hams---
 ' the Ulcers healed up, the Gums became
 ' clean and sound, and he grew in every
 ' other Respect so well that he went upon
 ' Deck, and remained healthy all the Re-
 ' mainder of the Passage.

C A S E S I X T H.

‘ *John Harlington*, a Recruit, 37 Years of
 ‘ Age, of the middle Stature, and formerly
 ‘ of a healthy Constitution.----About the
 ‘ 25th of *May* his Gums were spongy, pale-
 ‘ coloured and sore, his Breath offensive,
 ‘ both Hams stiff, and he complained of
 ‘ wandering Pains through all his Limbs.

‘ These Complaints increased till the 8th
 ‘ of *June*, when he had moreover a fixed
 ‘ Pain in the Loins, a Swelling of both
 ‘ Knees, with several Bumps or Tumors,
 ‘ some of which were of a bluish Colour,
 ‘ on the inside of the *Tibia*; he was ex-
 ‘ tremely costive, and so emaciated that he
 ‘ could hardly crawl out of his Ham-
 ‘ mock.

‘ This Day I gave him a Quart of the
 ‘ *Wort* in the same Manner as to the
 ‘ others.

‘ 9th.---

‘ 9th.---Repeated the same.---No Alter-
 ‘ ation.

‘ 10th.---Continued the like Quantity---
 ‘ no Change.

‘ 11th.---The *Wort* had opened him a
 ‘ little;---all the Complaints better;---In-
 ‘ creased it to three Pints.

‘ 12th.---Colour more lively, and all the
 ‘ Pains easier.---Continued the *Wort*, and
 ‘ gave him an antiseptic Gargle for the
 ‘ Mouth, together with camphorated Spirits
 ‘ to rub on the Swellings of the Tibia.

‘ 13th.---In the Night he became loose,
 ‘ which continued;---all the scorbutic
 ‘ Symptoms better--repeated the Medicines
 ‘ as Yesterday.

‘ 14th.---Better---repeated the same.

‘ 15th.---Still continues loose---and pretty
 ‘ easy; goes on as usual.

‘ 16th.---Much the same as before---used
 ‘ the same Things.

‘ 17th.---Looseness continues ;---all Com-
 ‘ plaints easy excepting the Pain in the
 ‘ Back ;---repeated the *Wort*.

‘ 18th.---Much at one---repeated the
 ‘ same.

‘ 19th.---Had sweated a little---repeated
 ‘ the *Wort* to two Quarts, which was the
 ‘ last he got of it.

‘ As he had nothing all this while to
 ‘ subsist on but the *Wort*, he did not reco-
 ‘ ver Strength sufficiently to enable him to
 ‘ keep upon Deck---so that after a few Days,
 ‘ the Malt being all expended, he was most-
 ‘ ly confined to his Hammock until we ar-
 ‘ rived at the Island of *Mobila*: And altho’
 ‘ at that Island, and for five Days more
 ‘ that we were at Sea between it and *Joanna*,
 ‘ he had Plenty of Limes, Oranges, and
 ‘ other

‘ other Fruits, yet for want of fresh Meat,
 ‘ he and the rest of the Scorbutics were but
 ‘ very little better when they were landed
 ‘ at this last mentioned Island, the 16th
 ‘ *July*; where, as has been already said, they
 ‘ all recovered in five Days.’

R E M A R K S.

‘ These six Cases were all that the small
 ‘ Quantity of Malt I had on Board allowed
 ‘ me to give the *Wort* to; and of how
 ‘ great Service the use of it was to those
 ‘ who took it, I leave to the Judgment of
 ‘ any Person who has seen the Scurvy at
 ‘ Sea, and knows that all other Medicines
 ‘ hitherto tried are of little or no Effect.

‘ Whatever Alteration was made in the
 ‘ Habit of these Scorbutics, was entirely
 ‘ owing to the *Wort* and the Panado made
 ‘ of it; for we have not such a Variety of
 ‘ Diet and Provisions as they have in the
 ‘ Royal Navy, (where they are provided
 ‘ with portable Soup, Sago, Rice, Barley,
 ‘ &c.)

‘ &c.) and in the present Trial I believe the
 ‘ Patients tasted nothing beside during the
 ‘ Course; for on account of the Soreness of
 ‘ the Mouth, they could not eat any thing
 ‘ solid.

‘ It appears probable from this small Tri-
 ‘ al, that the use of *Wort* will in three or
 ‘ four Days abate the Scorbutic Pains, ex-
 ‘ cite a Looseness, and disperse the Erup-
 ‘ tions:---That in ten Days, or so, the *Wort*,
 ‘ in most Cases, if taken in Time and to a
 ‘ sufficient Quantity, will recover the scor-
 ‘ butic Patient so far as to be able to go
 ‘ upon Deck fit for moderate Duty;---
 ‘ That if continued, in smaller Quantity,
 ‘ after Recovery from the Disease, it will
 ‘ prevent their relapsing for Months, with-
 ‘ out any other Remedy, which nothing
 ‘ that has yet been carried to Sea has ever
 ‘ done:---That if aided by portable Soup,
 ‘ Rice, Sago, fresh Meat Broths, and the
 ‘ like, there will be little Danger of this
 ‘ Disease even in the longest Cruises.

‘ The Malt that I used, was got from a
 ‘ Maltster at *Gravesend*; it was kept in a
 ‘ Bag in the Gun-room, and remained fresh
 ‘ until I wanted to use it, which was about
 ‘ three Months.

‘ It was managed according to the Di-
 ‘ rections in the Proposal;---being ground
 ‘ daily in a Hand-mill, according as it was
 ‘ required.

‘ *Three* Measures of boiling Water were
 ‘ poured on *One* of the ground Malt, which
 ‘ was put into a large Copper Decoction-
 ‘ pot; and there left to stand for four
 ‘ Hours, when it was strained off through a
 ‘ Cloth, and each of the Patients served with
 ‘ their Allowance of it.---The *Wort* was of a
 ‘ pale Colour, sweetish and very agreeable :
 ‘ a Glass full of it, in a Heat of 74 Degrees
 ‘ of *Fahrenheit’s* Thermometer, kept for 24
 ‘ Hours, perfectly sweet and fresh---but in 36
 ‘ Hours became vapid, sourish, and threw
 ‘ up a Scum to the Surface.---When the
 ‘ Malt

‘ Malt was boiled, it made a *Wort* not so
 ‘ light and good, being high coloured,
 ‘ clammy, and did not run into Fermenta-
 ‘ tion so soon as that made by simple infu-
 ‘ sion, by six or eight Hours.

‘ When the Sick become numerous, the
 ‘ Water, to mash the ground Malt, may
 ‘ be boiled after Dinner in the Ship’s Cop-
 ‘ per; and a small wooden Vat may be
 ‘ placed in the Galley for the purpose of
 ‘ brewing; the Infusion may be strained
 ‘ thro’ a Piece of Hair-cloth, and received
 ‘ into a clean wooden Vessel, where it will
 ‘ keep sweet for about 30 Hours.

‘ Whether Malt will keep during the
 ‘ whole time of an *East India Voyage* is a
 ‘ Query;† but it might be made at several
 ‘ of the Company’s Settlements, in *India*,
 ‘ where there is no Want of good Barley to
 ‘ make it of.

† It will——The Malt which was carried out in the
Jason, was perfectly sound after an Absence of 18 Months.

‘ Whether this Remedy deserves to be
 ‘ placed, as the first Antiscorbutic, must be
 ‘ left to the further Trial and Experience
 ‘ of others; although, if it answers as well
 ‘ as I have seen it, few, if any, will deny
 ‘ it.’

* * * * *

In order to enable the Reader to form a
 Judgment of the Virtues of *Wort*, as com-
 pared with the other things that have usually
 been recommended as Antiscorbutics, I shall
 here add an Extract from Dr. *Lind's* Trea-
 tise on the *Scurvy*, page 191, where he gives
 an Account of the Result of some Experi-
 ments which he made.

‘ On the 20th *May* 1747, I took twelve
 ‘ Patients, in the *Scurvy*, on board the
 ‘ *Salisbury* at Sea.---Their Cases were as
 ‘ similar as I could have them. They all
 ‘ in general had putrid Gums, the Spots and
 ‘ Lassitude, with Weakness of their Knees.
 ‘ ---They lay together in one Place, being a
 ‘ proper Apartment for the Sick in the Fore-
 ‘ hold; and had one Diet common to all,
 ‘ viz.

' viz. Water-gruel sweetened with Sugar in
 ' the Morning; fresh Mutton-broth often-
 ' times for Dinner; at other Times, Pud-
 ' dings, boiled Biscuit with Sugar, &c. and
 ' for Supper, Barley and Raisins, Rice and
 ' Currants, Sago and Wine, or the like.---
 ' Two of these were ordered each a Quart
 ' of *Cyder* a Day.--Two others took twenty-
 ' five Drops of *Elixir* of *Vitriol* three times
 ' a Day, upon an empty Stomach; using a
 ' Gargle strongly acidulated with it for their
 ' Mouths.---Two others took two Spoonfuls
 ' of *Vinegar* three times a Day, upon an
 ' empty Stomach; having their Gruels and
 ' their other Food well acidulated with it,
 ' as also the Gargle for their Mouth.---Two
 ' of the worst Patients, with the Tendons in
 ' the Ham rigid, (a Symptom none of the
 ' rest had) were put under a Course of *Sea*
 ' *Water*; of this they drank half a Pint
 ' every Day, and sometimes more, or less
 ' as it operated by way of Physic.---Two
 ' others had each two *Oranges* and one
 ' *Lemon* given them every Day: These they
 ' eat with Greediness, at different times, up-
 ' on an empty Stomach. They continued

‘ but six Days under this Course, having con-
 ‘ sumed the Quantity that could be spared.
 ‘ The two remaining Patients took the Big-
 ‘ nefs of a Nutmeg three times a Day of an
 ‘ Electuary recommended by an Hospital
 ‘ Surgeon, made of *Garlic, Mustard-seed,*
 ‘ *Horseraddish* Root, *Balsam of Peru,* and
 ‘ *Gum Myrrh*; using for common Drink,
 ‘ Barley Water well acidulated with *Ta-*
 ‘ *marinds*; by a Decoction of which, with
 ‘ the Addition of *Cream of Tartar,* they
 ‘ were gently purged three or four Times
 ‘ during the Course.

‘ The Consequence was, that the most
 ‘ sudden and good Effects were perceived
 ‘ from the Use of the *Oranges* and *Lemons*;
 ‘ one of those who had taken them, being
 ‘ at the End of six Days fit for Duty. The
 ‘ Spots indeed were not at that Time quite
 ‘ off his Body, nor his Gums sound; but
 ‘ without any other Medicine than a Gar-
 ‘ garism with Elixir of Vitriol, he became
 ‘ quite healthy before we came into *Ply-*
 ‘ *mouth,* which was on the 16th of *June.*
 ‘ The other was the best recovered of any
 ‘ in

‘ in his Condition; and being now deemed
 ‘ pretty well, was appointed to nurse the rest
 ‘ of the Sick.

‘ Next to the Oranges I thought the *Cy-*
 ‘ *der* † had the best Effects. It was not
 ‘ indeed

† ‘ Extract of a Letter from Mr. *Ives*, (to Dr. *Lind*.)

———“ I judge it proper to communicate to you what
 “ good Effects I have observed in the Scurvy from the use
 “ of *Cyder* and *Sea Water*, during the last Cruise I made
 “ in the Western Squadron with my honoured Benefactor
 “ Admiral *Martin*. But as I do not pretend to have taken
 “ Notice of any thing more than merely a palliative Be-
 “ nefit from them, I think, without mentioning particular
 “ Cases, it will be sufficient for me to inform you, that in
 “ our preceding Cruise with the Western Squadron, his
 “ Majesty’s Ship *Yarmouth*, of 70 Guns, and 500 Men,
 “ was not only troubled with the Scurvy in common with
 “ other Ships, but in spite of all my Endeavours, lost in
 “ it a proportioned Number of Men.—Upon our Return
 “ from that Cruise, I took an Opportunity to represent to
 “ the Admiral, that as Vegetable Juices of all Sorts were
 “ from Experience found to be the only true Antiscor-
 “ butics, and I had myself formerly experienced the
 “ good Effects of Apples, it was reasonable to presume
 “ that *Cyder* must certainly be of Service.—This Sug-
 “ gestion agreed with some Accounts the Admiral had re-
 “ ceived from others; and he with great Readiness bought
 “ and put under my Care, several Hogsheads of the best

“ *Southham*

indeed very sound, being inclinable to be
 aigre or pricked; however those who had
 taken it, were in a fairer Way of Recovery,
 than the others at the End of the Fortnight,
 which was the Length of Time all these
 different Courses were continued, except
 the Oranges:---The Putrefaction of their
 Gums, but especially their Lassitude and
 Weakness, were somewhat abated, and
 their Appetite increased by it.

As

Southham Cyder. During the next Cruise, each Scor-
 butic Patient had daily a Quart or three Pints of Cyder;
 and as many as I could prevail on, took twice a Week
 three Quarters of a Pint of *Sea Water* in a Morning.—In
 all other Respects, I treated them as I used to do People
 in the Scurvy; which you well know, from the Conver-
 sation which has often passed betwixt us on this Subject,
 was with Squill Vomits, Pills composed of Soap, Squills,
 Garlic, &c. Elixir of Vitriol, and other Medicines suited
 to the different Stages and Symptoms of the Malady.—In
 one Word, we had this Cruise as many Scorbutic Patients
 as any other Ship, in proportion to our Complement of
 Men. But although all the Rest buried a great many,
 some to the Number of 20, others 30, 40, 50, and up-
 wards; yet the *Yarmouth* did not bury more than two
 or three, and these at the latter End of the Cruise, all
 our Cyder having been expended for a Week or ten Days
 before.—Upon our Arrival in Port, we sent to the Hos-
 pital, a great many in very dreadful Circumstances ”

‘ As to the *Elixir of Vitriol*, I observed
 ‘ that the Mouths of those who used it
 ‘ by way of Gargarism were in a much
 ‘ cleaner and better Condition than many
 ‘ of the Rest, especially those who used the
 ‘ Vinegar, but perceived otherwise no good
 ‘ Effects from its internal Use upon the other
 ‘ Symptoms.

‘ There was no remarkable Alteration
 ‘ upon those who took the *Electuary* and
 ‘ *Tamarind Decoction*, the *Sea Water*, or
 ‘ *Vinegar*, upon comparing their Condition
 ‘ at the End of the Fortnight, with others
 ‘ who had taken nothing but a little *Leni-*
 ‘ *tive Electuary* and *Cream of Tartar*, at
 ‘ Times in order to keep their Belly open,
 ‘ or a gentle Pectoral in the Evening for re-
 ‘ lief of their Breast.---Only one of them,
 ‘ while taking the Vinegar, fell into a gentle
 ‘ Flux at the End of ten Days. This I at-
 ‘ tributed to the Genius and Course of the
 ‘ Disease rather than to the Use of the Me-
 ‘ dicine.---As I shall have Occasion else-
 ‘ where to take Notice of the Effects of
 ‘ other Medicines in this Disease, I shall
 ‘ here

‘ here only observe, that the Result of all
 ‘ my Experiments was, that *Oranges* and
 ‘ *Lemons*, were the most effectual Remedies
 ‘ for this Distemper at Sea. I am apt to
 ‘ think *Oranges* preferable to *Lemons*, tho’
 ‘ perhaps both given together will be found
 ‘ most serviceable.’

On comparing Dr. *Lind*'s Experiments
 with those made by Mr. *Badenach*, we plain-
 ly see, that *Infusion of Malt*, is, to the full,
 as powerful with respect to Antiscorbutic
 Virtue, and as quick in its Operation as the
Fresh Juices of the Acid Fruits; but as the
 Material for making this Liquor may be so
 cheaply purchased, and is capable of being
 much longer preserved than *Oranges*, *Le-
 mons*, or indeed any other Kind of Fruit,
 there can be no Hesitation in giving it the
 Preference for general Use.

The Methods of brewing, as well as ad-
 ministring the *Wort*, are so plainly set forth,
 by both Mr. *Young* and Mr. *Badenach*, that
 it would be superfluous to add any thing
 further.---All the Precaution that seems ne-
 cessary

cessary with respect to the Administration is to begin with a small Quantity and increase gradually as it is found to agree.---- When the *Wort* purges too much, abstain, or lessen the Dose ;---or add as much of the Elixir of Vitriol as will make the Drink gratefully sour :---if it gripes so much as to create Distress---give from fifteen to twenty Drops of Liquid Laudanum in two Spoonfuls of Cinnamon Water at Bed-time.

I observe that neither of the Gentlemen mixed Currants or Raisins with the Panado, as I originally proposed: these Fruits I should think would not only make the Mefs more grateful, but also render it more efficacious; therefore, where these are at hand I would recommend them to be added, in any future Trial; for more Trials we certainly shall have, now that the Ice is fairly broken, and that People may see there is neither much Expence, Trouble, nor Hazard attending this Practice. On this Pre-
sumption, I here again repeat my Request, that such Gentlemen as may hereafter try the *Wort*, will, previous to its Administration,

tion, carefully and particularly note down the Cases in which it is given, describing with Accuracy the several Symptoms, and relating, fairly, the Progress, and Effects from Day to Day; and let these Observations be communicated, either to the Public at once, or to the Author at *Dublin*.

August 6th, 1767.

F I N I S.