PROCEEDINGS
OF THE
THE ROYAL SOCIETY OF NEW SOUTH WALES,

WEDNESDAY, MAY 4, 1892.

ANNUAL GENERAL MEETING.

H. C. Russell, B.A., C.M.G., F.R.S., President, in the Chair.

Fifty-three members and five visitors were present.

The minutes of the preceding meeting were read and confirmed.

The following Financial Statement for the year ending 31st March, 1892, was presented by the Hon. Treasurer and adopted:—

<table>
<thead>
<tr>
<th>General Account</th>
<th>£ s. d.</th>
<th>£ s. d.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Receipts</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One Guinea</td>
<td>212</td>
<td>2 0</td>
</tr>
<tr>
<td>Two Guineas</td>
<td>443</td>
<td>2 0</td>
</tr>
<tr>
<td>Arrears</td>
<td>91</td>
<td>0 0</td>
</tr>
<tr>
<td>Advances</td>
<td>3 3</td>
<td>0 0</td>
</tr>
<tr>
<td>Total Receipts</td>
<td>1405</td>
<td>10 0</td>
</tr>
<tr>
<td><strong>Balance on 1st April, 1891</strong></td>
<td></td>
<td>41 12 0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Payments</strong></th>
<th>£ s. d.</th>
<th>£ s. d.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advertisements</td>
<td>31 17 0</td>
<td></td>
</tr>
<tr>
<td>Assistant Secretary</td>
<td>250</td>
<td>0 0</td>
</tr>
<tr>
<td>Books and Periodicals</td>
<td>170 14 0</td>
<td></td>
</tr>
<tr>
<td>Bookbinding</td>
<td>55 1 5</td>
<td></td>
</tr>
<tr>
<td>Freight, Charges, Packing, &amp;c.</td>
<td>15 3 4</td>
<td></td>
</tr>
<tr>
<td>Furniture and Effects</td>
<td>39 2 1</td>
<td></td>
</tr>
<tr>
<td>Gas</td>
<td>29 11 2</td>
<td></td>
</tr>
<tr>
<td>Carried forward</td>
<td>591 9 0</td>
<td></td>
</tr>
</tbody>
</table>
## PAYMENTS—continued.

<table>
<thead>
<tr>
<th>Item</th>
<th>£ s. d.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housekeeper</td>
<td>10 0 0</td>
</tr>
<tr>
<td>Insurance</td>
<td>9 10 0</td>
</tr>
<tr>
<td>Office Boy</td>
<td>26 0 0</td>
</tr>
<tr>
<td>Petty Cash Expenses</td>
<td>19 6 3</td>
</tr>
<tr>
<td>Postage and Duty Stamps</td>
<td>37 12 6</td>
</tr>
<tr>
<td>Printing</td>
<td>32 17 0</td>
</tr>
<tr>
<td>Printing and Publishing Journal</td>
<td>278 11 6</td>
</tr>
<tr>
<td>Prize Essay Award</td>
<td>25 0 0</td>
</tr>
<tr>
<td>Rates</td>
<td>39 18 9</td>
</tr>
<tr>
<td>Refreshments and attendance at Meetings</td>
<td>17 19 6</td>
</tr>
<tr>
<td>Repairs</td>
<td>137 14 9</td>
</tr>
<tr>
<td>Stationery</td>
<td>7 11 9</td>
</tr>
<tr>
<td>Sundries</td>
<td>10 3 3</td>
</tr>
<tr>
<td>Total Payments</td>
<td>1243 14 3</td>
</tr>
<tr>
<td>Transfer to Building and Investment Fund</td>
<td>165 0 0</td>
</tr>
<tr>
<td>Balance on 31st March, 1892</td>
<td>38 11 7</td>
</tr>
<tr>
<td><strong>Total Payments</strong></td>
<td><strong>1447 5 10</strong></td>
</tr>
</tbody>
</table>

### BUILDING AND INVESTMENT FUND.

#### RECEIPTS.

<table>
<thead>
<tr>
<th>Item</th>
<th>£ s. d.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transfer from General Account</td>
<td>165 0 0</td>
</tr>
<tr>
<td>Interest on Fixed Deposit</td>
<td>37 13 0</td>
</tr>
<tr>
<td>Amount of Fund on 1st April, 1891</td>
<td>566 17 1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>769 10 1</strong></td>
</tr>
</tbody>
</table>

### CLARKE MEMORIAL FUND.

#### RECEIPTS.

<table>
<thead>
<tr>
<th>Item</th>
<th>£ s. d.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest on Fixed Deposit</td>
<td>15 0 0</td>
</tr>
<tr>
<td>Amount of Fund on 1st April, 1891</td>
<td>300 1 8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>315 1 8</strong></td>
</tr>
</tbody>
</table>

### Fixed Deposit in Union Bank

<table>
<thead>
<tr>
<th>Item</th>
<th>£ s. d.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed Deposit in Union Bank</td>
<td>315 1 8</td>
</tr>
</tbody>
</table>

**Audited, H. O. Walker. ROBERT HUNT, Honorary Treasurer. S. MACDONNELL. W. H. WEBB, Assistant Secretary.**

**Sydney, 14th April, 1892.**
Messrs. H. A. Lenehan and P. N. Trebeck were duly elected Scrutineers for the election of officers and members of Council.

A ballot was then taken, and the following gentlemen were duly elected officers and members of Council for the current year:

Honorary President:
HIS EXCELLENCY THE RIGHT HON. THE EARL OF JERSEY, G.C.M.G.

President:
PROF. WARREN, M. INST. C.E., WEL.SC.

Vice-Presidents:
C. W. DARLEY, M. INST. C.E.  |  PROF. LIVERSIDGE, M.A., F.R.S.
Prof. T. W. E. DAVID, B.A., F.G.S.  |  H. C. RUSSELL, B.A., C.M.G., F.R.S.

Hon. Treasurer:
ROBERT HUNT, C.M.G., F.G.S.

Hon. Secretaries:
F. B. KYNGDON.  |  PROF. ANDERSON STUART, M.D.

Members of Council:
JAMES GRAHAM, M.A., M.D. EDIN.  |  J. H. MAIDEN, F.L.S., F.C.S.
A. LEIBIUS, PH.D., M.A., F.C.S.  |  J. ASHBURTON THOMPSON, M.D.
J. A. MCDONALD, M. INST. C.E.  |  PROF. THRELFAII, M.A.

The following gentleman was duly elected an ordinary member of the Society:

Sturt, Clifton, L.R.C.S., L.R.C.P. EDIN., L.F.P.S. GLAS.; Bulli.

The certificates of five new candidates were read for the second time, and of eleven for the first time.

The names of the Committee-men of the different Sections were announced:

Section B. and C.—Chemistry and Mineralogy, Geology and Palæontology.
Chairman—Prof. T. W. Edgeworth David, B.A., F.G.S.
Secretary for Chemistry—W. M. Hamlet, F.C.S., F.I.C.
Secretary for Geology—Rev. J. Milne Curran, F.G.S.

Meetings held on the First Tuesday in the month at 8 p.m.

Section E.—Microscopical Science.
Chairman—Mr. H. O. Walker.
Secretary—Mr. S. MacDonnell.
Committee—Messrs. T. M. Brindley, G. D. Hirst, P. R. Pedley, T. F. Wiesener, Dr. H. G. A. Wright.

Meetings held on the Second Monday in each month at 8 p.m.

Section H.—Medical,
Chairman—Dr. Fiaschi.
Secretaries—Dr. Hull and Dr. Huxtable.
Committee—Dr. W. Chisholm, Dr. James Graham, Dr. W. H. Goode, Prof. Anderson-Stuart, M.D., Dr. Rennie, Dr. MacCormick.

Meetings held on the Third Friday in each month, at 8 15 p.m.

Section K.—Civil and Mechanical Engineering.
Chairman—Cecil Darley, M.Inst.C.E
Secretary—J. A. McDonald, M.Inst.C.E.

Meetings held on the Third Wednesday in each month, at 8 p.m.

One hundred and sixteen volumes, six hundred and twenty-one parts, one hundred and forty-one pamphlets, two atlases and fifteen loose Meteorological charts received as donations since the last meeting were laid upon the table and acknowledged.

The following letter was read from Prof. W. T. Thiselton Dyer, C.M.G., M.A., B.Sc., F.R.S., Director of the Royal Gardens, Kew:—
Royal Gardens, Kew.
8th February, 1892.

Dear Sir,—It was with mingled suprise and pleasure that I received your very kind letter of 23rd December, informing me that the Council of the Royal Society of New South Wales had done me the very signal honour of conferring upon me the Clarke Memorial Medal (which came safely into my hands at the same time).

I cannot but feel, however, that this distinction is one which has been earned rather by the Institution over which I have the honour to preside than by any merit of my own. That, however, rather enhances than diminishes the satisfaction which I derive from it.

The connection between Kew and the Australian Colonies has always been peculiarly close; and I observe that this is no less than the third occasion upon which it has been recognised by your Society. That connection began in the last century with Sir Joseph Banks, who, though not actually connected in any official way with Kew, was virtually its scientific director; it was resumed by the splendid work on the elucidation of the Australian flora of my immediate predecessor in office, Sir Joseph Hooker; and it culminated in the preparation at Kew, by Mr. Bentham.
of his classical description of the whole Australian flora. It is, I feel, no small distinction to be associated in the eye of Australian scientific men with these two eminent recipients of the Clarke Medal. My own work has, I feel, been the much humbler one of continuing a tradition, which by the wisdom of the Government has made Kew as much an Imperial as a local institution.

The services to which you allude have become so much a matter of routine that they scarcely seem to possess any exceptional merit. Their reward, if they deserve any, continually manifests itself in the kindness and sympathy which Kew never fails to receive at the hands of its Colonial correspondents. If anything is needed to lighten the continuous and perhaps sometimes onerous labours of the Kew staff, it is the feeling that they are working not merely for a limited section of the home community, but for the pleasure and gratification of intelligent persons in every part of the Empire.

Kew has undoubtedly in the last half-century been successful in effecting much for the advancement of many material interests. Its highest work has, however, perhaps been accomplished in the encouragement and help which it has been able to afford to the cultivation of science in England beyond the seas. In Australia, with its splendid Universities, energetic scientific societies, and fine botanic gardens, it sees an offshoot of the best home intellectual life, which must always command its warmest sympathy.

I am, dear Sir, yours truly,

W. T. THISELTON DYER,
Director.

W. H. Warren, Esq., Hon. Secretary,
Royal Society of New South Wales.

Mr. H. C. Russell, B.A., C.M.G., F.R.S., then read his address.

A vote of thanks was passed to the retiring President, and Prof. Warren, Wh. Sc., M. Inst. C.E., was installed as President for the ensuing year.

WEDNESDAY, JUNE 1, 1892.

Prof. Warren, M. Inst. C.E., President, in the Chair.

Twenty members and two visitors were present.

The minutes of the preceding meeting were read and confirmed.

The certificates of five new candidates were read for the third time, of eleven for the second time, and of two for the first time.
The following gentlemen were duly elected ordinary members of the Society:

Stuart, Charles M'Donnell; Sydney.

Twenty-one volumes, eighty-four parts, twenty pamphlets and thirteen meteorological charts, received as donations since the last meeting, were laid upon the table and acknowledged.

The following papers were read:

2. "A determination of the Magnetic Elements at the Physical Laboratory, University of Sydney," by C. Coleridge Farr, B.Sc.
   Remarks were made by Messrs. H. C. Russell, A. J. Pollock, H. F. Madsen, and Prof. David.
   Remarks were made by Messrs. C. C. Farr and A. J. Pollock.
   Remarks were made by Prof. David and Mr. W. M. Hamlet.

Mr. H. C. Russell made some remarks on the large Sun-spots, visible at the present time.

**WEDNESDAY, JULY 6, 1892.**

Prof. Warren, M. Inst. C.E., President, in the Chair.

Forty-one members and seven visitors were present.

The minutes of the preceding meeting were read and confirmed.

The certificates of eleven new candidates were read for the third time, of two for the second time and of six for the first time.
The following gentlemen were duly elected ordinary members of the Society:—

Cowdery, G. R.; Sydney.
Gundlach, Louis Richard; Manly.
Scarr, Percy; Sydney.
Schofield, James Alexander; Sydney.
Webster, James Phillip, Assoc. M. Inst. C.E.; Marrickville.

Thirty-four volumes, ninety-five parts, nine pamphlets and one hydrographic chart received as donations since the last meeting were laid upon the table and acknowledged.

A letter from Mr. James Nisbet of Narrawin Station to Mr. H. C. Russell was read, in which reference was made to the accountable death of large numbers of fish in the station lagoon, in a single night.

Mr. J. M. Smail, M. Inst. C.E., read a paper "On the Ventilation of Sewers and Drains."

The discussion upon this paper was postponed to the next meeting of the Civil and Mechanical Engineering Section.

A model of the Cowra Bridge was exhibited by Mr. Robert Hickson, M. Inst. C.E., and a Weather Forecasting Diagram was exhibited and explained by Mr. H. C. Russell, B.A., C.M.G., F.R.S.

**WEDNESDAY, AUGUST 3, 1892.**

Prof. Warren, M. Inst. C.E., President, in the Chair.
Forty-three members and four visitors were present.
The minutes of the preceding meeting were read and confirmed.
The certificates of two candidates were read for the third time, of six for the second time, and of three for the first time.

The following gentlemen were duly elected ordinary members of the Society:

Halloran, Henry Ferdinand; Sydney.
White, Harold Pogson; Kogarah.

Twenty-one volumes, one hundred and twenty-two parts, and five pamphlets received as donations since the last meeting, were laid upon the table and acknowledged.

The following papers were read:

1. "Flying Machine Work and the \( \frac{1}{6} \) I H.P. Steam Motor, weighing 3\( \frac{1}{4} \) lbs.," by Lawrence Hargrave.
   Remarks were made by Prof. Threlfall and the Chairman.

2. On the venom of the Australian Black snake (Pseudechis porphyriacus), by C. J. Martin M.B., B.Sc., Demonstrator of Physiology in the University of Sydney, and J. McCarvie Smith.
   Remarks were made by Mr. W. M. Hamlet, Prof. Anderson Stuart, and Prof. Liversidge.

Mr. W. M. Hamlet exhibited and described a new form of Blowpipe apparatus.

Mr. H. C. Russell exhibited a photograph of Winnecke's Comet, obtained the day previously after three hours exposure.

**WEDNESDAY, SEPTEMBER 7, 1892.**

Prof. Warren, M.Inst.C.E., President, in the Chair.

Twenty-six members and four visitors were present.

The minutes of the preceding meeting were read and confirmed.

The certificates of six candidates were read for the third time, of three for the second time, and of three for the first time.

The following gentlemen were duly elected ordinary members of the Society:

Bell, Walter Farmer, M.Inst.C.E.I.; Sydney.
Everett, William Frank; Sydney.
Kiddle, Hugh Charles; Burrumbuttock East, via Albury.
Vickery, George B.; Sydney.

Twenty-eight volumes, one hundred and eighty-five parts, fifteen reports, twenty-one pamphlets and fifteen meteorological diagrams received as donations since the last meeting, were laid upon the table and acknowledged.

The following paper was read:—“The effect which settlement in Australia has produced upon Indigenous Vegetation,” Part I., by Alex. G. Hamilton.

Remarks were made by Prof. Anderson Stuart, Messrs. C. Hedley, H. G. McKinney, W. D. Campbell, and H. C. Russell.

Mr. Hedley exhibited several coloured drawings prepared from original sketches on the spot by Mr. Harry Stockdale, illustrating the various modes of burial practised by natives of the Alligator River, Northern Territory. They showed the corpses wrapped in Melaleuca bark, and placed on niches of rocks, among the branches of trees or on scaffolds erected on the plains.

Prof. Anderson Stuart, M.D., exhibited an improved form of the apparatus for demonstrating the nature of a sound-wave, and made from the original model constructed at the Sydney University by the Cambridge Scientific Instrument Company. The beauty of workmanship, and unique way in which wave motion was made apparent to the eye elicited much admiration.

WEDNESDAY, OCTOBER 5, 1892.

Prof. Warren, M. Inst. C.E., President, in the Chair.

Twenty members and three visitors were present.

The minutes of the preceding meeting were read and confirmed.

The Chairman announced with deep regret the death of Mr. Robert Hunt, C.M.G., F.G.S., Deputy Master of the Royal Mint,
Sydney, who had been a member of the Council since 1880, and Hon. Treasurer from 1885.

The Rev. Dr. W. Wyatt Gill called attention to the reprint by the Government Printer of Mr. L. E. Threkeld's "An Australian Language, as spoken by the Awabakal, the people of Awaba, or Lake Macquarie, being an account of their language, traditions, and customs," and gave an account of the steps which led up to the Government undertaking the work. He eulogised the work of Dr. Fraser, who had edited the book as a labour of love.

The certificates of three candidates were read for the third time, of three for the second time, and of two for the first time.

The following gentlemen were duly elected ordinary members of the Society:

- Flint, Charles Alfred, M.A.; Stanmore.
- Hodgson, Charles George; Sydney.

Twenty-five volumes, seventy-four parts, fourteen reports, seven pamphlets, and one meteorological chart received as donations since the last meeting were laid upon the table and acknowledged.

The Society's bronze medal and cheque for £25 were presented to Mr. Alexander G. Hamilton, Master of the Public School at Mount Kembla, for his essay "On the effect which settlement in Australia has produced upon indigenous vegetation." The President congratulated Mr. Hamilton on his contribution, who proceeded to read the second division of his essay, the first portion having been read at a previous meeting. In summing up the paper, Mr. Hamilton said that he was of opinion that the causes of the destruction of native flora were—(1) the destruction of various timbers, and in cultivating the soil or improving the pastures; (2) by the alteration of surface drainage, by the surface being broken either designedly or by cattle; (3) by the overstocking of the natural pastures without any means being resorted to for renovating them, and by the destruction and modification of
the flora caused by the checking or modification of the native fauna, and the introduction of new flora.

Prof. Anderson Stuart said the subject had been handled in a very interesting way, and there were a great many points that awakened interest. One of these was the prediction that the rabbit plague would bring its own cure. It happened that the other evening he (Prof. Stuart) was reading some ancient history, and he saw it stated that a rabbit plague was the means of practically depopulating the whole of the south of France and of Spain 100 B.C., and yet in the succeeding century no mention was made of any such plague, and there was no such plague there today; and it was pointed out that what happened there might happen here in Australia. Various means of getting rid of the rabbits had been proposed, but still there was no doubt whatever in his mind that the only way of getting rid of the plague was by the introduction of a suitable infectious rabbit disease. "Fowl cholera" had not succeeded, still that by no means was to say that other microbe diseases would not succeed. He believed that a microbe would be found which would cope with the evil. The way to get that microbe was not by offering a prize. It would only be got by having competent men in sufficient numbers with ample opportunity and means to study the whole subject. To merely offer a prize, and to expect men to do work for a prize, was, he was certain, entirely futile. Both Pasteur and Koch, when in conversation with him during the past two winters, had spontaneously expressed themselves in exactly the same terms with regard to this question of a prize.

Mr. Kyngdon gave expression to his appreciation of the paper.

Mr. Benbow referred to an aspect of the rabbit question which he thought had not been touched. In Europe rabbits bred only during the spring and the summer. In these colonies on account of the favourable climate the rodents bred all the year round. This constant breeding must, he thought, have a weakening effect upon their constitutions, and their vitality must be greatly lowered allowing diseases, which they could resist now, in time to come to
decimate them. It was quite possible that in the course of a few years the rabbits would become so vitiated as to be extremely susceptible to natural poison.

The following were exhibited:—
1. A steam engine for a Flying-machine, by Mr. L. Hargrave.
2. Drawings of the planet Mars from observations taken with an eight and a half inch reflecting equatorial telescope by Mr. Walter Gale.

**WEDNESDAY, NOVEMBER 2, 1892.**

Prof. Warren, M.Inst.C.E., President, in the Chair.

Twenty members and one visitor were present.

The minutes of the preceding meeting were read and confirmed.

The certificates of three candidates were read for the third time, of two for the second time, and of seven for the first time.

The following gentlemen were duly elected ordinary members of the Society:—

Kirkaldie, David: Sydney.

McNeill, John Patrick, M.D. Dublin, L.R.C.S.I.; Burwood.

Speak, Savannah J.; Sydney.

Nineteen volumes, eighty-three parts, nine pamphlets, four reports, one hydrographic chart, one photograph, and one engraving received as donations since the last meeting, were laid upon the table and acknowledged.

The Chairman announced that the Council recommended the election of the following gentleman as an Honorary Member of the Society, viz., William Huggins, D.C.L., LL.D., Ph.D., F.R.S., &c., 90 Upper Tulse Hill, London.

The election was carried unanimously.

The following papers were read:—


Y—Dec. 7, 1892.
3. "Some Folk-songs and Myths from Samoa," translated by the Rev. G. Pratt, with Introduction and Notes by John Fraser, LL.D.

Prof. Warren, M. Inst. C.E., exhibited two extensometers to measure \( \frac{1}{100000} \) part of an inch, in connection with the testing of the elastic limit and modulus of elasticity of materials, and the Rev. J. Milne Curran, F.G.S., exhibited a series of photographs and micro-photographs, illustrating the geology of New South Wales.

**WEDNESDAY, DECEMBER 7, 1892.**

Prof. Warren, M. Inst. C.E., President, in the Chair.

Thirty-five members and three visitors were present.

The minutes of the preceding meeting were read and confirmed.

The certificates of two new candidates were read for the third time, of seven for the second time, and of two for the first time.

The following gentlemen were duly elected ordinary members of the Society:

Statham, Hugh Worthington; North Sydney.
Thow, William; Ashfield.

The Chairman announced that the Clarke Medal for 1893 had been awarded by the Council to Professor Ralph Tate, F.L.S., F.G.S., University of Adelaide.

It was resolved that Messrs. S. MacDonnell and P. N. Trebeck be appointed Auditors for the current year.

Twenty-three volumes, ninety-six parts, twenty-five reports, six pamphlets, two hydrographic charts and two meteorological charts received as donations since the last meeting, were laid upon the table and acknowledged.

The following letter was read:
Sydney, December 5, 1892.

The Hon. Secretary, Royal Society of N.S.W.

Dear Sir,—I enclose herewith a cheque for one hundred pounds, which sum I desire to be placed in the hands of the Council of the Royal Society of New South Wales, with the object of bringing about an exhaustive study of certain features of Australian weather.

I will in a short time, and in another letter, indicate more fully the particular weather features, the study of which I desire to promote.

Believe me,

Yours very truly,

RALPH ABERCROMBY,
by H. C. RUSSELL.

Mr. Russell, in a letter to the Society on the subject, said that the points for consideration which the Hon. Mr. Abercromby had mentioned to him were—the effect of the north-west monsoon and our southerly busters. Mr. Abercromby, however, had not quite made up his mind, and was not sure whether the appointment of a committee or the offering of prizes would the better fulfil the purpose he had in view. It was unanimously resolved that a letter be sent to Mr. Abercromby thanking him for his gift and also for the confidence which he had placed in the Council.

The following papers were read:

   Remarks were made by Messrs. C. W. Darley, C. Hedley, L. Hargrave, and W. M. Hamlet.


3. "Notes on some Australian Stone Weapons," by Professor Liversidge, M.A., F.R.S.

4. "Notes on the recent Cholera Epidemic in Germany," by Dr. Schwarzbach.
   Remarks were made by Mr. Hamlet, and Prof. Anderson Stuart, M.D.


7. "Languages of Oceania," by John Fraser, B.A., LL.D.


Some implements and other articles from the South Sea Islands were exhibited by Mr. C. A. Benbow.
A requisition dated 5th August, 1891 was presented to the Hon. Secretaries signed by various members of the Royal Society asking for the re-establishment of the Geological Section. Subsequently, at a meeting held in the Library on April 4th, 1892, it was arranged that Sections B—Chemistry and Mineralogy, and C—Geology and Palaeontology should be combined with the hope of securing a better attendance, and a larger and wider interest than could otherwise have been obtained. Meetings were therefore held in the Library of the Royal Society on the third Tuesday in each month, when the following exhibits were placed before the members and papers were read:

"An account of a visit to New Guinea together with some notes on the community of life between Australia and New Zealand," by Mr. Charles Hedley.

"On the occurrence of Platinum and associated minerals in the sands of the Richmond River; also in the lode-material of Broken Hill illustrated by specimens," by Mr. J. C. H. Mingaye.


"On some Chinese lozenges containing quinine and morphia, said to be used to make drunken men sober," by Mr. W. M. Hamlet.

"An account of some intrusive rocks in the neighbourhood of Sydney, illustrated by microscopic sections and photographs," by the Rev. J. Milne Curran.

"On a new mineral containing Jodide of Copper found at Broken Hill," by Mr. W. M. Hamlet.
EXHIBITS.

Photographs of spheroidal weathering of rocks, and of limestone and basalt near Orange, by the Rev. J. Milne Curran.

Some interesting minerals from Fiji, by Mr. J. C. H. Mingaye.

Some of the silver-bearing kaolins from Broken Hill, by Mr. W. M. Hamlet.

Dicks' Petrological Microscope, new and larger model, by the Rev. J. Milne Curran.

Geological photographs, by Mr. B. Dunstan.

Some New South Wales Minerals, by Mr. J. H. Campbell.

CIVIL AND MECHANICAL ENGINEERING SECTION.

At the preliminary meeting held on April 6th, the following officers were elected for the 1892 Session:—Chairman: Mr. Cecil Darley, M. Inst. C.E. Hon. Secretary: Mr. J. A. McDonald, M. Inst. C.E. Committee: Mr. H. Deane, M. Inst. C.E., Mr. J. M. Smail, M. Inst. C.E., Mr. H. G. McKinney, M. Inst. C.E., Mr. D. M. Maitland, L.S.

Monthly meeting held May 18, 1892.

Mr. C. Darley in the Chair.

It was resolved that the members be asked to subscribe 10s. per annum towards the cost of printing the papers read before the Section and that the Committee be empowered to send a circular to that effect to all members.

The evening was devoted to a discussion on Dr. Ashburton Thompson's paper on "The Sewerage of Country Towns," and was opened by the reading of a short contribution from Mr. A. F. Osborne. Messrs. J. T. Jones, Henson, Campbell, Grimshaw, Pollitzer, Seaver and the Chairman took part in the discussion, and Dr. Thompson replied.
A letter was received from Mr. Hickson, Commissioner for Roads, inviting the members to visit the outfall works of the Western Suburbs Sewerage Scheme, and an invitation was given by the Chairman for the members to visit the Pumping Works at Ryde.

*Monthly meeting held June 15, 1892.*

Mr. C. Darley in the Chair.

The Chairman read a description of the engines &c. recently erected at Ryde Pumping Station, giving the results of the tests applied, and illustrating his remarks by diagrams.

A discussion then ensued in which Messrs. Haycroft, Grimshaw, Houghton, Dare, King, Pridham, and Boys took part.

*Monthly meeting held July, 20th, 1892.*

Mr. C. Darley in the Chair.

The evening was devoted to a discussion on a paper by Mr. J. M. Smail, M. Inst. C.E., on the "Ventilation of Sewers and Drains," which had been read before the Royal Society on July 6th, 1892. The following gentlemen spoke—Mr. Darley, Col. Wells, Messrs. Maitland, Henson, Knibbs, Prof. Selman, and Mr. Haycroft. Mr. Smail then replied.

*Monthly meeting held August, 16th, 1892.*

Mr. C. Darley in the Chair.

A paper by Mr. W. F. How, A. M. Inst. C.E., on "Various Systems of Tramway Traction," was read and the discussion was adjourned to a future meeting.

*Monthly meeting held September 21st, 1892.*

Mr. C. Darley in the Chair.

The discussion on Mr. How's paper was opened by the Secretary reading a communication from Mr. Norman Selfe, and was continued by Messrs. Grimshaw, Thow, and Price. The further discussion was then adjourned to the next meeting.
PROCEEDINGS OF THE SECTIONS.

Monthly meeting held October 19th, 1892.

Mr. C. Darley in the Chair.

The further discussion of Mr. How's paper was opened by Mr. R. E. Jones, and carried on by Messrs. Cowdery, Elwell, Haycroft, and Prof. Selman. Mr. How replied.

Monthly meeting held November 16th, 1892.

Mr. C. Darley in the Chair.

Mr. Nardin read a paper on "Recent Bridge Building in New Zealand," by Mr. A. H. Alabaster, with an introduction by himself. The discussion was adjourned to the next meeting.

Mr. Houghton then read a paper on "Notes on the Economical use of Steam," the discussion on which was also adjourned.

Monthly meeting held December 21st, 1892.

Mr. H. Deane in the Chair.

The discussion on Mr. Alabaster's paper was opened by Mr. Grimshaw, and continued by Mr. Parkinson, Profs. Selman and Warren, and Mr. Bell.

The discussion on Mr. Houghton's paper was further adjourned till next Session.

A paper was read by Mr. C. O. Burge on "Light Railways for New South Wales," the discussion being adjourned till next Session.

The average attendance of members at the meetings during this Session has been twenty-six, and the number of members subscribing to the printing fund is fifty-six.

MEDICAL SECTION.

At the preliminary meeting held in April, the following officers were elected:—Chairman: Dr. Thos. Fiaschi. Committee: Prof. T. P. Anderson Stuart, Drs. James Graham, Wm. Chisholm,

During the session two general meetings were held. At the first, Dr. Rennie contributed a paper upon the subject: "Recent work on the pathology of Cancer. There was a large attendance of members, and at the conclusion of the meeting Dr. Rennie was thanked for his valuable contribution.

At the second meeting Dr. Chisholm read notes of a case of hydatid of the brain, and Dr. Fiaschi read those of a case of sarcoma of the testis in a cryptorchid removal. There was a fair attendance.

MICROSCOPICAL SECTION.

A preliminary meeting of this Section was held on 6th April, 1892. Dr. H. G. A. Wright being in the Chair. The following officers were elected for the year:—Chairman: Mr. H. O. Walker. Secretary: Mr. S. MacDonnell. Committee: Dr. H. G. A. Wright, Messrs. T. M. Brindley, G. D. Hirst, P. R. Pedley, and T. F. Wiesener.

*Monthly meeting 9th May, 1892.*

Mr. P. R. Pedley in the Chair.

Dr. Wright called attention to the omission in the new edition of "Carpenter on the Microscope" of the details of structure observed in mounted preparations of the foot of the blowfly, prepared by Mr. H. Sharp, of Adelong, and brought specially before the notice of the editor, the Rev. Dr. Dallinger.

Mr. Kyngdon exhibited a pattern of microscope, now out of date, but in its day considered to be one of the best of the cheap instruments of thirty years ago. The stand was known as Smith and Beck's "Universal."

Dr. Wright exhibited photographs of the blowfly's tongue, showing the structure alluded to above.
Monthly meeting 13th June 1892.

Mr. P. R. Pedley in the Chair.

Dr. W. Morris exhibited Powell & Lealand's 1/6 inch apochromatic objective of 1.5 numerical aperture, showing anthrax and cholera bacilli and the podura scale.

Mr. P. N. Trebeck exhibited a dipping from Port Jackson in the neighbourhood of Milson's Point, the water at the time of taking having been highly phosphorescent.

Dr. H. G. A. Wright exhibited a series of photographs showing the arrangement of suckers on the pseudo-tracheae of the tongue of the blowfly.

Mr. S. MacDonnell exhibited a current-slide for observing growth of minute aquatic life.

Monthly meeting 11th July, 1892.

Mr. P. R. Pedley in the Chair.

Mr. G. D. Hirst exhibited a couple of positive eye-pieces mounted on handles.

Dr. H. G. A. Wright exhibited photographs of Isthmia nervosa and I. enervis.

Monthly meeting 8th August, 1892.

Dr. H. G. A. Wright in the Chair.

Dr. Wright exhibited a series of photographs illustrating the transverse markings on the difficult test diatom "amphipleura pellucida" taken with Powell & Lealand's new 1/4 inch apochromatic objective after an hour's exposure. This duration gave a good result, which might have been improved had the exposure been still longer. The unaided eye is unable to see these faint strie with the magnification of the 1/4 inch—600 diameters—but photography has succeeded in fixing them on the sensitive plate.

On behalf of Dr. Morris, Mr. S. MacDonnell exhibited a somewhat rare fungus (Acidium bellidis), found on the green leaves of the common daisy. Also leaves of the marguerite and
of the summer chrysanthemum infested with the various stages of development of a fly, which punctures the leaf and lays its eggs within the tissues. This insect is supposed to be the "black-horned leaf-miner," *Phytomyza nigricornis*. The name "miner" is given to the grub because it clears away the substance of the leaves in galleries.

Mr. Wiesener showed some photographic prints taken by Zeiss, the well-known optician of Jena, with an anastigmatic photographic lens that has been constructed on a new optical formula with the Schott glass. The clearness and beauty of these photographs elicited high praise.

*Monthly meeting 12th September, 1892.*

Mr. G. D. Hirst in the Chair.

Mr. F. B. Kynddon exhibited Reichert's Petrological Microscope.


*Monthly meeting 10th October, 1892.*

Dr. H. G. A. Wright in the Chair.

Mr. Wiesener exhibited Zeiss's microscopes and high power objectives sent to the recent Medical Congress, also Abbe's apotometer and Reichert's student's microscope.

Mr. T. Brindley exhibited rock sections by polarised light.

*Monthly meeting 14th November, 1892.*

Dr. H. G. A. Wright in the Chair.

A microscopical preparation of the skin of a negro who had died in the West Indies from leprosy, showing the bacilli in great abundance, was exhibited. The slide was stained and mounted by Mr. J. McGarvie Smith.

A first class microscope by Carl Zeiss, optician of Jena, was shown by Mr. Wiesener, together with a three-millimetre (\( \frac{3}{8} \) in.) apochromatic homogenous objective by the same maker, having a numerical aperture of 1.40.