

**A further inquiry into the comparative infrequency of calculous diseases among sea-faring people : with some observations on their frequency in Scotland / by Alex. Copland Hutchison.**

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NATIONAL AGENCY ON SCOTLAND  
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*Dr. Alex. Copland Hutchison*  
A FURTHER INQUIRY

INTO THE

COMPARATIVE INFREQUENT

OF

CALCULOUS DISEASE

AMONG SEA-FARING PEOPLE

WITH

SOME OBSERVATIONS ON THEIR PREVALENCE IN  
SCOTLAND

By ALEX. COPLAND HUTCHISON, F.R.S.

READER TO THE MEDICAL GENERAL BOARD  
THE PRESIDENT OF THE SOCIETY.

FROM THE FORTY-SEVENTH VOLUME OF THE MEDICAL  
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SOCIETY OF LONDON

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1850.

*Kind Regards & Remembrance*  
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SURGEON TO THE WESTMINSTER GENERAL DISPENSARY, AND A  
VICE-PRESIDENT OF THIS SOCIETY.

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*Read May 4, 1830.*

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IN the year 1818, I first drew the attention of the public to the subject of the "Comparative Infrequency of Urinary Calculi among Sea-faring People," in a paper contained in the ninth volume of the Transactions of this Society. My former calculations and inferences were derived chiefly from the maritime population of the naval service, in which I had spent the greater part of my professional life, both in active service at sea, in various parts of the world, and subsequently as Surgeon to the Naval Hospital at Deal.

By official documents then obtained from the



Admiralty and sick and wounded department of the service, I showed, that during a period of sixteen years of war, including one year of an armed peace, viz. from the 1st of January, 1800, to the 1st of January, 1816, out of an annual average of 162,000 men and boys, of which the navy consisted, from between the ages of nine and ten to upwards of sixty, eight cases of stone, only, had occurred, three of which I was enabled, satisfactorily, to make out as having entered the service with the disease upon them; but the histories of the other five cases could not be traced, from the operating surgeons having died, or from the patients' names and ships whence received into hospital not being furnished; so that *their cases* even, remain doubtful. I have, however, calculated upon these five as originating in a seafaring life, and which gives one case of stone in 518,400 persons, being  $\cdot 3125$ , or a little less than one third of a case per annum.

I have likewise shewn that during these sixteen years, 86,000 patients were admitted into the naval hospitals of Haslar, Plymouth, and Deal, from the already stated maritime population, after deducting 10,000 for gun-shot wounds, &c. which gives, only, about one case of stone in 17,200 of all classes of disease admitted: whereas, according to Dr. Marcet \*, and Mr. Richard Smith of Bris-

\* See an Essay on the Chemical History and Medical Treatment of Calculous Disorders, by that distinguished physician, the late Dr. Alexander Marcet, Second Edition, 1819.



tol \*, the average number of stone cases admitted into the London and provincial civil hospitals, Norwich excepted, is about *one* in every 400 : the Norwich hospital being *one* in every *forty* cases of the total admissions, according to Dr. Yelloly. The Yarmouth, Peignton, and all the foreign naval hospitals were purposely kept out of my original calculations, as not any case of stone was then reported to have occurred in them during the period in question †.

\* See Mr. Richard Smith's interesting statistical paper, contained in the Tenth Volume of the Medico-Chirurgical Transactions.

† I feel greatly indebted to Dr. Yelloly for the manner in which he has introduced my name into his valuable paper, in the Philosophical Transactions for 1829, and for his having called my attention to a case in the Yarmouth Naval Hospital, which occurred in 1808, and which ought to have appeared in my original paper before adverted to. I cannot account for the omission in any other way than by supposing it to have been an oversight in Mr. Burke, who was the successor to Dr. Tait as surgeon of that hospital, and my correspondent on the occasion of these inquiries.

I have, however, now traced this patient at the Navy Office. He was received into Yarmouth Hospital from L'Aimable, frigate.—His age was twenty years, and he was rated on the ship's books as *Ordinary*, which rating every naval officer very well knows, may be achieved by good conduct after being but a short time at sea; and I learn, from Dr. Yelloly's letter to me, that the stone extracted was of the mulberry species, and as large as a pullet's egg; so that the probability is that this young man entered the naval service with the disease upon him.

I must here remark, however, that Dr. Yelloly has fallen into an error in quoting from my paper in the Medico-



In the present Paper, which I have the honour to lay before the Society, I shall briefly detail the result of a more extended inquiry, at every principal sea-port town in England, Scotland and Ireland, from whence answers to my queries have been received, commencing the inquiry at the period of the termination of my last, and in so doing I shall give a faithful account of every case of calculus occurring among this class of persons which may have come, directly or indirectly, under my notice, by written or oral communications; the former shall be transmitted with this to the Secretary, that the council of the Society may see the data from which I have come to the

Chirurgical Transactions, by his making my calculations of 162,000 men for a period of fifteen instead of sixteen years, and by his giving me six stone cases in place of five; which, instead of making one stone case in 400,000, or,  $\cdot 4$  per annum, as stated by Dr. Yelloly, (Philosophical Transactions, p. 59,) makes about *one* in 518,400, or about one third of a case per annum, as already stated in the text. The moment I mentioned this circumstance to the Doctor, he saw at once the mistake into which he had fallen, and which arose from his not remarking that my calculations had gone from the beginning of the first year to the end of the last. And with regard to his giving me one case more than I had calculated upon, this arose from his supposing, that as I had not stated the case of the young marine, who had been but a very few months at sea, so strongly as I had done the cases of the two boys, which were very peculiar and unusual, that, therefore, the marine ought not to have been included among my exemptions; but the *fact* is precisely as I reported it in my original paper, according to the documents then before me.



conclusion of the comparative infrequency of this disease among seamen.

With regard to marines \* and fishermen, who it will appear have, in some instances, been the subjects of this disease, I have a few remarks to offer:—and first, with respect to the marines; I am not altogether certain, in strict fairness of argument, that they ought to be classed as sea-faring persons, in the sense, at least, in which that term is here intended to be employed; for their services are divided between the sea and the land, as is so emphatically expressed by the motto of that distinguished corps, “*PER MARE ET TERRAM*”; and it is well known that even during war, they are on the average nearly as much at their respective divisions (head quarters), as serving afloat, for they are regularly relieved after a certain period of sea duty; and in peace, they are even more on shore.

With respect to the latter class—fishermen,—they seldom sleep on board their vessels; and when they do, it is only in the deep-sea fishery, and where they have hardly one salt junk dinner in the time of their absence, nor are they without vegetable food;—besides it is very usual for the fishermen along the coasts of Suffolk, Norfolk, and Yorkshire, as well as on the Western coast, after

\* Medico-Chirurgical Transactions, Vol. IX. pp. 449, 450.



their fishing season is over, which lasts only two or three months, to be employed in ploughing the fields, or in other agricultural pursuits. I maintain, therefore, that fishermen have, "a fortiori," much less reason to be classed among sea-faring people than the marines have.

My distinguished friend, Dr. Prout, who has attended so much to urinary diseases \*, informs me that he has been consulted once, only, by the master of a coasting vessel, whom he suspected to labour under calculus of the bladder, but who had not been sounded and by a young midshipman, within the last few months, who has very lately been operated upon by Mr. Brodie †.

Dr. Prout further informs me, that in his opinion cases of stone occurring *under forty years* of age, very generally have had their commencement in early youth or in childhood; and where the disease is found to exist after this period, that it is a formation of later date. These are highly important remarks, and I have deemed it but fair

\* See his valuable work, entitled "An Inquiry into the Nature and Treatment of Diabetes, Calculus, and other Affections of the Urinary Organs, &c." Second Edition. Published in 1825.

† This young gentleman, (John May, aged 18 years,) entered the naval service the end of June, 1828, and was sent on shore from H. M. S. Falcon in the following August, a period of ship service not exceeding six weeks.



they should be stated in this place, that they may have their due influence in this inquiry \*.

As it is well known that persons subject to gout and certain cutaneous diseases are those who are most frequently the subjects of stone, or gravel; I may, also, mention as a remarkable fact, that during the whole of my own services, I never once met with a case of gout, or of any cutaneous disease, strictly speaking, in a seaman (psora and syphilitic eruptions excepted).—That gout occasionally occurs among officers in the navy, I am free to admit, for I have learnt that it does; but in my original paper on this subject, I have drawn a distinction between the officers and seamen, from their modes of living being so dissimilar, besides, there is in the latter class, hardly any probability of hereditary tendency to gout as in the former.

In this part of the Inquiry I have consulted my friends, Sir Gilbert Blane, the most distinguished medical authority of the age †, Drs. Magenis, Gillispie, and Burnett, Medical Commissioners of the Navy, and Physicians to the Fleet, besides numerous other medical officers in the service; and the result is, that seamen are exempt from gout and from every species of cutaneous eruption excepting those already mentioned ‡.

\* In several parts of Dr. Prout's work, before quoted, much of this information is inferred.

† See Diseases of Seamen, 3d Ed. pp. 187, 188.

‡ My esteemed friend, Dr. Andrew Baird, (who was em-



Where there may be a tendency to particular diseases in certain situations, habits, and modes of living, among certain classes of persons; so may there be in others a particular exemption from them. That stone in the bladder is comparatively a rare disease among seamen, and that they possess a singular immunity from it, I am quite satisfied, as I hope to demonstrate in the sequel; but, *wherefore*, I have not presumed to say, no more than Dr. Yelloly has, as to its extraordinary prevalence in Norwich and the surrounding district; although I have, elsewhere\*, thrown out some suggestions, with regard to this point, which may, eventually, lead to more correct conclusions than, from the present state of our knowledge, we are authorized to draw from them†.

employed about forty years as a medical officer in the navy, particularly as Physician to the Fleet, and Inspector of Hospitals, &c.), has informed me that in all his practice among seamen, he has found not more than two or three cases of gout, and some few of herpetic eruption, besides those mentioned in the text.

\* Medico-Chirurgical Transactions, Vol. IX.

† Dr. Yelloly, at page 66 of the Philosophical Transactions, before quoted, has very ingeniously thrown out the suggestion, which I believe, however, had long ago occurred to Dr. Prout, that as there appears to be more calculous cases in towns, in proportion to the country districts, particularly among children, whether “it would not seem to indicate the existence of a connexion between some diathesis which prevails in towns, (probably the scrophulous,) and the tendency to the secretion, or deposition of lithic acid, on which the origin of urinary calculi so much depends.” Now, it is a well known fact, that seamen are peculiarly exempt from scrophulous affections; and we are all well aware that sea-air, and sea-bathing are the very



The present official returns from the medical department of the navy embrace a period of thirteen years, that is from the 1st of January, 1816, to the 1st of January, 1829, which here, at least, will be commencing the inquiry where I left it off. My correspondence with the medical officers of the civil sea port hospitals on the present occasion, will be found not always to agree with the period specified in the official returns from the sick and wounded department of the navy. They are, however, for seldom less than ten years, for which, indeed, I only asked returns; and I embrace this opportunity of offering my best thanks to Mr. Barrow and Mr. Bedford, of the Admiralty, to the Medical Commissioners of the Navy, and to the various Gentlemen herein after mentioned, for their very kind communications in reply to my letters, to whom, in most instances, I am personally unknown, and whose conduct on this occasion, clearly proves the zeal and ardour with which scientific inquiries are now encouraged in this country.

I shall now, without further comment, lay before the Society, a summary of the documents I have collected during the last few months, briefly

best remedies in these diseases. I have had several proofs in my own practice that, in decidedly scrophulous cases, where they were sent from town to enjoy sea-air and bathing, the disease was completely subdued, but on their return to London, scrophula again shewed itself as before, in an incredibly short period.



remarking upon them as I proceed, where it may be necessary.

## SUMMARY.

There have been employed in the naval service, as seamen, marines, and boys, from the 1st of January, 1816, to the 1st of January, 1829, as follows\* :—

In 1816 . . . . .	33,000
1817 . . . . .	19,000
1818 . . . . .	20,000
1819 . . . . .	20,000
1820 . . . . .	23,000
1821 . . . . .	22,000
1822 . . . . .	21,000
1823 . . . . .	25,000
1824 . . . . .	29,000
1825 . . . . .	29,000
1826 . . . . .	30,000
1827 . . . . .	30,000
1828 . . . . .	30,000

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Total 331,000

Annual average for 13 years, about 25,461.—  
Out of the above population and period, there

\* It is proper here to remark, that the number of men passing through the service, to make up deficiencies by shipwreck, desertion, death, and other casualties, has not here been taken into account, as in my original paper, *during war*; which I ascertained through Mr. Finlaison, the keeper of the records at the Admiralty, then amounted to about 30,000 annually.



have been admitted into the only two naval hospitals kept open during these years, viz. Haslar and Plymouth, 21,910 patients of all descriptions; and, extraordinary as it may appear, there has not occurred in the whole number of officers, men, and boys employed in the British navy *one* case of stone from the 1st of Jan. 1816, to the 1st of Jan. 1829.

It is true, however, that two patients with stone were, within this period, received into Haslar, and one into Plymouth Hospital, who were operated upon by the respective surgeons. The first at Haslar was a labourer employed in the King's Victualling Yard at Portsmouth, who had never been at sea, and the other (a young seaman belonging to a revenue cruiser, the *Stag*), who did not belong to the naval service, and for whose admission a particular order must have been given. I have ascertained at the Custom House that this man was serving on board the *Stag* on the 23d of May, 1829, having been discharged from the hospital cured. Mr. Farris, the commander of the *Stag*, says, he is 26 years of age, has been 13 years at sea, and has laboured under symptoms of stone since the early part of his youth. The third and last case was operated upon in Plymouth Hospital in March, 1828. He was a half-pay purser in the navy, 46 years of age, and had never been at sea since he obtained his first warrant as a purser, in 1799\*.

\* Mr. Rhind, a lieutenant in the navy, on half-pay, was cut by Mr. Hammick, as a private patient at Plymouth, in 1827. This



## ABERDEEN.

The surgeons of the Royal Infirmary of this place have replied to my queries through their intelligent house surgeon, in so concise and yet so full and satisfactory a manner, that it would be injustice to Mr. Cromar to withhold a word. He says, "The cases of calculus which have occurred in the hospital during the last ten years, amount to 68. Of these there were 13 boys, 5 women, and 50 men. Of the men, 15 followed different trades, 33 were employed in agriculture, and 2 were fishermen. The ages of the boys were from 2 to 14 years; the youngest of the women was 23, and the eldest 60. One of the fishermen was 43, and the other about 50. The ages of the men varied from 45 to 71."\*

officer stated to me, in conversation, that he had laboured under stone in the bladder ever since he was cured of stricture in the urethra, on the coast of America, during the war; and Mr. R., as well as Mr. Hammick, attributes the disease to the surgeon of his ship having invariably used cotton or lint in wiping the bougies for re-introduction, when he had stricture; for on making a section of the stone after its extraction, a portion of cotton was found to be its nucleus. Though it may therefore be probable that the production of a calculus in the bladder, in this case, was owing to the introduction of cotton in the manner mentioned, yet I think it but just to include this case in the calculation, as one occurring in a seaman.

\* (Amsterdam). Dr. Hawkins states, that at the chief hospital of this great emporium for commerce, two cases of stone only occurred in the year 1823. See a valuable work just published, entitled, "Elements of Medical Statistics," by Dr. F. Bisset Hawkins, page 112.



## BRISTOL.

Mr. Richard Smith, of Bristol, the author of a valuable statistical paper on Stone\*, informs me, that in the infirmary of that city they have operated upon thirty-one cases in the last ten years. In private on two, one of which was an overseer of coal works; the latter a sailor boy of 18, who had been three voyages to the West Indies, but who experienced symptoms of stone in infancy. Besides these, Mr. Richard Smith, in his letter to me, mentions an old pilot at Pill, who has passed large pieces of gravel, but who has no stone in the bladder. The ages vary from  $4\frac{1}{2}$  to 66.

Of the thirty-one hospital cases *not one* had ever been at sea: and it is mentioned in my original paper, before quoted, that an accurate record of the occupations of patients admitted into the Bristol Infirmary, has been kept ever since it was established, about 90 years ago. In this period there have been 387 operations of lithotomy performed there, and yet not one case is designated "Mariner"; which must be considered a very remarkable circumstance, when we reflect that during the greater part of that period, Bristol was the second sea-port in the empire.

## DUNDEE.

Having read an interesting paper on the subject

\* Medico-Chirurgical Transactions, Vol. X.



of calculus, by Mr. John Crichton, of Dundee\*, I wrote to that gentleman; and his answer is, that out of about 100 operations for stone he himself had performed, and of 15 others in which he assisted Mr. Mudie, of Arbroath, three only were sea-faring persons. The first, he states, had symptoms of stone from birth; was cut at 21 years of age, and he continued at sea for twenty years afterwards in perfect health.

The second was Captain Kidd, who had been living on shore upwards of twenty years previously to the commencement of his calculous affection, and was 84 when he underwent the operation. He recovered; experienced a return of the disease two years afterwards, and again submitted to the operation, from which he also recovered †.

The third case was that of Capt. M—, R.N., who was attacked with symptoms of stone while residing at Alnwick, in Northumberland. This officer, it appears, was cut in August 1824. Mr. Crichton further states, that this patient had for twelve years before laboured under frequent at-

\* See Edinburgh Medical and Surgical Journal, Vol. XXIX.

† Upon his family and friends joining to dissuade him from hazarding a second operation at his very advanced period of life, "What," said the old gentleman, stamping with his foot, "would you have me live in misery, when I can obtain ease at the expense of a few minutes' suffering?"



tacks of nephralgia, accompanied by the voiding of sand and gravel.

Mr. Bedford, at the Admiralty Office, informs me that Captain M— had not been employed at sea since April 1812; so that it appears evident the nephralgic symptoms in this patient commenced between the third and fourth month after he had ceased to serve afloat\*.

#### EDINBURGH AND LEITH.

My friend, Sir George Ballingall, the Professor of Military Surgery in this university, says that the journals of their infirmary have been examined, and in which it appears that forty-one cases of stone had been operated upon during the last ten years; that of seventeen, whose occupations are noticed in the history of the cases, one is stated to be a Shetland fisherman, and one a sailor boy; twelve are mentioned to have been under 14 years of age; and of the remaining twelve, the occupations are not specified.

In 1821, Mr. Liston, of Edinburgh, performed his first operation for stone†. From thence to Sept.

\* May there not have been a predisposition to urinary calculus in this case, and by his continued services at sea, the disease was warded off, until he fixed his residence on shore?

† See Edinburgh Medical and Surgical Journal, Vol. XXIX. p. 236, et seq.



1829, he has in all performed the operation of lithotomy thirty-four times in private practice; one only being from England, and three were under 14 years of age. These added to Sir George Ballingall's number, make seventy-five cases recorded for Edinburgh and Leith in ten years, which gives  $7\frac{5}{10}$  annually for these places, as far as we know\*.

#### GLASGOW, AND ITS SUBSIDIARY PORTS.

During the last twelve years, viz. from January 1817 to 1828†, Dr. John Macfarlane, of that city, says, that there have been admitted into their infirmary, where a correct register is kept, thirty cases of stone in the bladder, but that no seaman was of the number. In the Greenock infirmary two cases occurred; the one in a labourer, the other in a child. At Port Glasgow there is no infirmary, and but two medical practitioners in the place. The ages of the cases admitted into the Glasgow Infirmary vary from  $2\frac{1}{2}$  years to 85, and *there are nine under 14‡*.

\* Mr. George Bell, the distinguished surgeon in Edinburgh, informed me, September 1829, that in his practice he has operated upon several cases during the period specified. So it is to be presumed have many other surgeons, both in Edinburgh and in other parts of Scotland, in public institutions as well as in private practice.

† Nearly two years' journals of this hospital, it appears, are missing.

‡ Since the above was written, I have had sent to me the



## GREENWICH HOSPITAL FOR DECAYED SEAMEN.

For nearly six years that Dr. Dobson has been surgeon to this hospital, that gentleman informs me that not one case of stone in the bladder has occurred there ; but that, on dissection after death, gravel had been found in the ureters, in a few of the aged pensioners, and that he had removed portions of gravel from the urethra of three during life. This is precisely what Dr. Robertson's report was to me, after a lengthened service of twenty-seven years as physician to that institution, and which is stated in my original notice on this subject\*. I am well assured also, that, for the previous six years to Dr. Dobson's appointment, no case of *calculus vesicæ* had occurred†.

## GUY'S HOSPITAL, LONDON.

That highly distinguished surgeon, Sir Astley Cooper, writes me, that he kept no record of the

Glasgow Medical Journal, No. VIII. for Nov. 1829, in which will be found a very interesting paper on Lithotomy, by Dr. Marshall of that city, detailing twelve cases of operation by him between the years 1823 and 1828 inclusive, independent of Dr. Macfarlane's Infirmary cases, as also one case by Mr. James Wilson on a female. Nine of these were above fourteen years of age, and four, only, under ; three were females ; none were of the seafaring class ; and three only have *Mr.* prefixed to the initial of the name, so that we have a right to presume that all the others were of the pauper or lower class of inhabitants.

\* Medico-Chirurgical Transactions, Vol. IX.

† Since this paper was drawn up, a man who had been a



occupation of the patients cut by him in this Hospital; and that the only two patients he recollects as belonging to this class, were the naval captain and surgeon adverted to in my first paper \*. Mr. Key, the present able Senior Surgeon, says, that from his private memoranda, out of forty-four cases he has there cut in seven years, one only was so far allied to a sea-faring life as to be a fisherman at Faversham in Kent.

#### HULL INFIRMARY, YORKSHIRE.

The only case of stone occurring unequivocally in a seaman, which my researches have enabled

marine, but discharged the service in 1815, on account of the general reduction, was admitted into Greenwich Hospital in December last, with stone in the bladder, by a special order. This man informed me, in Dr. Dobson's presence, that in 1816, when at work as a labourer in the country, he was injured in the loins while working at a winch; that for some years afterwards he suffered considerable pain in the region of the kidney, and subsequently at the neck of the bladder. This man is now undergoing the operation of lithotrity, by the Baron Heurte-loup, Dr. Dobson being desirous, like a sensible man as he is, of seeing the operation performed before he attempted it himself (lithotrity being a new operation in this country): and I have great satisfaction in saying that I have seen the Baron on three several occasions operate upon this man with great adroitness.

\* Dr. V. Duke, now in London, is the surgeon alluded to, and who has within these few weeks authorized me so say, that the notice of his case in my original paper was perfectly correct, for that he had laboured under symptoms of stone from infancy. The case of the captain cannot be traced.



me to make out, is that of J. Thompson, whose case is recorded by Mr. Hardy \*; and this gentleman has kindly informed me by letter, that Thomson was forty years of age before any symptoms of stone occurred, and that he was sixty-six when he died with the stone in his bladder, the weight of which was  $27\frac{1}{2}$  ounces avoirdupois! Mr. Fielding, the Senior Surgeon to the Infirmary at Hull, informed Mr. Hardy, also, that in the last twenty-five years, the cases of stone occurring in that Institution, may be averaged at two and a half, or three annually, and that in all these, as well as in his private practice, which is very extensive, Mr. F. never knew a seaman to be the subject of this disease.

#### INVERNESS INFIRMARY, ETC.

Dr. Nicol of this city, the metropolis of the Highlands, has written to say, that seven cases of stone in the bladder, only, have occurred in that county, as far as he knows, or could obtain information, during the last twenty years. Five of them were operated upon by himself and the other surgeons of the place, and two in London. None were mentioned as being seamen.

#### LIVERPOOL INFIRMARY, ETC.

Mr. James Dawson, surgeon to this institution, has kindly informed me, that ten operations for

\* See London Medical Gazette, Vol. III. p. 569.



stone have been performed there in the last thirteen years, and six in private practice, all of whom recovered. He mentions, however, that there were eight more of the former class, and ten of the latter in whom stone was ascertained to exist, who either refused to submit to the operation, or else the surgeons, for good reasons, declined it; twenty-two of the total number were natives of the place, and although an incorrect register has been furnished us, it is remarkable that none are named as being of the sea-faring class. It is proper to mention, however, that nearly four years' Hospital Journals are missing; but this deficiency, as regards numbers, has been supplied by Mr. Dawson from other sources.

Of the sixteen cases operated upon, one-half were under 14 years of age, and two of them twin boys, a remarkable circumstance in this inquiry.

#### NEWCASTLE UPON TYNE INFIRMARY.

Dr. Ramsay, the senior physician to this institution, has sent me an account of the stone cases admitted there, and where a very correct register is kept of the occupations of the patients; but not one is mentioned as even approaching to a sea-faring life out of twenty-seven cases in the last ten years; and what appears to be very remarkable in this report is, that the youngest subject operated upon was 20 years of age; there are three only of 21, and all the rest are 35 and upwards.



## NORWICH HOSPITAL.

Dr. Yelloly, the distinguished author of the able paper on this subject, in the Philosophical Transactions for 1829 already adverted to, acquaints me that not any seaman with stone had been admitted into the Norwich Hospital, during the last eleven years that a correct register of occupations had been kept there; out of 122 admissions with this disease.

## ST. THOMAS'S HOSPITAL, (LONDON.)

The cases of stone occurring in this Hospital from 1819 to 1828 inclusive, being ten years, Mr. Green, one of the able surgeons and lecturers at this Institution, informs me were seventy-seven, making  $7\frac{7}{10}$ ths per annum. There is not any official register kept at the Hospital, but Mr. Green states that the sister who attends all the lithotomy cases says, she *thinks* that a young man about twenty, was of the sea-faring class.

## THE LONDON HOSPITAL.

This Hospital, from its proximity to the shipping in the river and docks, as well as the most crowded part for commerce of any in, or in the neighbourhood of London, has, during the last ten years, received forty-one cases of stone; being a fraction more than four per annum, and yet there does not appear among the number *one* case in a sea-faring person. A boy of fifteen, an apprentice to the



Marine Society's ship, stationary in the river, and who had never been to sea, is included in the list furnished me by the clerk of the Hospital, through the kindness of Sir William Blizard and Mr. Andrews, two of the surgeons; but this case, surely, cannot be taken into the account. A correct register of the occupations, &c. of patients admitted, is kept at this Hospital. The ages vary from  $3\frac{1}{2}$  to 72 years, and of the total number, eighteen are under fourteen years of age\*.

#### SUNDERLAND INFIRMARY AND DISPENSARY.

Dr. Brown writes that four cases of stone only have been admitted at these Institutions, but not one of them a sea-faring person. He says, however, that Mr. Gregson, a surgeon of extensive private practice for many years in Sunderland, has acquainted him that he had met with stones in the bladder on dissection after death in two aged seamen. In the one, it was distinctly made out that he had no symptoms of stone for several years after he had quitted the sea-faring life; and in the other it is stated, that he quitted the sea sixteen years before his death, but no further particulars could be obtained.

\* (St. Petersburg.) Dr. Bisset Hawkins says, that at the principal Hospital (the Imperial) of this great maritime port, only thirty-two operations for stone occurred from 1803 to 1817, which appears the more remarkable, as the disease is stated to be very common in Russia.—See *Elements of Medical Statistics*, p. 110.



## DUBLIN.

Mr. Richard Carmichael of the Richmond Hospital, and who has been long distinguished by his surgical writings, acquaints me, that there are on the average only about six cases of stone annually operated upon in Dublin. It appears, both from Dr. Egan's very interesting paper, contained in the Tenth Volume of the Transactions of the Royal Irish Academy, and from Mr. Carmichael's letter to me, dated April, 1829, that Ireland is remarkable for the infrequency of stone in the bladder, compared with other countries and localities. This exemption Mr. Carmichael attributes to the very limited use of fermented liquors in Ireland among the lower orders, and to the general use of ardent spirits. In the Richmond Hospital, which Mr. C. attends, they have on an average not more than *one* case of stone annually\*.

Dr. Egan, in the paper just quoted, page 250, says, that the clergy of the Roman Catholic Church are peculiarly liable to calculous diseases, and form no small portion of the very few operated upon in Dublin; and which he attributes to the

\* See Dr. Wollaston's observations on the generation of uric acid in carnivorous birds.—Philosophical Transactions for 1810, p. 229; and Practical Observations on Surgery, 2d ed. By A. Copland Hutchison, p. 324 and 334, in reference to the above observations of Dr. Wollaston.



use of a small sour wine during their residence in their seminaries abroad \*.

\* It appears from Dr. Egan's paper in the Transactions of the Royal Irish Academy, quoting from the Second Volume of the Memoirs of the French National Institute, Mathematical and Physical Sciences, year 7, he says, "that there was instituted about forty years ago, at Luneville, in Lorraine, an hospital for the exclusive relief of calculous and gravelly patients. In that interval, 1629 of both sexes were admitted, and operated upon;—of these 1564 were males, and only 65 females. To Citizen Saucerotte, an Associate of the Institute, we are indebted for these details," &c. I have recently learnt that this Hospital has ceased to exist. The details, however, as far as they go, are exceedingly interesting, and, as to the frequency of stone in a particular district, they far exceed even Norwich, or any other place in this country. But in France I believe it used formerly to be a common practice with patients requiring operations, to come from very distant provinces to institutions of note. It is therefore questionable, whether the patients in the above Hospital were chiefly of that particular district.



TABLE showing the total number of CASES OF STONE Operated upon in a given Period, at the under-mentioned SEA-PORT Towns, distinguishing their Age, Sex, and such as were in any manner allied to a SEA-FARING LIFE, as far as could be ascertained.

Places.	No. of Years.	No. of Cases from correct Register.	No. of Cases from incorrect Register.	Total.	Average No. of Cases annually, (nearly.)	Age.		Sex.		Sea-faring Persons.			Remarks.
						Under 14 Years.	Above 14 Years.	Males.	Females.	Sailor Boys.	Seamen.	Fisher-men. Pilot.	
ABERDEEN Infirmary .....	10	68	..	68	$6\frac{8}{10}$	13	55	63	5	..	..	2	
Amsterdam, (Chief Hospital) .....	1	2	..	2	..	..	..	..	..	..	..	..	
Bristol Infirmary .....	10	33	..	33	$3\frac{3}{10}$	15	18	31	2	..	..	1	
Dublin .....	1	..	6	6	6	..	..	..	..	..	..	..	
Dundee Infirmary, and Arbroath .....	37	78	37	115	$3\frac{3}{4}$	21	57	75	3	..	..	..	
Edinburgh, and Leith .....	10	63	12	75	$7\frac{1}{10}$	15	48	63	..	1	..	1	
Glasgow and Greenock Infirmaries .....	12	32	..	32	$2\frac{8}{10}$	9	23	32	..	..	..	..	
Greenwich Hospital, for decayed seamen ..	10	..	..	..	..	..	..	..	..	..	..	..	
Guy's Hospital, (London.) .....	7	..	44	44	$6\frac{2}{7}$	..	..	..	..	..	..	1	
Haslar, Naval Hospital .....	13	2	..	2	..	..	2	2	..	..	..	..	
Hull Infirmary, (Yorkshire.) .....	25	..	62	62	$2\frac{1}{2}$	..	1	1	..	..	1	..	
Liverpool Infirmary .....	13	..	16	16	$1\frac{3}{13}$	8	8	14	2	..	..	..	
London Hospital, (London.) .....	10	41	..	41	$4\frac{1}{10}$	19	22	36	5	..	..	..	
Newcastle-upon-Tyne Infirmary, &c.* ..	10	31	..	31	$3\frac{1}{10}$	..	31	31	..	..	..	..	
Norfolk and Norwich Hospital .....	11	122	..	122	11	43	74	117	5	..	..	..	
Plymouth Naval Hospital .....	13	2	..	2	..	..	2	2	..	..	1+	..	
St. Petersburg Imperial Hospital .....	14	32	..	32	$2\frac{4}{14}$	..	..	..	..	..	..	..	
St. Thomas's Hospital, (London.) .....	10	..	77	77	$7\frac{1}{10}$	..	..	..	..	..	..	..	
		506	254	760	..	143	341	467	22	1	2	5	

\* This includes Sunderland.

† This is the Cotton Case mentioned at p. 13, in a note.



Upon inquiry at the Board of Trade and at the Custom House, I find that during the year 1828, there were employed as seamen and boys in the trade of Great Britain and her dependencies, exactly 155,576. In the revenue cruisers in England, Ireland and Scotland, 1,426. To this is to be added the seamen, marines and boys of the navy, amounting to an annual average of about 25,461, as before stated; making in all 182,463 seamen, marines and boys annually employed at sea, in the public and commercial services of this country, after a peace of fourteen years' duration, and yet, out of that vast population, how exceedingly small is the number of stone cases occurring among this class of persons, according to the foregoing summary \*.

For obvious reasons I have studiously avoided mixing up this inquiry with any matters unconnected with its more immediate object. The statistical inquiries on the subject of urinary calculi which have been published in this country within the last fourteen years, by Drs. Marcet and Prout, by Messrs. Richard Smith, Martineau, Crichton, Liston, and lastly, by Dr. Yelloly, cannot but be highly useful to the future inquirer, and throw light upon the nature of this extraordinary disorder. I feel assured, indeed, with my lamented

\* Admirals Cum——d and Doug——s, I have just been informed, have been operated upon for stone within the last twelve months; but from the best authority, the symptoms of their disease did not exist until they had been some time settled on shore.



friend, Dr. Marcet, that it is chiefly in this way that the true pathology of the disease can ever be obtained, and, consequently, the most efficacious mode of treatment.

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SOME OBSERVATIONS  
ON  
THE FREQUENCY  
OF  
CALCULOUS DISEASES  
IN SCOTLAND.

As there does not appear to be any authentic record of the prevalence of calculous diseases in Scotland, and as it is clearly shewn from the foregoing summary as well as in what follows, that we have hitherto been very much in the dark on this interesting part of these inquiries, it may, perhaps, be permitted that I should say a few words upon it in this place.

Dr. Yelloly, quoting from Mr. Richard Smith, of Bristol, gives but eight cases of stone annually for all Scotland, and this estimate was generally considered not far from the truth. From the subjoined abstract, however, it will appear that this number is greatly under-rated by Mr. Smith ; for, according to the returns here presented, the numbers will be found to be greater, even than in England, comparatively with the population of these two parts of the empire ; but before I give the ab-



stract, it may be more correct to state what further information I have received since this paper was originally written, from such places in Scotland as can hardly be called sea-ports, to some of which my inquiries have subsequently been directed.

*Paisley.*—Mr. D. M'Kinlay, of this populous manufacturing town, and Secretary to the Medical Society there, has very kindly transmitted to me a most complete record of such cases of stone as have been operated upon in Paisley during the ten years previous to the 19th of April, 1830, and from which record we have eighteen cases in all; namely, three Infirmary patients, and fifteen private, of whom one, only, was a female; three are under 15 years of age, and the others are from 15 to 77. Their occupations are stated to be chiefly *weavers* and other *working* people—not one sailor being among the number, and what is remarkable, they were all natives of the town. Three deaths, Mr. M'Kinlay says, occurred out of the whole number, and two of these had the stones extracted by the rectum after the Sansonian method as it is called. They had both exceeded the 74th year of their age, when the operations were performed.

It must here be remarked, however, that although there be fifteen out of eighteen who are private patients, according to the Table transmitted, it does not follow that the whole number were not paupers, and operated upon at their own habitations, through the zeal and humanity of the surgeons of



Paisley, with the view, perhaps, of preventing a painful separation from their families; for it appears that the whole eighteen were working tradesmen, such as are constantly the inmates of the London Hospitals: and it is a well known and acknowledged fact, that the lower orders of Scotch people, in their own country at least, have a great aversion to receive any charity or parochial relief, in whatever shape it may be offered. I know not what this aversion arises from, if it be not pride. Be it, however, what it may, I am glad to see it, and heartily wish that the same feeling were equally prevalent in England.

The calculations made by Drs. Marcet, Prout, and Yelloly, Messrs. Richard Smith, Martineau, and others, as to the frequency of the operation of lithotomy in England, were, I believe, chiefly confined to Hospital practice, and therefore could only include the pauper population; but in my calculations as to the greater frequency of calculous diseases in Scotland than in England, it may be urged that, in a few instances, I have included private practice. It is true that I have done so, as the Table will shew; but after adding up all the private patients operated upon in the few instances where it has been mentioned, they amount only in all to twenty-six, which will be about one and a half per annum in the total number for all the places in Scotland which have been named. There will therefore remain, on an average, about twenty-two pauper cases annually for North Britain.



During this inquiry, I have been informed, with much pain and regret, that in some districts in Scotland where calculous diseases are very prevalent, that the surgeons are averse to the performance of the operation of lithotomy, lest their reputation should suffer, in the event of failure; and that, therefore, the patients are either transported to a distance to be operated upon by some celebrated lithotomist, or else they die in misery with stone in the bladder.

It grieves me exceedingly to be constrained to announce such a fact, of my professional brethren and countrymen, but I owe it to society and to myself to speak out on this occasion, as I have my information from an honest and honourable correspondent, residing in a populous town in Scotland, and in which, too, there is an infirmary! He states, however, that the surgeons of the place, being himself one, have now determined upon a reform in this particular, and that stone cases shall be operated upon without such transfer in time to come.

I sincerely trust that this notice of the subject will make its proper impression in other places as well as in Scotland; and before I dismiss it, and take final leave of calculous diseases, the statistical part at least, I would strongly recommend every private practitioner in England, Scotland, and Ireland, as also elsewhere, to spend a month or six weeks every seven years, or oftener, in attendance



on hospital practice in the metropolis of either kingdom, including Glasgow and Aberdeen, or wherever any large hospital may be established nearest to their own residence; so as to have witnessed the practice generally, and some of the capital operations in surgery; by which means he will acquire a confidence in himself which with many, I am convinced, is all that is wanted in operative surgery; and I am also quite satisfied he will be otherwise *greatly* benefitted, and the public still more so. A little such sacrifice of time and money will be well applied, and ought, therefore, to be made for the public weal, as well as for the gratification of one's own feelings of rectitude.

OPERATIONS of LITHOTOMY Performed in SCOTLAND at the subjoined Places, in a given Period.

Places.	No. of Cases.	In No. of Years.	Or Annually about	Population.
ABERDEEN Royal Infirmary ... ..	68	10	$6\frac{8}{10}$	55,000
Dundee and Arbroath Infirmarys, &c. *	30 †	10	3 ‡	35,817
Edinburgh Royal Infirmary, &c.	75	10	$7\frac{5}{10}$	138,000
Glasgow and Greenock Royal Infirmarys 32 Additional No. by Dr. Marshall 18	45	12	$8\frac{2}{12}$	169,000
Inverness Infirmary .....				
Paisley Royal Infirmary and private practice	18	10	$1\frac{8}{10}$	26,000
Total	243	..	$23\frac{3}{10}$	435,817

\* In Messrs. Crichton and Liston's statements, seventeen only were not paupers, as they have Mr. or Captain, prefixed to their initials, and there are none so marked from Paisley.

† This is about the proportion in ten years for one hundred and fifteen cases in thirty-seven years.

‡ See Edinburgh Medical and Surgical Journal, Vol. XXIX., and a subsequent communication from the Author of that article to me.



The above statement is without calculating all the other parts of Scotland in which county infirmaries and dispensaries are established, and the number operated upon in private practice, excepting the few mentioned, throughout the whole of that country. It has been shewn, indeed, that one private practitioner alone, between January 1821 and September 1829, performed the operation of lithotomy thirty-four times, independent of his infirmary practice, which has been of very recent date, and had already been calculated upon. The above Table gives us about twenty-two pauper cases annually for Scotland, and which makes about one case of stone in 90,900 of the total population, estimating it at 2,000,000, according to the last census. But if we were to allow twenty-four pauper cases annually for all Scotland, I am quite sure that we should be nearer to the correct statement, and which would give about one case of stone in every 83,000 : the computation for all England, according to Dr. Yelloly, being one in every 108,000 of the total population.

Having thus clearly established the fact of the greater prevalence of calculous diseases in Scotland than in England, contrary to all preconceived opinions and statements on the subject, I shall conclude this article with a brief account of the mode of living among the lower orders of the Scotch, for the information of those who are less acquainted with the country than I am.



Their principal food, as Dr. Johnson says, is certainly oatmeal ; cooked in various ways. It is made into cakes and pottage, or porridge, with water ; and the latter, as a luxury, is sometimes made with milk. It is also made into brose, (which is oatmeal, boiling water and butter, or in place of the latter two, the fat skimmings of broth made palatable with salt,) haggis and puddings, with suet and onion. There is another mess of which the Scotch are particularly fond ; it is called sowens, and is an excellent diuretic. It is made by steeping the husks of the oatmeal in water for about two days, until the mixture has become sour ; the fluid is then poured off from the husks. It is put on the fire in a vessel, kept stirring, and as it boils, it thickens like a kind of paste, or farinaceous jelly. On the sea coast, or on the banks of rivers and lakes, where fish is abundant, they indulge in it, and indeed salt herrings or dried fish they have all the year round. Butchers' meat they seldom enjoy more than once a week, which is made into broth with barley and vegetables. They have cakes also made with barley meal which they call scones ; these have sometimes a quantity of potatoes mixed with the meal, and potatoes are used generally in every form of cooking, with butter, with milk, and without either, roasted, plain boiled, and stewed. And finally, as gin is the bane of the lower orders in England, so is their native spirit, whiskey, the bane of the Scotch.

Scotland furnishing more calculous cases, ac-



according to its population, than England or Ireland, may possibly be owing, in some degree, to the more sedentary occupations of the Scottish people, independently of any peculiarity in their food. Witness the numerous and extensive manufactories of cotton, linen, shawls, and worsted stuffs of all kinds, &c. all over the country; and the same reasoning may be applied to Norwich, as accounting for the great prevalence of the disease in that city.

*Dutchess Street, Portland Place,*

*April, 1830.*

THE END.







