

THE TASMANIAN JOURNAL OF NATURAL SCIENCE

By

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ABSTRACT

The dates of publication of the separate parts of the *Tasmanian Journal of Natural Science* have been determined.

Some comment is made on the history of the publication of the *Journal*, on the quality of the articles and their scientific value, and on a few of the contributions.

The *Tasmanian journal of natural science, agriculture, statistics, etc.*, was the first scientific periodical of any consequence* to be published in the Australian colonies. The standard of the contributions is high, as one might expect from a society whose patron and guide was Sir John Franklin. (See also Tasmanian State Archives, GO 33/39, pp. 644-653.)

The journal had its origins in the Philosophical Society of Tasmania, a semi-private body comprising those who were interested in the development of the natural sciences in Tasmania. At the invitation of the Governor, their meetings soon came to be held in the library at Government House, 'where every facility and encouragement have been afforded them by their distinguished patron, Sir John Franklin, who has taken the liveliest interest in their proceedings' (Little, J. (1841) Introductory paper. *Tas. J. nat. Sci.*, Vol. I, No. I, pp. 1-13).

The Society had two classes of members, resident and corresponding. The resident members were at first nearly confined to Hobart, but as time went on members from Launceston and other parts of Tasmania, at first included among the corresponding members, were added to the Hobart members, increasing the number of resident members from about a dozen to about thirty. The resident members were largely local dignitaries—government officials, service officers, schoolmasters, medical men—who were interested in the natural sciences, but they included several who were active in their scientific pursuits, such as Lieutenant J. H. Kay, R.N., who was in charge of the magnetic observatory at Hobart, Dr Edmund Hobson, a keen naturalist, and Ronald Campbell Gunn, the botanist.

Among the corresponding members there were a number of scientists of international repute, and Sir John Franklin must have been largely the one who secured their enrolment. They included a number of those who had accompanied the exploring expeditions, both British and French, which visited Tasmania while Sir John was

Governor, together with one or two figures of importance in the United Kingdom. Among those who had come with the expeditions were Joseph Dalton Hooker, C. H. Jacquinot, J. B. Jukes, James Clark Ross and J. Lort Stokes; amongst residents in Australia and New Zealand, W. B. Clarke the geologist and Charles Sturt the explorer; and amongst overseas notables, Professor William Buckland the geologist, Professor Richard Owen the anatomist and P. E. de Strzelecki.

The Society took a wide view of its functions in the colony: its object, according to the preface to the first number of the *Journal*, was to encourage scientific research in Tasmania—

The publication of our Transactions is, perhaps, the most important field of action for our body: it stimulates to study, and assists research,—it shows how far we are from the fulfilment of all we wish and hope, and yet how much a very moderate degree of diligence avails to diminish the interval.

The *Tasmanian Journal* published material dealing not only with Tasmania, but also with the other Australian colonies; and as well there were a few contributions relating to New Zealand, the antarctic regions and elsewhere. All the natural sciences were covered—geology, palaeontology, botany and zoology—and there were also articles on exploration and travel, and on a wide range of other subjects. Many of the articles are useful contributions to knowledge of the southern environment. Of Tasmanian interest are papers dealing with *Callorhynchus australis*, by E. C. Hobson (Vol. I, No. I); fossil wood, by Joseph D. Hooker (I/I); Tasmanian plants available as food for man, by R. C. Gunn (I/I); description of fish collected at Port Arthur, by J. Richardson (I/I, II); observations on *Physalia pelagica*, by A. Sinclair (I/II); the pouch young of marsupials, by E. S. P. Bedford (I/III); the aborigines of Tasmania, by Thomas Dove (I/IV), by Jorgen Jorgenson (I/IV), R. C. Gunn (II/X), and W. B. Davies (II/XI); the teeth and poison apparatus of Tasmanian snakes, J. W. Agnew (II/VIII); the acacias of Tasmania, R. C. Gunn (III/I); and several papers describing work at the Hobart observatory, by J. H. Kay (I/II, I/III, II/XI). Papers dealing with the southern hemisphere include—the habits of *Alectura lathamii*, the bush turkey of Australia, John Gould (I/I); the geology of Kerguelen, R. McCormick (I/I); a vocabulary of the Adelaide tribe, J. P. Gell (I/II); Australian coals, P. E. de Strzelecki (I/III); the

* Possibly some may consider that such publications as the Anniversary Addresses of the Agricultural Society of New South Wales (1823, 1824, 1826) and the reports of the Agricultural and Horticultural Society of New South Wales (1828, 1829, 1830) should be classified as scientific periodicals and accorded priority, but these were certainly not journals concerned with the publication of scientific research, and they did not set out to be such.

antarctic regions, R. McCormick (I/IV); the mythology of the New Zealanders, James Hamlyn (I/IV); the discovery of the bones of the moa and notes on the tuatara, W. Colenso (II/VII); the trilobites of New South Wales, W. B. Clarke (III/I); and the mandible of *Diprotodon*, by E. C. Hobson (III/V). As well there are extracts from articles of Tasmanian interest from the overseas scientific periodicals, and some reports from other sources; and a number of valuable notes on a variety of subjects.

Two zoological papers are of some interest. One is an account of the anatomy of the elephant shark, *Callorhynchus australis* (Holocephali), by E. C. Hobson (I/I). The standard of the work is high. The author describes the external features, skin, skeleton, alimentary canal and reproductive system of a male specimen. He also mentions 'an accessory organ of respiration . . . situated betwixt the posterior rays of the dorsal fin and the spinal column', consisting of 'a fine net-work of vessels enclosed betwixt the two layers of depressor muscles arising from the sides of the spinal column, and inserted into the triangular piece sustaining the fin'. Hobson considered the structure to be a 'rudimentary lung', from being able to squeeze out the gaseous matter contained in it, and believed it to serve the fish 'in the essential movements of sinking and rising to the surface'; and gives his views on how it might function. A preliminary examination of specimens of *C. australis* has shown that a cavity does exist subcutaneously behind the dorsal fin, as Hobson has described. It seems to communicate with a retroperitoneal space along the dorsal wall of the abdominal cavity. The matter is now being investigated further.

The other zoological paper of note, also by Dr Hobson, records some observations on the blood of *Ornithorhynchus* (I/II). He finds the erythrocytes to be of the mammalian type, and describes them, but he concludes erroneously that the Monotremata must be viviparous, not oviparous.

The appearance of the first number of the journal gave rise to some outcry from Hobart's printers because the work was done at the Government Printing Office, which was prohibited from taking private work. Edward Abbott, proprietor of the *Hobart Town Advertiser*, was one of those who protested, and he published his correspondence with the Colonial Secretary in a rare pamphlet, a copy of which is to be found in the Colonial Secretary's files (Tasmanian State Archives CSO 8/21/580). Mr Abbott's objection was—

not so much to the Magazine in question, for it is an innocuous production, but it is purely one of principle; for if the Government can be authorised to print a scientific Magazine, they may with impunity put forth a political Newspaper.

Mr Abbott's complaint, however, had little substance, because when the Society had reached the decision to publish a journal, R. C. Gunn had made enquiries and had been told by Mr Elliston that the work was beyond the capacity of even the leading printers in the colony because none of them had a sufficient quantity of good type. Moreover, 'the miserable blundering style' in which most of

the colony's newspapers were got up gave little hope that any one of them could produce a journal of the 'neatness and accuracy' deemed essential in a scientific periodical (Archives, Royal Society of Tasmania).

The importance of the material published in the *Tasmanian Journal* merits exact information about the dates of issue of the parts. These can be determined largely from advertisements in the Tasmanian newspapers.

Volume I Title page dated 1842

No. I. Pp. 1-80; issued 20 August 1841; edition, 750 copies.

Sources: Secretaries' report, dated 1 September 1841 (archives, Royal Society of Tasmania; *H.T. Courier*, 27 August 1841, September 10.

No. II. Pp. 81-160; issued 9 November 1841.

Sources: *H.T. Courier*, 12 November 1841.

No. III. Pp. 161-240; issued 27 May 1842.

Sources: *H.T. Courier*, 27 May 1842.

No. IV. Pp. 241-320; issued 5 July 1842.

Sources: *H. T. Courier*, 8 July 1842.

No. V. Pp. 321-424; issued 3 February 1843 (paper cover dated 1842).

Sources: *H.T. Courier*, 3 February 1843.

Volume II Title page dated 1846

No. VI. Pp. 1-80; issued 11 August 1843.

Sources: *H.T. Courier*, 11 August 1843.

No. VII. Pp. 81-160; issued 6 October 1843.

Sources: *H.T. Courier*, 6 October 1843.

No. VIII. Pp. 161-240; issued (22) 29 January 1845 (paper cover dated 1844).

Sources: *Launceston Examiner*, 22 and 29 January 1845.

No. IX. Pp. 241-320; title page dated April 1845, but probably not issued before June 1845.

Sources: *T.T. Courier*, 5 June 1845; *Launceston Examiner*, 25 June 1845.

No. X. Pp. 321-392; issued c. 26 November 1845 (title page dated July 1845).

Sources: *Launceston Examiner*, 26 November 1845.

No. XI. Pp. 393-468 (index, pp. 465-467); issued c. 25 March 1846 (title page dated January 1846).

Sources: *Launceston Examiner*, 25 March 1846.

Volume III Title page dated 1849

No. I. Pp. 1-80; issued c. 2 January 1847 (title page dated October 1846).

Sources: *Launceston Examiner*, 2 January 1847.

No. II. Pp. 81-164 (pp. 160-164 not numbered—meteorological register); plates 3-5 (art. XIII) issued with No. III; title page dated 1847).

Sources:

No. III. Pp. 165-248 (pp. 244-248 not numbered—meteorological register) issued (not determined) (title page dated July 1847).

Sources:

No. IV. Pp. 249-327 (plus 7 pages meteorological register, not numbered); issued (not determined) (title page dated January 1848).

Sources:

No. V. Pp. 329-414 (pp. 409-414 not numbered—meteorological register); issued c. 19 August 1848 (title page dated July 1848).

Sources: *Launceston Examiner*, 19 August 1848.

No. VI. Pp. 415-489 (pp. 479-484 not numbered—meteorological register; pp. 485-489, index); issued (not determined) (title page dated January 1849).

Sources:

NOTES:

(1) In volume I (No. II, pp. 81-93, continued in No. III, pp. 161-187) there appeared an article by Captain Arthur F. Cotton* entitled 'On irrigation in Tasmania'. The second part of the article was published in the *Hobart Town Courier* of 6 and 13 May 1842. The arrangement of the work as it appeared in the *Courier* is slightly different from that in the *Journal*, the material of pp. 161-170, 186-187 of the latter printing appearing on 6 May, and that of pp. 171-186 on 13 May. The engraved plates of the *Journal* articles were issued with the *Courier* of 6 May 1842, and here include a view of a dam which is not found in the *Journal*. The same article, but without the plates was also published in the *Van Diemen's Land Chronicle* of 4 March (see also *H.T. Courier* of 18 March 1842). Irrigation was also the subject of a lecture given by Major Hugh C. Cotton at the Mechanics' Institute, Hobart, on 14 July 1843. At the request of the committee of the institute, the address was later published by George Rolwegen, bookseller, Collins Street, Hobart, being issued on 6 October 1843 (see *H.T. Courier*, 6 October 1843) J. A. Ferguson, *Bibliography of Australia*, 3, item 3594).

In spite of the similarity of name, origin and subject, Captain Arthur Cotton and Major Hugh Cotton were different people. Captain Arthur T.

Cotton of the Madras Engineers arrived in Tasmania in October 1841, married and settled at Longford: he had had twenty years experience of irrigation works in India. His paper on irrigation in Tasmania was published in two parts, the first appearing in November 1841 and the second in May 1842—publication of the second part was therefore anticipated by the *Chronicle* and the *Courier*. Captain Cotton was a corresponding member of the Tasmanian Society at the time of issue of the first number of the *Journal*. In 1854 he sold Longford House and returned to India. Major H. C. Cotton did not reach Tasmania until 10 November 1842. He also had been in India, but he came to Tasmania to settle, having been appointed deputy surveyor-general. Major Cotton was not elected to membership of the Tasmanian Society until August 1843.

(2) The separate numbers of the *Tasmanian Journal*, of which some in original covers are still to be found in collections, were issued in brown, greenish blue or yellow paper wrappers showing title and medallion (a platypus encircled by a belt inscribed with the motto 'quocunque aspicias hic paradoxus erit', paradoxus being a pun on the name *Ornithorhynchus paradoxus*); volume number, and month and year of issue (in the earlier numbers, the year of issue only); the publisher and printer. Volumes I (all) and II (numbers VI and VII) were published and printed by James Barnard, Government Printer; and Volumes II (numbers VIII and XI) and III (all) by Henry Dowling, Launceston. Henry Dowling's titles are given variously: e.g., Henry Dowling, Printer, Launceston, and Henry Dowling, Stationer, Launceston; and sometimes the press is also noted as "Examiner", Launceston. Volume II, number VII and succeeding numbers were also published by John Marray, London. The secretary for the issue of Volume I numbers I-IV was F. Hartwell Henslowe; for Volume I number V and Volume II numbers VI and II, John Philip Gell; and for all later issues, Ronald Campbell Gunn.

ACKNOWLEDGMENT

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* An MS note seen in a copy of the *Journal*, apparently contemporary, states—'Must be Arthur T'.

