

Mr. CHARPENTIER added that in Manchester the artisans had been foremost in scientific research, and their studies had done a vast amount of good.

The CHAIRMAN, on behalf of the Society, thanked Mr. Charpentier for his donations to the Museum.

Mr. J. SWAN proposed a vote of thanks to the donors and authors of the various papers read before the meeting.

Several members examined the zoophytes shown by Mr. Charpentier by means of the microscope, and the meeting closed.

AUGUST, 1884.

The monthly meeting of the Royal Society of Tasmania was held on Monday evening, 11th August. Mr. James Barnard, V. P., occupied the chair. Mr. J. McAlpin, F.L.S., Edinburgh, was introduced as a visitor. A very large number of Fellows were present.

The following were duly elected as Fellows of the Society:—Miss Mary Lodder, the Hon. John Lord, M.L.C., Rev. John Vansittart Buckland, B.A., Messrs. Crawford John Maxwell, J. R. McClymont, M.A., W. Saville Kent, F.L.S., F.G.S., etc., W. Harvey Buckland, B.A., H. C. Kingsmill, B.A., J. McCance, F.R.A.S., R. Sydney Milles, C.E., Chas. Ellis Davies, J. G. Davies, Philip Seager, Henry Cook, jun., T. C. Just, W. H. Charpentier, Frederick Pedder, Alex. North.

The HON. SECRETARY (Dr. Agnew) stated that the society was to be congratulated on the election of such a large number of Fellows, a far greater number than had hitherto been elected in one evening.

RETURNS, ETC.

The HON. SECRETARY brought forward the usual returns, viz.:—

1. Number of visitors to the Museum:—July—Week days, 1,289 ; Sundays, 870 ; total, 2,159.

2. Number of visitors to Gardens—4,999.

3 and 4. Plants and seeds received at and sent from the Royal Society's Gardens during the month of July:—

From Mr. Joseph Harris, South Yarra, bundle of fruit trees, etc. (30).

From Messrs. Law, Somner, Melbourne—Case, containing 74 plants.

From Mrs. S. Purchase, Parramatta—Case, containing 30 plants.

From the Botanic Gardens, Brisbane—Case, containing 15 ferns.

From Messrs. Heyne Co., Adelaide—31 packets seeds.

From the Colonial Museum, Wellington—17 packets seeds.

To the Botanic Gardens, Rome—36 packets seeds.

To Mr. Joseph Harris, South Yarra—Case seedling plants.

To Messrs. Law, Somner, Melbourne—Box seedling plants.

To Mr. C. F. Creswell, Melbourne—Box seedling plants.

5. Time of leafing, flowering, and fruiting of a few standard plants in the Royal Society's Gardens during the month of July:—

15th. Paper almond commencing to flower.

18th. *Cytisus leucanthus* commencing to flower.

25th. Winter aconite commencing to flower.

25th. *Arbutus unedo* commencing to flower.

- 28th. *Garrya elliptica*, commencing to flower.
 31st. Snowflake commencing to flower.
 31st. White mulberry commencing to break.
 28th. *Crocus aurces* in full flower.

LIBRARY.

6. The usual monthly and other periodicals for July.
 7. List of additions to the library for the month of July.
 The following books and pamphlets were presented from the author. Mr. W. Saville Kent, F.L.S., F.G.S.
- (1) On an existing coral closely allied to the Palæozoic Genus *Favosites*.
 - (2) On the *Madreporaria*, or *Stony Corals*.
 - (3) On a new genus of the *Madreporaria*, or *Stony Corals*.
 - (4) Hackel, on the relationship of the sponges to the coral.
 - (5) On a new species of *Sagitta* from the S. Pacific.
 - (6) Notes on the Embryology of Sponges.
 - (7) Observations upon Prof. E. Haeckel's Group of the *Physemaria* and on the affinity of the Sponges.
 - (8) The Foraminiferal nature of *Haliphysema Tumanowiczii*.
 - (9) On the *Hexactinellidæ* or *Hexradiate Spiculed Sponges*.
 - (10) Notes on Prof. J. Clark's *Flagellate Infusoria*, with description of new species
 - (11) On a new Anchoing Sponge "*Dorvillia Agariciformis*."
 - (12) On the *Calcareous Spicula* of the *Gorgonaceæ*.
 - (13) On some new and little known species of *Madrepores* or *Stony Corals*, in the British Museum collection.
 - (14) Report upon the sponges of the Bahama Islands, etc.
 - (15) A further communication upon certain Gigantic Cephalopods recently encountered off the coast of Newfoundland.
 - (16) On two new Genera of *Alcyonoid Corals*.
 - (17) Notes on *Appendicularia* and the Larval condition of an *Acanthocephaloid Scolecid* from the coast of Portugal.
 - (18) On a new genus of Sponges from North Australia.
 - (19) On a new British *Nudibranch* (*Embletonia Grayi*.)
 - (20) British marine and fresh water fishes.
 - (21) *Infusoria*: What are they? Their collection and investigation.
 - (22) A Manual of the *Infusoria*, pts. 1, 2, 3, 4, 5, 6.
8. Transactions of the Asiatic Society of Japan, vol. 2, pt. 2, from the Society.
9. The Victorian Naturalist, vol. 1, No. 6 (June), from the Society.
10. Transactions of the Royal Historical Society, vol. 2, pt. 1, from the Society.
11. Monthly Notices of the Royal Astronomical Society, vol. 44, No. 7 (May), from the Society.
12. On the *Bingera Meteorite*, New South Wales.
13. Rocks from New Britain and New Ireland.
14. On the Chemical Compositions of certain Rocks, New South Wales.
15. The *Deniliquin* or *Baratta Meteorite*, by Professor A. Liversidge, F.R.S., from the author.
16. Vegetable Moulds and Earth Worms, by Chas. Darwin, from Mr. J. McCance, F.R.A.S.
17. List of books relating to Tasmania, compiled by J. B. Walker, from the author.
18. The New Zealand Journal of Science, No. 4, vol. 2 (July), from the Society.
19. Proceedings of the Academy of Natural Sciences, part 1, from the Society.
20. Journal of the Royal Microscopical Society, vol. iv., part 3 (June), from the Society.

21. Meteorological Observations, India (January), from the Meteorological Office, India.
22. *Agricultural Gazette*, June 9th, 16th, 23rd, 30th.
23. *Gardeners' Chronicle*.
24. *The Athenæum* (June).
25. *The Nature* (June).
26. *Journal of Science* (July).
27. *Annals and Magazines of Natural History*.
28. *Journal of the Society of Arts* (May and June).
29. *The Florist and Pomologist* (July).
30. Census of Victoria, from the Victorian Government.
31. Vital and Meteorological Statistics of Tasmania, from the Government Statistician.

MUSEUM.

List of Presentations to the Museum:—

Mammals :

A Tasmanian Tiger—(*Thylacinus cynocephalus*), Mr. Dunbabin.
Two Native Cats—*Dasyurus viverrinus*, Mr. C. E. Davies.

Birds :

Chestnut-faced Owl—*Strix castanops*, Mr. F. Weston.
Collared Sparrow Hawk—*Accipiter torquatus*, Mr. Geo. Howe.
Head and Feet of Wedge-tailed Eagle—*Aquila audax*, Mr. H. Gatty.

Fishes :

A Tasmanian Red Perch—*Anthias rasor*, Mr. Boyes.

Reptiles :

A Diamond Snake—*Hoplocephalus superbus*, Mr. W. F. Petterd.

Mollusca :

A Pecten—*Pecten fumatus*—*Mactra cretacea*, Mr. E. D. Swan.
A Mussel—*Mytilus*, sp., Mr. W. Saviile-Kent.

Fossils :

Fossil Wood, Mrs. Justin McC. Browne.
Fossil Shells, Mr. C. E. Davies.

Ethnology :

Bows and Arrows, etc., from the Andaman Islands, presented by Mr. T. C. Just.
A Water Colour Painting of Tasmanian Fish, Mrs. L. Meredith.

FERNS ON THE MOUNTAIN.

The Hon. Secretary said the Fellows would recollect that the destruction of the ferns at the Bower had been brought under the notice of the last meeting by Mr. Justice Dobson; and, as a result, a deputation consisting of himself, Colonel Legge, and Mr. C. H. Grant, had waited on the Minister for Lands to make representations to him on the subject. A few days afterwards he received a reply from the hon. gentleman saying that he (the Minister of Lands) entered heartily into the matter, and would do all that lay in his power to carry out the objects of the deputation. Arrangements were being made to define the boundaries of the private property in the locality, and, as soon as this was done, boards would be erected warning people not to cut ferns on the Crown land, and the bailiff would be instructed to see that the notices were respected.

THE DEATH RATE.

Mr. R. M. JOHNSTON, F.L.S., read a paper entitled—"Remarks on the observed periodicity of the death-rate, with suggestions as to its

possible relation with the periodicity of solar and other super-terrestrial phenomena."

The object of the paper was to show that there is a marked rise and fall of the death-rate in Europe and Australasia, as ascertained from the records of various countries during the last 39 years, the periodicity of which closely corresponds with the maxima and minima of sun-spots, and with the movements of Jupiter in his orbit from aphelion to perihelion. In the colonies of Australasia, especially during the last 25 years, there is such a close agreement with each other in the rise and fall of their respective death-rates that it is not easily accounted for unless it be referred to some superterrestrial influence of a variable character. Local causes appear in conjunction with this obscure powerful influence as mere ripples on the swell of a great wave. Although the several states of Europe do not correspond with each other so closely as do the widely separated colonies of Australia it is considered significant that the mean of the death-rate of Europe corresponds in a remarkable way with that of Australasia. Mr. Johnston considers that the greater agreement of the Australasian colonies is due more or less to the absence of artificial evils, such as pestilence of war and excessive density of population, and therefore it is conceivable that the death-rate of the Australasian colonies is a more reliable index of the mediate or immediate effect of super-terrestrial causes. The paper was illustrated with diagrams.

CANCER IN CATTLE.

Dr. H. A. PERKINS, M.D., read a paper on *Osteosarcoma*, or so-called cancer of the jaw in cattle; and added that since writing the paper he had found that there had not been an undue number of deaths from cancer in man during the last few years, but only in a corresponding degree to the increase of population. Accompanying the paper were specimens of tumorous bones illustrated by comparison with the bones of healthy animals taken from similar parts, which in reality was not cancer at all, but a growth of scrofulous or tuberculosis origin. The paper was accompanied with a post mortem report of the examination of 12 beasts, suffering from the disease, made by Mr. Park.

The ACTING CHIEF JUSTICE (Hon. W. L. Dobson): Cannot you absolutely destroy tuberculosis?

Dr. PERKINS: In many cases only by destroying the entire animal.

The ACTING CHIEF JUSTICE: Would there be no harm in eating it after it was well cooked?

Dr. PERKINS: That would depend upon how it was boiled or roasted, and on the extent of ravages of the disease. Many people put meat into the water before it is boiling, and let it, as it were, simmer for a time, and so make a decoction. The better plan is to wait until the water has reached boiling point before placing the meat in it.

Mr. BELSTEAD: For the purpose of destroying the disease?

Dr. PERKINS: Partly so, and partly for ordinary cooking to be done well. At the same time it was true that the disease might be killed in the parts contiguous to the water.

Mr. JOHN SWAN said he had received a letter written by a person who was in the habit of purchasing cattle for slaughter in one of the mining districts. The writer observed that he seldom or never bought a lot of cattle without getting one or more with swollen jaws. As he would not be likely to purchase more than 15 or 20 at a time, this would give a higher percentage than he should have suspected to exist. It was much more general in many parts than was supposed, and in the early stages of the disease the beast suffering from it would, in his opinion, be passed by the inspector of stock, who would not, on account of the ailment, condemn it as unfit for human food.

The HON. SECRETARY said these cases, though commonly said to be cancerous in character, were in fact truly tuberculosi; cancer was a complete misnomer.

Mr. SWAN: Until lately he had always heard the term cancer applied to the disease.

The ACTING CHIEF JUSTICE said in reference to a remark in the paper about rabbits not drinking, he had often, when out shooting, seen rabbits come down in the evening to drink at a water hole.

Dr. PERKINS: In very dry weather?

The ACTING CHIEF JUSTICE: Yes.

Dr. PERKINS: There was no succulent food about for them.

Mr. SWAN said the disease was as common amongst kangaroos as cattle.

Dr. PERKINS: In Germany 20 per cent. of the cattle suffered in that way.

Mr. BELSTEAD: We may consider ourselves well off, then.

OTHER PAPERS.

The following papers were also read:—

Notes on a Sapphirina and a Salpa, caught off the Cape of Good Hope. By John McCance, F.R.A.S. Accompanying the above paper were two beautiful drawings of the above specimens.

Notes on the discovery of two rare species of Ferns, new to Tasmania. By R. M. Johnston, F.L.S., etc.

Description of a new species of *Crepidula*, from the Eocene beds, Table Cape. By R. M. Johnston, F.L.S., etc.

NOTES AND EXHIBITS.

Mr. STEPHENS called attention to three specimens placed on the table for inspection.

1. Core of Silurian limestone from the diamond drill at Tarleton, proving, he regretted to say, the correctness of his previous remarks in regard to the position of the Mersey coal measures. The search for coal at that particular spot was therefore at an end.

2. A specimen of *Orthoceras* s.p. from the Silurian limestone near Redwater Creek, Mersey, forwarded by Mr. Hainsworth. A portion had been sent to Mr. Wilkinson, Government Geologist, Sydney, for comparison with similar fossils from New South Wales, but it had not yet been identified.

3. Part of small boulder with casts of *Orthis* and crinoidal stems, etc. This, as he had ascertained from information kindly furnished by Mr. Thureau, was found in sinking a shaft near Lisle at a depth of 30 feet, and was interesting in connection with the Silurian fossils found under somewhat similar conditions near Table Cape. Perhaps some day they might trace it back to the parent rock from which it was broken off.

Mr. R. M. JOHNSTON stated that, with regard to the results of boring at Latrobe, although unfortunate as regards the prospects for coal, the discovery that the lower coal measures of that district rested immediately upon the silurian limestone was of particular interest to him, inasmuch as the position of the Tasmanite beds could now be more satisfactorily determined. When he (Mr. Johnston) examined the Tasmanite beds some years ago, he found waterworn fragments of the silurian limestone included among them. Recently he discerned in the lower portion of the core from the Mersey boring-rod a dark close-grained sandstone identical in character with certain bands occurring in the Tasmanite series, and he therefore had every reason to believe that the latter and their equivalents formed the lower members of the Mersey coal measures.

Mr. J. MCC. BROWNE laid on the table an extract from the *Australasian Shipping News*, in which, under the heading "A Travelled Whale" it was stated that in a late issue of the *John o' Groat Journal*, Scotland, an account was given of the capture in Behring's Straits in June, 1883, of an enormous whale, 62ft. long, and weighing 72 tons, which was found on being cut up to contain embedded in its blubber a harpoon with the words "Henty, L. 1838," branded on it. It is well known that that old colonial family, the Hentys, had in the year above given a whaling establishment at Portland, Victoria, and that they had a number of harpoons for that establishment made for them at Launceston, for which town probably the initial L stands.

Mr. BROWNE stated that the Hentys had no whaling vessels, but whaled from the shore at Portland Bay, after some years they sold off all their whaling plant which was bought by owners of whaling vessels, some of these vessels are known to have fished in the Northern Hemisphere, where the whale was probably struck, and carried away the harpoon.

Mr. STEPHENS said he had drawn the attention of Baron Von Müeller to a beautiful light purple fungus which had been found on the slopes of Mount Wellington. The fungus being too fragile to bring into town, a drawing made by Miss Walker, of Rhodes, N.S.W., had been forwarded to the Baron, who had identified it as a species of *Clavaria* and had since sent the following note on the subject:—"I sent the drawing to the great specialist, Dr. Cooke, pointing out that the fungus was near *Clavaria Amethystina*, but differed somewhat in colour, and suggested the name *C. lilarina*. He, however, regards it as the real species of Fries. It is new to Tasmania, indeed to Australia, so perhaps it is worthy of notice at your Royal Society, if it was only to show that fungi need yet much to be studied there."

THE CALCUTTA EXHIBITION.

Mr. JUST said he had presented the Society with a collection of ethnological specimens, consisting of bows and arrows, dresses, and ornaments worn and used by the natives of the Andaman Islands, which he had been fortunate in obtaining through the instrumentality of Mr. V. Portman, assistant superintendent at the Andaman and Nicobar Islands. While the exhibition was going on the Government of India took steps to have casts taken of some of the native races and wild tribes of India, representatives of which were present in Calcutta at the time. He applied for duplicates of some of the casts before he left, and if the hon. secretary would follow up his action there would be no difficulty in obtaining the casts, and Dr. Watt, the curator of the Economical Museum in Calcutta would take care that proper dresses were supplied for them. The Lieut.-Governor of Bengal had written to him, promising him a complete set of the economic products of India, and other interesting specimens which he hoped to see presented to the society for the museum. He had further handed over to Mr. Morton for the Museum 111 specimens of the diets of India, and a collection of fishes, which were presented by Doctor Kanny Loll Dey, the principal Hindoo native physician in Calcutta, and also a box containing rocks of various kinds, presented by Dr. Anderson, curator of the Imperial Museum, Calcutta. A valuable box of books had been forwarded through by the Government of India to the Tasmanian Government, and, as in all probability many of them would be of special interest to the Fellows of the Society, he would endeavour to have a selection made, and with the approval of the Chief Secretary, add them to the Royal Society's library. He might also state that Dr. King, curator of the Botanical Gardens at Calcutta would be happy to exchange specimens with the Hobart Botanical Gardens.

VOTE OF THANKS.

Mr. J. McC. BROWNE moved a vote of thanks to the donors of the various presentations, and the gentlemen who had contributed papers; and said he had it as the opinion of a person in Melbourne, who was used to cattle generally, that the so-called cancer was not prejudicial to human life and health, nor was it regarded with so much apprehension as pleuro-pneumonia.

The ACTING CHIEF JUSTICE seconded the motion, for the purpose of saying that the Minister of Lands was entitled to some recognition from the society for the promptness with which he had shown his regard for the opinion of the society, as to what should be done for the preservation of ferns on the mountain. One remark he wished to add was that in Hobart they had two great advantages, the mountain and the river—the mountain on the one side, which they could enjoy at will, and the river on the other, which they could enjoy also, but which they could not enter to have a bath without paying for it. It seemed to him as if it was throwing away one of the greatest advantages which nature had given them. He saw the Minister was in favour of granting a new boating club a site for a shed, and he trusted the hon. gentleman would add to that another shed or hoarding, so that a swim or a wash could be had at any time free of charge, as the possession of such an advantage would be the means of adding to the health and manliness of the rising generation.

The motion was carried by acclamation, and the proceedings terminated.

SEPTEMBER, 1884.

The monthly meeting of the Royal Society of Tasmania was held on Monday evening, September 8. His Honor, the Acting Chief Justice, Mr. Justice Dobson, F.L.S., occupied the chair. There was an unusually large attendance of Fellows and visitors, the latter, including about 20 ladies, the Premier (the Hon. Adye Douglas), the Minister of Lands (the Hon. N. J. Brown), and other prominent gentlemen.

The following gentlemen having been previously nominated by the council, were duly elected as Fellows of the Society:—Rev. Geo. Clarke, Messrs. T. R. Atkinson, Leonard Rodway, P. Oakley Fysh, jun., Alfred Mault, Geo. P. Fitzgerald, W. P. Little, W. L. Boyes.

RETURNS, ETC.

The Hon. Secretary brought forward the usual returns, viz.:—

1. Number of visitors to the Museum.—August—Week days, 1,140; Sundays, 1,065. Total, 2,205.

2. Number of visitors to Gardens, 4,851.

3. Plants and seeds received at the Royal Society's Gardens during the month of August.

From the Botanic Gardens, Wellington, N.Z., 17 packets seed.

From Messrs. Heyne, Adelaide, 36 packets seeds.

From Baron Ferd. Von. Mueller, Victoria, roots *Nymphœa Gigantea*, etc.

From the Botanic Gardens, Rome (Lady Dry), 46 packets seeds.

From Mr. James Grant, Queensland, 18 packets seeds.

From Mr. J. Smith, Riddell's Creek, Victoria, 20 plants.

From the Botanic Gardens, Melbourne, 39 plants, 30 packets seeds.

4. Time of leafing, flowering, and fruiting of a few standard plants in the Royal Society's Gardens during August, 1884.