

## Abstract of Proceedings

---

2ND MARCH, 1948

### *Annual Meeting*

The Annual Meeting was held in the Society's Room, Tasmanian Museum. His Excellency the Governor, President of the Society, presided.

The following Office-bearers were elected for 1948:—Dr. W. L. Crowther was elected Vice-President for two years in the place of Mr. L. Cerutti, who retired under Rule 12; Honorary Secretary, Dr. J. Pearson; Assistant Honorary Secretary, Mr. D. C. Pearse; Honorary Treasurer, Mr. S. Angel; Honorary Auditor, Mr. H. J. Exley.

The following were elected members of the Council for 1948:—Mr. A. L. Meston was elected for three years in the place of Dr. W. L. Crowther, who retired under Rule 21. Mr. J. W. C. Wyett, who had been appointed for one year in 1947, in the place of Professor H. D. Gordon, was elected for a further term of three years.

The following were elected members of the Society:—Ordinary Members: Miss E. Bailey, Miss M. G. Rouse, Miss C. Shepherd, Archdeacon J. R. Norman, Mr. R. Pocock, Dr. W. W. Wilson.

Dr. D. G. Osborne, Lecturer in Geology, University of Sydney, delivered an illustrated lecture entitled 'New Zealand (Scenic, Geologic, and Seismologic)'.

6TH APRIL, 1948

A meeting was held in the Society's Room. Mr. W. H. Hudspeth, Vice-President, presided.

The following were elected members of the Society:—Ordinary Members: Dr. Ida Birchall, Dr. M. C. Devenish-Mears, Mrs. M. Gallia, Mrs. M. J. Swan, Mr. K. B. Allen, Mr. I. G. Anderson, Professor H. N. Barber, Mr. F. D. Cumbræ-Stewart, Hon. R. K. Green, Mr. E. E. Guiler, Mr. R. M. Gunn, Dr. C. Loftus Hills, Mr. E. D. B. Innes, Dr. T. James, Mr. A. C. Richmond, Mr. A. Roche, Mr. C. J. S. Somerset, Mr. H. Turner, Mr. D. D. von Bibra.

Professor H. N. Barber delivered an illustrated lecture entitled 'Genes and Plasmagenes'.

Archdeacon Atkinson presented specimens of *Hedycarya augustifolia*. A. Cunn. 'Djelwuck' or 'Austral mulberry'. Family *Monimiaceae*, collected in Lancaster's bush and on the banks of Narracoopa Creek, towards the eastern shore of King Island, in October, 1947. He requested that these specimens should be kept at the Herbarium.

30TH APRIL, 1948

A meeting was held in the Society's Room. His Excellency the Governor, President of the Society, presided.

The following were elected members of the Society:—Ordinary Members: Mr. A. M. D. Hewer, Mr. A. C. Thompson, Dr. D. H. Waterworth; Associate Members: Mr. J. E. S. Alwyn, Mr. J. R. Wall.

The President presented the R. M. Johnston Memorial Medal to Professor T. Griffith Taylor, Professor of Geography at the University of Toronto.

Professor Taylor then delivered the R. M. Johnston Memorial Lecture entitled 'Racial Migrations and Relations', illustrated by lantern slides, of which the following is an abstract:—

We are met here to-night to keep green the memory of a very distinguished Tasmanian citizen, R. M. Johnston, who died in 1918 after devoting many years to research in several fields of science. He contributed numerous memoirs on biological and geological problems to the records of the Royal Society, and when I was engaged in pioneer investigations in the geography of this State, his large volume on the 'Geology of Tasmania' was a very important source for my study. I also feel it a special honour to follow the man to whom I owe my early training in geology and geography—Sir Edgeworth David—who gave the first Johnston Memorial Lecture in 1923.

Ever since 1918 I have been more interested in the Patterns of Human Distribution than in any other branch of scientific research. The lengthy monograph by the American biologist, W. D. Matthew, published in New York in 1915, entitled 'Climate and Evolution' deals with the evolution of the mammals. Matthew laid great stress on *Charting the data of distribution* as a key to evolution, and I felt that primitive man who lived long before civilization began, must necessarily obey the same laws of distribution.

I plotted on world-maps all the anthropometric data which was available. Among these data were those dealing with head indices, facial indices, hair waves, nasal shape, skin colour, stature, etc. etc. They gave patterns very like Matthew's zones for the even-toed and odd-toed mammals with which biologists are familiar.

These data were plotted on maps with a special projection, much like that used by Matthew; so that the essential *World Pattern* was emphasised. It consists of a central area or core in southern Asia from which project three 'World Peninsulas'. These are Eur-Africa, Austral-Asia, and the Americas. The nine major environments of the world (from Ice-cap to Selva) are repeated three times on each side of the equator; and this Pattern is an important feature in the theory of Race Migration and Classification which I have been developing for thirty years. (This aspect of Racial geography is fully developed in my book 'Environment Race and Migration', Toronto, Chicago & Oxford University Presses, 1937.)

Let us now consider the pattern in the racial distribution which has developed in the migrations in the Pacific regions of the World. To understand these, we must consider in some detail the very varied environments, including topography and climate. These have changed notably during the time of the Racial migrations—which I believe to have taken several hundred thousand years. We must ignore the complications due to the mixing of peoples in the last 450 years due to large scale emigration across the seas; and consider the zones of races which characterised the world in pre-Columbian times.

Why and how did early man migrate? I do not think he moved willingly from his native haunts. Primitive tribes have quite definite rules as to trespass, as any student of our aboriginals knows. He knew nothing of the outer world and was in general fearful of the unknown. The major factor which drove him away from his favourite haunts was Climatic Change; just as the major migrations of our time have been due to famines, droughts and other features of Climatic change. In the several hundred thousand years involved in our study there occurred the world wide phenomena known as the Riss Ice Age, the warmer Interglacial, and the various fluctuating climates of the Warm Ice Age and of Post-placial Periods. Very convincing evidence has been demonstrated in Scandinavia as to climatic changes there in the last 20,000 years; and as to their effects on the zones of forests and on the movements of early man. (These are discussed fully in my book 'Environment and Nation', Toronto, Chicago & Oxford Universities, 1936.) We may be sure that similar correlations of climate and man will be revealed when detailed research in other lands has been carried out.

A second important element in race migration is the topography. Almost all movements on a large scale seem to have followed well defined 'Corridors'. In our corner of the Old World one may instance the Khyber Pass into North-West India. Down this poured a dozen invasions of the rich plains of Hindustan during historic times. It was equally the gateway in prehistoric times. Into China the broad-head Alpines poured by way of the Jade Gate—which was the north-east corner of the high plateau of Tibet. Every incursion into Australia made use of those 'Stepping stones' which we call the East Indian Islands. During the coldest phases of the Ice Ages we are reasonably sure that a sub-continent (known as Sunda Land) occupied this area. It was drowned by the thaw-waters when the ice-caps melted. (See Fig. 5 in my book 'Our Evolving Civilization an Introduction of Geo-pacifics', Toronto & Oxford Universities, 1947.)

To understand the pattern which develops after a number of migrations along such a Corridor; I use the analogy of a Playing-Field. We may assume it lies on a main road, but a mile or two out of the city. When a notable game is imminent we may picture school-boys moving out in the morning along the main road (the 'Corridor') and for an hour or so roaming over the vast level attractive site of the playing field. About noon the proletariat stream into the field, and the boys climb into trees around the margins of the field, while the proletariat—after moving freely around, occupy the poorest seats. Next come the capitalists by the same route and occupy the best seats. Finally come the cream of our civilization, the cricketers, etc. (who incidentally receive far more attention from the public than do Einstein or Rutherford). They occupy the most attractive area in the region—the central level plain.

If we study any very extensive human migrations we find much this distribution whether it be into India, into Australia or into America. The least attractive areas—such as the deserts or mountains, or dense jungles ultimately receive the earliest and feeblest tribes. They have been 'pushed to the wall' in the struggle for existence. Here inevitably occur the pygmy Negritos, as I have demonstrated in many maps and diagrams. The process as regards the other races is best shown in America—where the migrations were mostly within the last 20,000 years. Here the 'corridor' was clearly along the eastern margin of the Young Mountains; and here accordingly we still find the recently arrived broad-head tribes of Amerinds. In my opinion they are the last-developed and biologically the most advanced. They include the Shoshone, Navaho Aztec, Inca and Araucarian groups.

Pushed out into inhospitable corners we find the narrow-headed tribes notably the Eskimo in Greenland. In unattractive forests in Bolivia some Qurungua tribes are, in my opinion, actually kin to the Australian aboriginal. I think they represent a preglacial migration from Asia long before any Amerinds reached America.

In our own part of the world we find Negritos in the rugged mountains of New Guinea—whereas more advanced Oceanic Negroes occupy the plains of the Fly River. It is likely that the marginal island of Tasmania preserved Negritos until 1875 just as they occur in the mountains of the marginal Philippine Islands to-day. The Australian aboriginal entered Australia probably during the Warm Glacial period, when Sunda Land gave him a rather ready access into the southern Continent.

The Polynesian migrations are rather complex. They occurred relatively late in history, after boat-building was well understood by folk living in the south-east of Asia. I have seen many culture-patterns in south China which recall those of Polynesia. They were marginal peoples, kin to the broad-heads in Western Europe, and were displaced by the still later broad-heads whom we call Chinese.

They sailed far into the Pacific where the earlier Oceanic Negroes had never ventured. It is probable that these later migrations consisted of a broad-head aristocracy, together with many narrow-headed serfs. Hence we do not find pure racial stocks in any islands. However, Easter Island folk have less of the broad-head element than tribes in Hawaii or North Island (N.Z.); while the broadest heads are found in Samoa and Tahiti—which are usually accepted as the most cultured groups of the Polynesians.

In conclusion it has long been clear to me that a general appreciation of the biological migrations and patterns which I have just tried to demonstrate would do much to diminish race-prejudice. All over the world intolerance is due to ignorance. The world is shrinking so rapidly that all races are becoming our neighbours. We must learn to live in harmony with other peoples and races; and cultural geography (especially when directed towards world-peace as in the newer branch called Geo-pacifics) seems to me to be the most practical method of propaganda towards that much-to-be-desired objective.

1ST JUNE, 1948

A meeting was held in the Society's Room. Mr. W. H. Hudspeth, Vice-President, presided.

The following were elected members of the Society:—Ordinary Members: Miss D. J. R. Bell, Mr. M. H. F. Bennett, Mr. H. V. Biggins, Mr. F. F. Fairthorne, Jnr., Mr. E. F. Fricke, Mr. W. J. Gellie, Mr. G. T. H. Harris, Mr. M. H. Hurburgh, Mr. C. C. Lawrence, Dr. W. K. McIntyre, Mr. E. J. Martyn, Mr. E. J. Pitchford, Sir Gordon Rolph, Mr. M. H. Rosenberg, Mr. E. T. Smith, Mr. G. H. Stancombe, Mr. F. L. von Stieglitz, Dr. L. Hardy Wilson; Associate Members: Miss N. J. Purcell, Mr. C. H. Johnson, Mr. A. G. Lyne, Mr. A. J. McIntosh, Mr. G. B. Sharman.

On behalf of the Royal Society of New South Wales, the Chairman presented to Dr. J. C. Jaeger the Walter Burfitt Prize and Medal for 1947. This award was made for Dr. Jaeger's outstanding work in mathematics during the previous three years.

Professor C. D. Hardie delivered a lecture entitled 'Science and Perception'.

#### 6TH JULY, 1948

A meeting was held in the Society's Room. Mr. W. H. Hudspeth, Vice-President, presided.

The following were elected members of the Society:—Ordinary Members: Mrs. E. Glasson, Mrs. M. C. F. McAfee, Mr. M. B. Amos, Mr. J. Bradley, Mr. F. F. Fairthorne, Mr. T. G. Johnston, Mr. H. Vernon Jones, Dr. R. A. Lewis, Dr. H. Spencer Roberts, Mr. R. H. Youl, Dr. Robert Wall; Associate Members: Mr. W. M. Crosby, Mr. R. H. Cruickshank, Mr. N. P. Tilley, Mr. K. R. Walker.

Mr. K. M. Dallas delivered a lecture entitled 'The Political Economy of Van Diemen's Land', of which the following is an abstract:—

The outstanding fact about Van Diemen's Land before 1850 is the high level of prosperity enjoyed by comparison with other Australian colonies. The evidence of capital expansion, of trade, of wage-levels and living standards especially before the depression of the Forties is in striking contrast to its comparative poverty in later periods. The high productivity was certainly due in part to the continued investment of capital by new immigrants and some absentee investors but this too was partly due to the Imperial subsidy on account of the convict establishment. This provided a constant demand for produce, at fixed prices with no risk of bad debts and the primary income from the 'invisible export' of food, materials and services generated secondary incomes of large volume in a community where unused resources were plentiful.

Its importance in the growth of the colony came from its size, from its certainty and because it supplied ample volume of liquid wealth, which was the basis of internal finance and exchange, and was also a reserve of international money, as good as gold, and available for the finance of import trade with Mauritius and Canton for which there was no acceptable export commodity.

Moreover its fluctuations were opposite to those of other exports, declining in good years when numbers of convicts assigned were large and increasing in lean years when they were returned to Government gangs. Thus it provided a stabilising influence unique in colonial development. The absence of bank failures during the Forties depression is due to this stability. Melville estimates that in one year of that period it was as high as £400,000.

The continued attempts at economy by the Imperial Government were largely unsuccessful and the increasing convict population meant that the subvention increased right to the last years of transportation and the decline in prosperity in the Sixties is largely due to the end of this golden rain.

Transportation thus evolved into a subsidised emigration as the pastoral and agricultural industries were stimulated by the demand for wool in England and for food here. The convict working class were better off than the wage-earners of contemporary Britain, and the regulation of rations, clothes and wages was the true origin of Australian wage regulation. The earnings of all were determined by prescribed conditions for assigned service. The convicts outside the penal settlements were 90 per cent of the total and were an average sample of the skills then known in Britain. The opportunities to achieve economic independence, even while legally hound, were many and make the term 'Slavery', as used by Forsyth in 'Governor Arthur's Convict System' merely rhetorical, especially when compared with 'free' employment as it then was in Britain.

The history of the convict period needs to be rewritten in the light of modern economic theory on the relations between Investment and National Income.

#### 5TH AUGUST, 1948

A special meeting was held in the Society's Room. Mr. W. H. Hudspeth, Vice-President, presided.

Rule 43 was amended to read as follows:—

A sum of £20 may be paid at any time by a Member as a Life Membership Fee, provided however that any Ordinary Member wishing to become a Life

Member shall first pay any arrears which may be due in respect of his subscription as an Ordinary Member. Such Life Membership Fees shall be invested or at the discretion of the Council be expended only upon permanent improvement of the rooms occupied by or upon the general equipment of the Society. Each Life Member shall receive a copy of the Papers and Proceedings for the year in which his subscription as a Life Member is paid and for each subsequent year without further payment.

#### 5TH AUGUST, 1948

A meeting was held in the Society's Room. Mr. W. H. Hudspeth, Vice-President, presided.

The following were elected members of the Society:—Ordinary Members: Miss H. Bayly, Miss D. M. Harvey, Mr. A. D. MacKinnon; Associate Member: Mr. I. F. Reynolds.

Mr. T. D. Raphael delivered an illustrated lecture entitled 'Bees—The Production of Pedigree Stock'.

Though the advances made by the animal geneticist and stock breeder are well known, the public does not generally recognise the intensive work and immense strides that have been made in the breeding of bees.

The main objects of workers in this field has been to produce a strain of heavy honey producers, vigorous and adaptable, free from a pronounced tendency to swarm and in temperament docile and easy to handle. Many varieties of bees have been utilised by the apiarist, including Italians, Carniolans, Caucasian, Ligurian and Cyprian in addition to the common Black and many less known types.

The inmates of a normal hive in summer consist of one queen, the mother of the whole colony, several hundred drones and 50,000 or more workers. The queen is the only fully developed female and can lay up to 3000 eggs in a day, the drones are the males and the workers are undeveloped females. It therefore follows that one has only to change the queen to change the whole hive, and queen breeding is, in consequence, one of the most important branches of specialised apiculture.

When a few queens only are required, this can be simply done by dequeening the selected colony when the bees take immediate steps to replace the loss. But as the breeder requires possibly hundreds in a season, other methods must be devised. Commercial practices now generally centre round a three stage process, a separate hive (or section of a composite hive) for starting the queen cells, a hive for feeding the developing larvae and a third from which the young queens are mated. Special conditions have to be created within the hives to stimulate the bees to their individual tasks and considerable skill and ingenuity is required. As bees mate in the air, control of the male parentage is difficult to obtain and a considerable percentage of mismating sometimes occurs. The choice of isolated districts or islands where bees of other strains do not occur, the breeding of large numbers of drones of the desired type and the controlling and concentration of drone flight, are the methods by which crossing has been reduced to a minimum, or even sometimes eliminated. However, during the last two years a technique for the artificial insemination of queen bees has been evolved in America and following further experimental work it is hoped in the near future to perfect a practical and commercial system which will perhaps revolutionise present methods and result in great advances in the genetical side. Anaesthetisation of the young queens with carbon dioxide as a means of inducing early egg production is another advance in this field.

Mr. Angel exhibited a painted aboriginal skull from Northern Australia. This was one of a number of skulls bequeathed to the Museum by the late Howard Amos. The skull was originally given to the Reverend Gillmore of Swansea, while he was a padre in the Army stationed in Arnheim Land in Northern Australia, by one of the natives there. Only two mainland tribes have this type of decoration and it shows the New Guinea influence.

#### 7TH SEPTEMBER, 1948

A meeting was held in the Society's Room. Dr. W. L. Crowther, Vice-President, presided.

The following were elected members of the Society:—Ordinary Members: Mr. A. K. Caris, Mr. W. P. Holman, Mr. W. C. Morris; Associate Member: Miss E. M. Smith.

The Chairman announced that the following documents, which formed part of the Lefroy Bequest, had been presented to the Society by the Scott Polar Research Institute, England:—

1. Address to Sir John Franklin on his appointment to the governorship of Van Diemen's Land, signed by citizens of Westbury and Launceston.
2. Address to Sir John Franklin on his resignation of the governorship of Van Diemen's Land, signed by the landholders, magistrates and others of the northern part of the island.
3. Resolution of sympathy with Lady Franklin by the Legislative Council of Van Diemen's Land, 1852.
4. Address to Lady Franklin from the Tasmanian subscribers to her private search expedition, 1852, with an analysis of the list and details of the sums contributed.
5. Resolution in the Tasmanian House of Assembly of thanks to Lady Franklin for her gift of Franklin Island, 1868.

Dr. C. Loftus Hills delivered an illustrated lecture entitled 'Geological Research in Tasmania', of which the following is an abstract:—

The subject is approached from the angle of 'adaptation to environment'. It is pointed out that the rise of all civilisations has been the acceptance of a challenge of a new environment and adaptation to it. How has Tasmania answered the challenge of her land surface and climate? The question is answered by a review of the progress of hydro-electric development, mineral exploration and geological research.

The existing close co-ordination of engineering and geological science by the Hydro-Electric Commission is a credit to all concerned.

The history of mineral exploration in Western Tasmania is traced from Philosopher Smith's discovery of Mt. Bischoff in 1871, Sprent's discovery of tin at Heemskirk in 1876, Long and Monk's discovery of silver-lead at Zeehan in 1882, Lynch, McDonough and Karlsen's finding of Mt. Lyell in 1881 and 1883, to McDonald's discovery of Rosebery in 1893, and that of Tullah by Innes in 1897. These discoveries were the foundation of the winning of £100,000,000 of new wealth up to the present time.

It is then shown how the work of successive geologists in Tasmania was related to these pioneering discoveries and the developments that ensued from them. The development of geological knowledge is traced from Charles Gould in the 1860's, R. M. Johnston in the 1870's and 1880's, Montgomery in 1890's, Waller in the early 1900's, Twelvetrees 1900-1920, Ward 1907-1912, Loftus-Hills 1913-1923, Arndel Lewis 1923-1943, to the present application of modern techniques with which are actively concerned Professor Carey, Dr. Loftus-Hills, the Hydro-Electric Commission, the Mines Department, North and South Broken Hill under Dr. Garretty and the Electrolytic Zinc Company under Mr. Graham Hall. A tribute is paid to the valuable contributions of amateur workers of the past; in addition to R. M. Johnston and Arndel Lewis, the names of Thomas Stephens, E. G. Hogg, Trety Noetling, W. F. Petterd and R. C. Stecht are mentioned.

It is emphasised that geological research in Tasmania is really only yet in its early stages. Work done up to the present is incomplete. Existing geological maps are subject to continuous review, adjustment and elaboration. This is illustrated by lantern slide of the evolution of the geologic structure map of Zeehan from 1903 to 1948 and the economic significance of this is pointed out.

It is shown that the present geological research in relation to mineral exploration is based on an expectation of results in from 2-5 years. But effective and efficient adaptation to environment demands a start on a plan of long-dated mineral exploration, designed to locate completely hidden ore deposits of which there is no sign at the surface, which must form the basis of mining operations 25-50 years from now. This will demand geologic research of the highest order in structure and plutonics, steadily applied throughout the years ahead of us.

## 8TH OCTOBER, 1948

A meeting was held in the Society's Room. Mr. W. L. Crowther, Vice-President, presiding.

The following were elected members of the Society:—Ordinary Members: Mr. E. L. Bailey, Mr. A. R. Ellis, Mr. Wm. Hart, Rev. J. Jones, Mr. E. R. Pretymann, Mr. A. F. Ryan; Associate Member: Mr. M. M. Hodgson.

Mr. W. H. Hudspeth delivered an illustrated lecture entitled 'The Rise and Fall of Chas. Swanston of the Derwent Bank'. (See p. 1.) The original Deed of Settlement of the Derwent Bank, which had been lent by Mrs. C. N. Atkins, was exhibited.

## 2ND NOVEMBER, 1948

A meeting was held in the Society's Room. Dr. W. L. Crowther, Vice-President,

The following were elected members of the Society:—Miss M. E. Chapman, Mrs. I. Conybeare Hervey, Mrs. A. K. Wettenhall.

The following papers which had been submitted for publication in the Society's Journal were tabled, and it was agreed to submit them to the Standing Committee:—

Tasmanian Littoral Spiders, by V. V. Hickman. (See page 31.)

Some Tasmanian Opiliones, by V. V. Hickman.

Neonatal Length as a Linear Function of Adult Length in Cetacea,  
by E. O. G. Scott. (See page 75.)

Tasman's Landing Places, by A. L. Meston.

New Species of Astacilla from Tasmanian Waters, by E. R. Guiler.  
(See page 45.)

The Vegetation of Mt. Field National Park, by Miss W. Curtis.

A Revised Description of *Dolichotera macalpini* Nicoll 1914, by P. W. Crowcroft.

Mr. G. K. Meldrum delivered an illustrated lecture entitled 'Clover and Infertility in Sheep'.

---

## Northern Branch

### Annual Report for 1948

Membership of the Branch increased considerably during the year, from four life members and thirty-five ordinary members to nine life members and fifty-seven ordinary members.

During the year reports were prepared by the Secretary on biological survey and historical research. Proposals for the latter were discussed at a conference in Launceston under the chairmanship of Sir John Morris, the parent Society being represented by Dr. W. L. Crowther. Sir John Morris agreed to go into the possibility of the appointment of an Archivist and later advised that the Government had agreed to make the appointment.

### Meetings

27TH FEBRUARY, 1948

A meeting was held at the Museum, Mr. F. Smithies presiding.

Dr. T. Levring, Director of the Marine Botanical Institute, Goteborg, and Assistant Professor, University of Goteberg, lectured on 'Submarine daylight and its effect upon seaweed life'. He described his own researches which are principally concerned with the problem of how seaweeds can make use of sunlight for their growth even though it is diminished in quality as a result of differential absorption and scattering in its passage through the sea-water, and pointed out that the changes which take place in the composition of the light are of great importance in the life of seaweeds, the occurrence of seaweeds of different pigment classes at different depths being associated with this.

21ST APRIL, 1948

*Annual General Meeting.*—The Annual General Meeting was held at the Museum, Mr. F. Smithies presiding.

The Annual Report and Balance-sheet for 1947 were adopted.

The following Office-bearers were elected:—

*Chairman:* Mr. J. E. Heritage, in place of Mr. F. Smithies, who retired under the rules.

*Vice-Chairman:* Mr. Gilbert McKinlay, in place of Mr. J. E. Heritage, who had been elected Chairman.

*Members of Council:* Hon. R. K. Green, F. Smithies (1948 only), and K. R. von Stieglitz in place of T. Dee and J. R. Forward, who retired under the rules and Gilbert McKinlay, who had been elected Vice-Chairman.

*Hon. Secretary-Treasurer:* Mr. N. J. B. Plomley.

A paper was given by Mr. K. R. von Stieglitz, entitled 'Some Notes on Paterson's Plains, its Pioneers and Early Life'.

In introducing the Speaker, the Chairman, Mr. Heritage, pointed out the importance of historical work being undertaken in Tasmania without further delay and said the Branch would encourage such work in the future, together with research in Tasmanian geology, biology and ethnology. He said that the work of the amateur was complementary to that of the professional and in Tasmania must provide the nucleus to carry on studies in each branch.

Mr. von Stieglitz dealt with the early history of Paterson's Plains, as St. Leonards with the area including Breadalbane, Franklin Village, Elphin and part of the White Hills was known originally. His reconstruction of the lives of the pioneers showed the difficulties with which they had to contend. Agriculture was at first unsuccessful because local conditions presented many problems and no trained farm workers were available. Crude huts were the only dwellings until as late as about 1825 because skilled building labour was not sent to the Colony,

but retained in New South Wales. Bushranging was rife, an outcome of the convict system and the economic difficulties of the young colony. He related many anecdotes concerning the pioneers and incidents of the times.

#### 17TH JUNE, 1948

A public meeting was held in the Public Library Hall, Mr. J. E. Heritage presiding.

Mr. A. W. Knight, Hydro-Electric Commissioner, gave a lecture on 'Hydro-Electric Developments in Tasmania'. Mr. Knight outlined the general principles and requirements for the development of hydro-electric power, and discussed the utilisation of such power sources in Tasmania. He showed how additional sources would be incorporated into the existing system. In commenting on power requirements in the Launceston area, he said that a power scheme with an installed capacity of 60,000 horsepower would be constructed on the South Esk at Trevallyn to provide for the needs of local industry.

The lecture was illustrated by a series of diagrams and photographs and at its conclusion a colour film was shown of the hydro-electric undertakings.

#### 21ST JULY, 1948

A meeting was held at the Museum, Mr. J. E. Heritage presiding.

Mrs. G. E. Perrin lectured on 'Plant Life in Tasmanian Seas'. The first reviewed the work of botanists who had contributed to a knowledge of the Tasmanian marine algae from the time of the early expeditions to the present, among them La Billiardiere, Robert Brown, Ronald Gunn, William Harvey, Mrs. Louisa Meredith and A. H. S. Lucas.

Mrs. Perrin said that of more than 1500 species of seaweeds recorded from the Australian coasts, about 500 species occur in Tasmanian waters, where three species of marine phanerogams are also found. She said that seaweeds grow in the waters of the continental shelf (to a depth of 25 fathoms) and form a very important constituent of the life there; certain reef building forms also occur, thus contributing to the structure of the places in which they live.

Mrs. Perrin then went on to describe methods of collecting and preserving seaweeds. She said that the plants could be collected either in storm wrack, or by wading at low tide, or dredging; to preserve them, they should be washed in fresh water, floated on to a paper mount and pressed and dried with frequent changes of the drying cloths and papers.

The lecturer finally described some of the commercial uses of seaweeds: as fertiliser, and in the manufacture of agar, alginates and many other products. She said that the quantities of marine algae available in certain areas are enormous; growth at Tamar Heads, for example had been noted as much as 18 feet in three months.

At supper after the meeting, fruit jellies were served prepared with agar from *Gracilaria lemaneiformis* collected at Tamar Heads.

#### 10TH SEPTEMBER, 1948

A meeting was held at the Museum, Mr. F. Smithies presiding.

Mr. Maurice Blackburn, M.Sc., Research Officer, Council for Scientific and Industrial Research, gave an illustrated lecture on 'Sea fisheries research, with special reference to Australia'. Describing the methods of fisheries research, Mr. Blackburn said that population studies, based on sampling, were the most

important means of studying the fish crop. Australia was producing now about 70,000,000 lb. of fish per annum, but this represented only about two per cent of the world fish catch.

The lecturer said there were three ways of increasing fish production:—

- (1) Initiating *new* fisheries;
- (2) Taking the *optimum* catch, i.e., the most that can be taken year after year without depleting the population; and
- (3) Increasing the productivity of the environment.

Mr. Blackburn then went on to deal with each of these aspects of fisheries research in detail. He pointed out that such work was only beginning in Australia and much remained to be done. Of the three lines of attack, the first two were of use in sea fisheries; it was not generally practicable to increase the productivity of the marine environment although this may be successful in enclosed waters.

#### 22ND NOVEMBER, 1948

A meeting was held in the Museum, Sir John Morris presided.

Dr. W. E. L. H. Crowther gave an illustrated talk entitled 'Some account of early Tasmanian Sealing and Whaling'. Dr. Crowther first commented upon the biology of whales and showed how the habit of the Southern Right Whale in visiting the coast of Van Diemen's Land for calving permitted the establishment of bay whaling. He said that the fishery was so profitable that in the late thirties and early forties of last century there were as many as forty leases for bay whaling around our coasts, and as many as fifty ships on the register at Hobart.

After a time the whales avoided the shores close to original whaling camps and had to be hunted further afield. Tasmanian ships were among those visiting the New Zealand grounds (vide McNab) and were responsible for the first settlements on the southern coast of Victoria.

Whale oil and whalebone were both important articles of commerce, the oil being used in the manufacture of candles. With the discovery of kerosene the industry declined rapidly, so that Tasmanian whaling had virtually ceased by the seventies.

Dr. Crowther concluded his lecture with a series of slides showing the old whaling ships and scenes of Tasmanian whaling.

#### Office-bearers, 1948

*Chairman:* J. E. Heritage, C.M.G., LL.B. (1948, 1949).

*Vice-Chairman:* Gilbert McKinlay (1948, 1949).

*Council:* C. Craig, M.B., M.S., F.R.A.C.S. (1948); Hon. R. K. Green, M.L.C., LL.B. (1948, 1949); F. Smithies, O.B.E. (1948); K. R. von Stieglitz (1948, 1949).

*Hon. Secretary-Treasurer:* N. J. B. Plomley, M.Sc. (1949).

*Statement of Accounts at 28th February, 1949.*

RECEIPTS.				EXPENDITURE.						
	£	s.	d.		£	s.	d.	£	s.	d.
Balance at 1st March, 1948 .....	27	17	4	Balance at 28th February, 1949—						
Subscriptions .....	66	8	0	Cash in bank .....	35	11	6			
Bank interest .....	0	4	7	Petty cash in hand .....	3	0	0			
								38	11	6
				Expenditure—						
				Lectures .....	10	16	0			
				Library .....	9	16	6			
				Postage and stationery .....	8	19	3			
				Petty cash .....	1	6	8			
				Miscellaneous .....	25	0	0			
								55	18	5
	£94	9	11					£94	9	11