The Royal Society of Tasmania

Annual Report, 1954

The Annual Meeting was held on the Society's Room, Tasmanian Museum, on 2nd March, 1954.

Mr. L. W. Miller, Vice-President, presided.

The following Office-bearers were elected:-

Vice-President: Under the Society's Rules Mr. L. W. Miller retired from the office of Vice-President, and Professor T. Hytten was appointed in his place (retiring 1956).

Hon. Secretary and Librarian: Dr. W. Bryden.

Hon. Treasurer: Mr. G. E. Hale.

Hon. Auditor: Mr. A. M. Hewer.

Council: Under Rule 21 Professor S. W. Carey and Mr. C Bisdee retired as members of the Council but were eligible for re-election having served only two years After a ballot had been taken Professor Carey and Mr. L. W. Miller were elected for a period of three years.

The names of the full Council for 1954 are given on the previous page.

The Council made the following appointments at its first meeting:—
Standing Committee: Mr. J. W. C. Wyett, Mr. L. W. Miller,
Professor S. W. Carey and the Hon. Secretary.

Board of Trustees of the Tasmanian Museum and Board of Trustees of the Botanical Gardens:

Board of Trustees of Tasmanian Museum: Professor T. Hytten and Professor A. Burn.

Board of Trustees, Botanical Gardens: Mr. S. Angel.

Representative to Library Association: Dr. W. Bryden.

Meetings: Nine ordinary meetings were held during the year. A Conversazione was held at the close of the meeting on 2nd November when supper was served in the Art Gallery to approximately 200 people.

Library: During the year 271 volumes were added to the Library in addition to a number of reports and pamphlets from British and Foreign Institutions and learned societies. The number of institutions on the exchange list is now 303. The Library now consists of 30,070 volumes.

Sir Ernest Clark—Gift: Books and papers—127 items in all—from the library of the late Sir Ernest Clark, were received during the year and added to the library lists. The Council expresses its sincere thanks to Lady Clark for her assistance in this matter and for her continued interest in this Royal Society.

Changes in Staff: Miss D. Bulman resigned her position as Assistant Librarian and Miss E. M. Geddes was appointed in her place from 23rd August. Miss Alicia Miller, who had been on the Library staff was transferred to the Museum.

ANNUAL REPORT

Membership: The Society consists of the following	members:—
Honorary Members	2
Corresponding Members	1
Ordinary Members:	
Class A 264	
Class B 162	
**************************************	436
Life Members	31
Associate Members	16
TOTAL	486

During the year 21 names were removed from the list of Members owing to deaths, resignations, &c., and 36 new members were elected.

Deaths: The Council regrets having to record the deaths of the following members:—Mrs. A. H. Clarke, Mr. J. Connor, Dr. D. H. E. Lines, Miss C. Travers, Professor F. Wood-Jones (Honorary Member).

W. H. Hudspeth Memorial: The Hudspeth Memorial Volume referred to in the last report was printed and is now on sale. Subscribers to the fund may receive a copy at a special rate—other members may obtain copies from the Tasmanian Museum Office.

Papers and Proceedings: The Council is grateful to the Tasmanian Government for the amount of £550 provided as portion of cost of printing the Papers and Proceedings of the Royal Society.

The Council also would like to record its thanks for the help given by the University of Tasmania in providing a sum of money enabling the Society to publish certain works by members of the University Staff in the Papers and Proceedings.

Rising costs have made it necessary for the Council to reconsider the whole question of printing the Papers. It is hoped that effective steps may be taken in the next twelve months to enable the Society to continue printing the Papers and Proceedings each year.

Northern Branch

Annual Report, 1954

At the Annual General Meeting of the Royal Society of Tasmania (Northern Branch), held at the Queen Victoria Museum Lecture Room on Friday, April 23rd, 1954, the following office-bearers were elected under the rules of the Society:-

Chairman: Mr. Roy Smith. Vice-Chairman: Mr. K. R. von Stieglitz. Council Members: Mr. G. H. Crawford, Mr. E. Padman, Mr. B. H. Travers.

Hon. Secretary and Treasurer: Mr. W. F. Ellis.

Members of Council retaining their offices for another year: Mr. G. Willing, Mr. J. Rex.

Meetings.—During the year eight General Meetings were held, at which the following papers were read:-

May 28th—The Development of Tasmanian Railways, by Mr.

W. A. Townsley, M.A. June 25th—Little Known Parts of Tasmania, by Mr. N. H. Harvey.

July 23rd—James Meehan, Architect and Surveyor, by Mr. B. H. Travers, O.B.E., M.A., B.Litt.
August 20th—Early Tamar Portraits, by Rev. E. C. Rowland,

F.R.Hist.S., F.R.G.S.

September 10th—Medical Practice and Personalities in Hobart Town, 1828-1837, by Dr. W. E. L. H. Crowther, D.S.O., M.B., F.R.A.C.P.

September 24th—The Zonation of Animals, by Dr. E. R. Guiler, B.Sc., Ph.D.

October 27th—John Pascoe Fawkner in Tasmania, by Mr. Robert Sharman, B.A.

November 26th—Jorgan Jorganson in Tasmania, by Mr. P. R. Stephensen.

Excursions: The Northern Branch conducted excursions to the following places of historic interest:

May 23rd—Bishopsbourne, led by Mr. K. R. von Stieglitz.

September 12th—Perth and Haggerstone, led by Mr. H. Stancombe.

October 24th—Corra Lynn Estate, led by Mr. K. R. von Stieglitz. December 5th—Hagley House and Westfield, led by Mr. Roy Smith.

Membership: The present membership stands at:—

14 life members

140 ordinary members

12 associate members

The Society records with regret the death of Mr. C. G. Ryan, a greatly respected member.

Library: Eight books were added to the library.

Sesquicentenary Celebrations: During 1954, the Northern Branch contributed considerably toward activities celebrating the sesquicentenary of British settlement in Northern Tasmania.

As its own contribution, T. J. Lempriere's manuscript "Penal Settlements of Van Diemen's Land", was edited and published in an edition of 750 copies. Permission to do this was granted by the Trustees and Librarian of the Mitchell Library, Sydney, whose aid is gratefully acknowledged. This publication has been very well received and to date over four hundred copies have been sold or are in circulation.

Plans for a memorial to be erected near the site of the first permanent settlement at Yorktown, West Tamar, were kindly prepared by Mr. G. Willing, and, in conjunction with the Beaconsfield Municipal Council, a grant was obtained for its construction from the Sesquicentenary Committee. The construction of this memorial and its maintenance was then undertaken by the Beaconsfield Council. This memorial, which has aroused favourable comment, was unveiled by His Excellency, Rt. Hon. Sir Ronald Cross, Bart., K.C.V.O., K.C.M.G., on November 14th, 1954.

The Northern Branch took part in the unveiling of a plaque erected at Rosevears, West Tamar, to commemorate the launching of the "Rebecca" by Captain George Plummer in November, 1834.

Representatives of the Society also approached the Sesquicentenary Committee and the Launceston City Council, suggesting that a similar memorial be erected in King's Park to commemorate the landing at the site of Launceston by Lieut. William Collins. This project was carried on independently by the Launceston Corporation and was unveiled on November 13th, 1954. As the inscription finally chosen is misleading, the Society has made a recommendation to the Council that it be amended as soon as possible.

Royal Society of Tasmania (Northern Branch)

Statement of Assets and Expenditure for Year Ended December 31st, 1954

	RECEIPTS.				١	EXPENDITURE.			
V .	Balance at 1.1.54 Subscriptions Bank interest Donations Sales, publications	$ \begin{array}{r} 111 \\ 3 \\ 10 \end{array} $	$\frac{19}{4}$	$\frac{2}{5}$		Lectures Library Printing and advertising Postage and petty cash Stationery Balance carried forward	$14 \\ 108 \\ 34 \\ 2$	$ \begin{array}{c} 10 \\ 18 \\ 9 \\ 3 \end{array} $	5 0 3 0
		£240	5	2			£240	5	2

Examined and found correct.

J. R. FORWARD, Auditor. 25.2.55.

F. Ellis, Hon. Sec./Treasurer.

Abstracts of Proceedings

2nd March, 1954

Annual Meeting

The Annual Meeting was held in the Society's Room, Tasmanian Museum. Vice-President, Mr. L. W. Miller, presided.

The following Office-bearers were elected for 1954:—Professor T. Hytten was elected Vice-President in the place of Mr. L. W. Miller, who retired under Rule 12; Honorary Secretary, Dr. W. Bryden; Honorary Treasurer, Mr. G. E. Hale; Honorary Auditor, Mr. A. M. Hewer.

Under Rule 21, Professor S. W. Carey and Mr. C. Bisdee retired as members of the Council but were eligible for re-election, having served two years only. Four nominations were received for these two vacancies and after a ballot had been taken, Professor S. W. Carey and Mr. L. W. Miller were elected for three years.

Professor Carey delivered an illustrated lecture entitled "Progress in the Controversy on the Evolution of Continents".

6th April, 1954

A meeting was held in the Society's Room. Professor S. W. Carey, a Member of the Council, presided.

The following were elected members of the Society:—Mr. L. S. Bethell, Mrs. J. Bowkett, Mr. K. G. Brooks, Mr. W. F. Ellis, Dr. J. C. H. Morris, Mr. E. D. Rowland, Mr. J. R. Skemp.

Mr. J. B. Thwaites delivered an illustrated lecture entitled "In the Footsteps of Sir John Franklin overland from Lake St. Clair to the Gordon River", of which the following is an abstract:—

An account of an expedition organized by the Hobart Walking Club as a contribution to Tasmania's Sesqui-centenary celebrations.

The six members who made this trip through Transylvania, as the area was designated on early maps of Van Diemen's Land, followed the historic route of 1842, using for guidance the diary of David Burn, one of Franklin's party.

In appearance the country traversed was found to be largely as described by Burn. The great rain forests flanking the Franklin and Gordon Rivers had not been damaged by bush fires. However, the heavy fires of the late 1930's had encroached only upon the fringes of the Lachlan Plains and Calder Pass, also swept the steep slopes of the Acheron Valley.

In the 112 years since Franklin's journey tracks were cut by Government parties to expedite exploration. In 1863 Charles Gould cut a track from the Gordon River towards Frenchman's Cap and reported on finding traces of Franklin's track. James Calder had spent 32 weeks on this work. Thirkell opened the track out again in 1906 but again it quickly reverted to nature from lack of use.

The discovery of payable gold on the Jane River in 1934, led to a mild rush and during its brief life the diggers used Calder Pass to reach the field.

The departure of Sir John's party had been unavoidably delayed until late in March, by difficulties which finally culminated in his dismissal of John Montagu, the Colonial Secretary.

The party comprised Sir John and Lady Franklin, Joseph Milligan, surgeon and botanist, James Calder, later to become Surveyor-General, who had cut his track from the Gordon in readiness, David Burn, a colonist, Bagot, aide de campe, O'Boyle, Franklin's orderly and Stewart, Lady Franklin's maid. Of the 16 convicts who accompanied the party, 12 were carriers loaded with 66 lb. kangaroo hide knapsacks and four volunteer bearers for Lady Franklin's chair, two to carry and two to relieve every half hour. This chair, made at Port Arthur was borne on stout poles. It is now in the Tasmanian Museum.

Sir John's cavalcade left Hobart on 24th March and reached Lake St. Clair nine days later. Here Calder took over and all superfluous equipment was sent back. The party was on foot from this point onwards, including Lady Franklin, who readily gave her chair up to Stewart who fell ill a few days later.

Franklin's party named a number of features during their epic journey. Among those in use to-day are Mount King William beneath which they camped, Calder Pass and Lachlan Plains, after Lachlan Macquarie, Governor of New South Wales and Van Diemen's Land. Fatigue Hill was renamed Mt. Arrowsmith by Strzelecki. Sir John expected the journey from Lake St. Clair to the Gordon would take a week. However, bitter weather, with rain and snow day after day seriously delayed the party. Flooded creeks and rivers added to their difficulties. The first serious delay occurred on the Loddon Plains flanking the eastern foothills of Frenchman's Cap where the party was encamped for six days at "Detention Corner". Calder and Burn went ahead with two convicts in an attempt to reach the Gordon River and hold the small schooner "Breeze" which had been sent round from Hobart Town to await the travellers.

The Franklin River, two days' journey ahead, had become a raging flood and barred their way. Here they were forced to wait a further eight days during which Sir John and the rest of the party came up. During this enforced wait two convicts attempted to cross on a raft and were swept a mile downstream where they made a landing on the far side. However, they managed to reach the ship which fortunately had waited beyond the agreed time

The marooned party meanwhile built a double canoe from Huon Pine logs which they named "Eleanor Isabella", after Sir John's daughter. The party subsequently crossed the Franklin in this craft and named their crossing "Eleanor Ferry".

The Walking Club party discovered a large cave on the edge of the Lachlan Plains which tallies with Burns' description of "Christmas Rock" in which Calder and his convict track cutters had sheltered from a storm on Christmas Day, 1840. Burn was enraptured by the view of Frenchman's Cap from the cave mouth.

Franklin's party was on extremely slender rations at this stage of their journey. Their sole diet had been salt messpork, damper cooked in the frying pan and black tea sweetened with brown sugar. Sir John insisted that he and his party suffer a further cut in rations on an equal footing with the convict carriers.

When they finally emerged from the Franklin River gorge onto the High Plains on the western bank they experienced the first fine day since leaving Lake St. Clair 19 days before.

All were extremely thankful to descend from the plains to the waiting ship at Expectation Reach, 10 miles upstream from the mouth of the Gordon.

On the way down Macquarie Harbour Sir John considered it his duty to call in at the old convict station at Settlement Island to judge for himself as to whether the decision to close the station seven years before and transfer to Port Arthur had been a wise one.

Storms and contrary winds prevented the "Breeze" from leaving Macquarie Harbour for a further three weeks and the whole ship's muster, in desperate straits for food, were forced to spend the time fishing to augment the ship's meagre supply of provisions which had been almost exhausted by the delays and the extra mouths to feed.

Meanwhile the authorities in Hobart Town were greatly concerned at the lack of news of the Vice Regal party and the ship "Eliza", of 150 tons, was despatched to make a search. The "Vansittart" also left Port Dalrymple and the ship "Beagle" was diverted from her survey work to join in the search.

On the 15th May the "Breeze" finally cleared Macquarie Harbour and met the "Eliza" a day out, when the party quickly transferred to her. The "Breeze" was sent on to Hobart Town to carry news of the Party.

A land party of six convicts under James Bastian was also despatched and after an arduous journey reached the Gordon but the Franklins had left no word of their safe embarkation. Bastian continued his search along the southern shores of Macquarie Harbour and then followed down the coast almost to Port Davey. Owing to shortage of food and the arduous journey they were just able to get back to Macquarie Harbour where they built a raft and landed on Settlement Island. They were able to find a few small potatoes in the gardens of the abandoned settlement. This was their only food for the return to Lake St. Clair. They used the canoe "Eleanor Isabella" to get back across the Franklin but capsized when half way over and lost the few remaining potatoes. By this time they were so weak that they could proceed little further.

In the meantime another land party had been sent out and it found Bastian and his men in dire straits, starving and unable to walk as their boots had been completely worn out.

On board the "Eliza" the redoubtable Sir John Franklin had decided to put in to Port Davey, where he was joined by the "Beagle" and "Vansittart". He also decided to check the bearings of South West Cape, the accuracy of which had been in doubt. It pleased him to be able to affirm that his old shipmate Matthew Flinders' calculations had been correct.

When they finally reached Hobart Town a great concourse of colonists had assembled on the waterfront to welcome the return of the Lieutenant Governor and his party. Sir John held a levee in the afternoon.

Free pardons were granted to several of the convicts as a reward for their labours on the Franklin Expedition through Transylvania.

4th May, 1954

A meeting was held in the Society's Room. Professor T. Hytten, Vice-President, presided.

Mr. J. B. Thwaites was elected a member of the Society.

Mr. G. H. Newstead delivered an illustrated lecture entitled "The Scintillation of Radio Stars", of which the following is an abstract:—

The lecture dealt with the work on which the speaker had been engaged at the Cavendish Laboratory, University of Cambridge, whilst on study leave from the University of Tasmania.

The first part of the lecture dealt with the discovery and properties of the radio stars—points of space which emit radio waves. Radiation from space was discovered by Jansky in 1932 when investigating the residual "static" present in radio receivers in quiet localities. Jansky found that the location of the noise kept sidereal time and was thus not part of the solar system. It was pointed out that resolution limits the accuracy of position finding and that to get greater resolution larger aerials or higher frequencies are necessary. Not much progress was made until 1946 when Hey, Parsons and Phillips, using equipment developed during the war for radar, noticed fluctuations of intensity coming from the Cygnus region, which they correctly interpreted as a source localized in that region. This was definitely established in 1948 by Ryle and Smith (Cambridge) and Bolton and Stanley (Sydney) using radio analogues of the Michelson interferometer and Lloyd's mirror respectively. Ryle developed the phase switch interferometer for balancing out the background radiation, and some hundreds of radio stars have now been discovered. A brief survey of the characteristics and theories of the origin of the radiation was given.

The second part of the lecture dealt with the scintillation of the radio stars—this is the same as the twinkling in optical stars. The evidence for Hewish's theory that the fluctuations are caused by irregularities in the upper ionosphere was reviewed and showed to be consistent with all the evidence. The most striking thing about the fluctuations is the marked diurnal variation with a pronounced maximum at midnight. The author's work at Cambridge showed that the intensity of scintillation appears to follow a sunspot cycle.

Existing theories of the cause of the irregularities were then discussed. These theories are of two main types: the "particle" type in which the irregularities are produced by collision of particles with the upper atmosphere and those which propose a turbulence mechanism. It was shown that there were difficulties with both types of theories, but those in which particle ionization—possibly by solar material—appear the most promising.

1st June, 1954

A meeting was held in the Royal Society's Room. Mr. L. W. Miller, a member of the Council, presided.

The following were elected members of the Society:—Mr. G. M. Davies, Mr. N. Lochiel, Mr. G. T. Butler.

Dr. H. C. Reynolds delivered an illustrated lecture entitled "The American Opossum, the most primitive Marsupial", of which the following is an abstract:—

Dr. Reynolds outlined something of the life of the American Opossum, regarded as the oldest living mammal in America. He traced something of the history of knowledge of the animal, and the life history as well as of the habit and food of these animals.

In his researches special attention was paid to the reproductive phase of the animal especially at time of birth. Observations were made and definite data was obtained of the transference of the young to the pouch—this process is carried out by the young themselves without any assistance from the parent. Mortality is high at this stage and in observations made by Dr. Reynolds about 60 per cent of the young born to four females reached the pouch; those that failed to do so were lost.

The lecturer discussed the evolutionary place of the animal paying particular attention to the point that it has remained generalised so avoiding serious competition.

The lecture was illustrated.

6th July, 1954

A meeting was held in the Society's Room. Professor T. Hytten, Vice-President, presided.

The following members were elected:—Mr. K. Tyson, Mrs. G. T. Eddie, Miss J. Eddie, Mr. S. R. Bell, Archdeacon L. N. Sutton.

Mr. D. O'Driscoll delivered an illustrated lecture entitled "Gold Mining in Western Australia", of which the following is an abstract:—

Gold played an important part in the development of Western Australia, bringing an influx of capital and population to the State on several occasions when the economy was in difficulties. Tasmanians may feel some interest in the history of gold discovery in the West because there appear to be many links with the search for minerals in their own island. The discoveries in Tasmania were in general a little earlier than those in Western Australia, and there can be little doubt that spectacular successes achieved in the island provided some of the stimulus for the vigorous prospecting carried out by the pioneers in Western Australia. A Tasmanian would recognise the evidence for this in the many familiar names to be found among the titles of the mining leases. Even to-day many members of the mining community think of Tasmania as their home.

Of particular interest is the fact that the year 1954 marks the anniversary of the first official mineral survey in the goldfields country, and a splendid vindication of the judgment of an early explorer. In 1854 Surveyor Austin, commissioned by the Governor to look for signs of minerals in the inland country, came back to report that the area around Mt. Magnet gave every promise of possessing worthwhile gold deposits. This prediction roused little enthusiasm for more than twenty years until the first substantial discoveries were made. Now, a century later, Mt. Magnet is known for its celebrated Hill 50, one of the most notable mining successes of recent years.

The fame of the West Australian goldfields, however, rests mainly upon Kalgoorlie, where an area of ground about the size of an average wheat farm has produced more than one thousand tons of gold. Many fabulous tales are woven into its history but the boom days of the industry are gone and gold mining has settled down to become a steady engineering pursuit. As year by year the chances of finding new outcropping ore bodies diminish, the industry turns for the replenishment of its ore reserves to new and more scientific methods of search. Advances in the understanding of intricate fold patterns and structures have shed new light on the conditions which favour the formation of ore-bodies, and in recent years handsome rewards have come from persistent prospecting at depth along favourable structural features. A notable example of this type of prospecting is to be seen at Norseman, where a large quartz reef was considered to have been worked out in 1919 and lay idle for a number of years. A study of the anatomy of the vein in 1934 showed that the ore was related to certain structural features which could be expected to repeat again at greater depth. This caused the old mine to be re-opened and the discovery of new ore shoots which eventually reached prominence among the richest and most persistent gold producers in the State.

In the immediate post-war years an exhaustive study of the Bullfinch field caused Great Western N.L. to open up the old Copperhead mine and this property has now begun producing a large tonnage of gold ore. A large new town has come into being and an exploratory attack has been launched on a number of other prospects in the surrounding country.

By far the most interesting of all exploration projects, however, is that going on at the south end of the Kalgoorlie field. Here the possible prize is a repetition of the Golden Mile. The exploration now being carried out by Kalgoorlie Southern Gold Mines was preceded by five years of intensive geological mapping and interpretation. The concept which emerged led to the formation of the present company with its quarter-million pound capital to be devoted to drilling at depth down the pitch of the regional structure. Holes of five and six thousand feet depths are being undertaken, and about half the scheduled programme is complete. Results so far are considered to encourage further prospecting. As the attack continues the eyes of mining people in many parts of the world will watch with interest and expectation. Should success attend this venture it will mark an important milestone in the progress of scientific mineral prospecting.

4th August, 1954

A meeting was held in the Society's Room. Professor T. Hytten, Vice-President, presided.

The following were elected members of the Society:—Miss E. M. Gyenge, Dr. T. J. Ick.

Mr. P. G. Law delivered a lecture entitled "Experiences in the Antarctic", of which the following is an abstract:—

Mr. P. G. Law spoke of previous visits to Antarctic dealing more specifically with those explorers who used Hobart as a final base. The question of the type of research being carried out, relationship of the Antarctic base to Macquarie and Heard Island Stations were explained.

The whole question of organisation, the hazards to be faced in selecting a site and organising research parties were dealt with by the lecturer who also told the fascinating story of the reason why Mawson was chosen as the base station in the Antarctic. The organisation of the work this year and next year leading to the "International Year" in 1956 was discussed and the lecture was splendidly illustrated with numerous colour slides.

14th September, 1954

A meeting was held in the Society's Room. Professor T. Hytten, Vice-President, presided.

The following were elected members of the Society:—Mr. E. R. Henry, Mr. P. B. Rogers, Mrs. F. G. Henry.

Mr. Hal Missingham, Director of the National Art Gallery, of N.S.W., delivered an illustrated lecture entitled "Drawing: the classical misconception", of which the following is an abstract:—

Mr. Hal Missingham discussed the question of drawing as contrasted to watercolour and oil painting. Stress was laid on the various styles of drawing adopted by artists and many of these were well illustrated by well selected slides. The place of drawing as an art was emphasised by the lecturer.

5th October, 1954

A meeting was held in the Society's Room. Mr. I. G. Anderson, a member of the Council, presided.

The following were elected members of the Society:—Mrs. M. D. M. Fowler, Mrs. D. C. McLaren, Mr. J. R. Driscoll, Mr. G. H. Newstead, Mr. H. Shea, Mr. L. M. Shoobridge.

Brigadier A. D. Molloy delivered an illustrated lecture entitled "Some Impressions of the North American Continent".

2nd November, 1954

A meeting was held in the Society's Room. The President, His Excellency the Governor, Sir Ronald Cross, presided.

The following were elected members of the Society:—Mrs. I. F. Henry, Dr. M. B. Liederman, Mr. L. A. Moon.

The Chief Justice, The Hon. Sir John Morris, K.C.M.G., M.A., LL.B., delivered an illustrated lecture entitled "The University of Tasmania". This was followed by a Conversazione in the Art Gallery when Supper was served to approximately 200 people.

[It is hoped to publish the substance of this address in a later volume of the Papers and Proceedings.]