ABSTRACT OF PROCEEDINGS, APRIL, 1905.

The Fellows of the Royal Society of Tasmania opened their session for 1905, being the 62nd, at their rooms, on Tuesday, April 11, 1905. His Excellency the Governor, Sir Gerald Strickland, K.C.M.G., President of the Society (accompanied by Lady Edeline Strickland, Miss Drummond, and suite), presided. There was an excellent attendance of members and friends. Her ladyship was presented with a handsome bouquet of flowers by the secretary (Mr. Alex. Morton), on behalf of the Council of the Society, upon her arrival.

Apologies.

Apologies were received from Colonel W. V. Legge, R.A., Mr. R. M. Johnston, I.S.O., F.S.S., and Mr. Russell Young.

Addresses of Welcome.

Mr. A. G. Webster, Chairman of the Council, addressing His Excellency, said: —Before they began the business of the evening, a pleasing duty devolved upon him. This was the first meeting of the Fellows of the Society since His Excellency had arrived, and had kindly consented to become their president, ex-officio. He, therefore, took the opportunity of offering His Excellency, on behalf of the Council and Fellows, a very cordial and hearty welcome. They all felt very much gratified that His Excellency had so readily acceded to the request to become their president, and to on that occasion encourage the members by delivering the opening address. His Excellency no doubt had already become acquainted with the history of the foundation of the Society by that distinguished man, Sir John Franklin, and, therefore, he (the speaker) need not take up time by dwelling on that subject, but content himself by saying he hoped that the 1905 session, so auspiciously began, would be productive of many valuable papers on the advancement of the State, and would add to the reputation already so widely spread which was enjoyed by the Society. He again bade His Excellency a very hearty welcome. (Warm applause.)

Medical Section.

Hon. Dr. G. M. Butler, M.L.C., said that, in the absence of the President of the Medical Section of the Society (Dr. Wolfhagen), it devolved upon him to express to His Excellency, on behalf of that section, their most hearty welcome. Of necessity, the meetings of the Medical Section were held in committee; but he assured His Excellency that those meetings resulted in considerable benefit to the community at large, as well as to the members of this Society. It had been, as the chairman of the Council had just said, a matter for congratulation to the Society that they had had so many distinguished presidents, and now they were very gratified to have His Excellency at their head. (Applause.)

New Members.

The following gentlemen were unanimously elected members of the Society:— Mr. Geo. Alex. Webster, B.A., M.R.C.S., Eng., M.B., Cantab; Mr. W. E. Masters, LL.B.; Mr. J. E. Smith, B.Sc.; Hon. Ellis Dean, M.L.C.; and Mr. Percy Ash.

PRESIDENTIAL ADDRESS.

"DUTIES OF LEISURE."

His Excellency the Governor delivered the following presidential address:—

Mr. Chairman, Members of the Council, and Fellows of the Royal Society,— The honour of addressing this Society as its president ex-officio is, at the same time, amongst the most pleasant and the most arduous of the duties devolving on the Governor of this State; it has been forcibly brought to my notice that the Royal Society of Tasmania is the senior Royal Society established in the Southern Hemisphere, and the vigour with which the point has been pressed has tempted me to examine if this be a mere coincidence, or the result of some relation of Cause and Effect.

One of the reasons that suggests itself at once is, that the exceptionally healthy climate of this beautiful island produces a high average of bodily and mental vigour, and that opportunities for industrial prosperity have made the struggle to live much easier in Tasmania than elsewhere in the Southern continent. Where the struggle to live is less severe, the fruits of realised labour become secure at an early stage of colonisation, and a leisured class arises which may devote its spare time and energy to divers pursuits other than the quest of riches. The geographical position of Tasmania, well out of the tropics, has allowed our people to escape the fate of others in fertile subtropical lands on both sides of the world, where life has become too easy, and the "dolce far niente" has dragged down communities full of promise to nothing better than a sybaritic existence. Accident has also favoured Tasmania in adopting a lofty view of the opportunities of leisure —the presence here, at the dawn of our social life, of that eminent pioneer of modern scientific research, Sir John Frank-

lin, perhaps contributed more than any other cause to induce men in whom brains, leisure, and education were combined, not to keep their opportunities and talents hidden "under a bushel."

The example of Sir John Franklin has led Tasmanians to seek, by scientific investigation, how to extract from mother earth, from the sky, and from the waters around us, ever-increasing returns of comfort, security, and enjoyment for present and future generations. Insularity is also an important factor in the early utilisation of leisure for a good purpose; History, the best analyser of human nature, indicates that islanders have, as a rule, been intensely devoted to the land of their birth. As a consequence of being circumscribed, islanders are more ready to be resourceful, and therefore to investigate.

In the early history of the world's civilisation (as nowadays in the Pacific Islands, or in Central Africa) there was no leisure, no capital, no cultivation of science, because individuals in primitive communities have to work so hard to live from hand to mouth that they cannot pause to investigate the causes of things. Leisure is not always reproductive; in fact, it is usually an incentive to waste; nevertheless, it will appear on reflection that without leisure the cultivation of science is impossible, and it is well that the man devoted to science as well as the humblest worker should realise this fact. The man who works with his hands does not always grasp the assistance given to him by the man who works with his brains, and whose board and lodging is provided from previous accumulations of the results of manual labour. On the other hand, the man of science is inclined to be stoical, and the word "Leisure" on first reaching his ears often arouses his scorn rather than gratitude for that very leisure which is the immediate cause of his being at all possible. It is only within recent history that any other permanent investment besides land has been called into existence. Before this period landowners were the only class able to give some attention to science. The monks who lived in the great mediæval monasteries may be regarded as a community of land-owning bachelors; but the individual monks, who occasionally cultivated profane learning, ran risks of being misunderstood, if they were either too assiduous or too successful; in fact, the blunders of the Inquisition offered but poor encouragement to those who, for instance, proved that the Sun does not go round the world. If anyone in Tasmania still believes the world is flat, the Royal Society will, at the worst, hesitate to invite him to read a paper.

It is remarkable that Literature, Poetry, and Art were raised to a high standard by the leisured classes during centuries in which natural sciences were neglected; it might be expected that medicine would have commanded in early history all the attention that could be concentrated on it by wealth, and the anxiety to prolong life; nevertheless, medicine was not treated scientifically, but by rule of thumb, and the system of trial and error up to our own times. The discovery of the art of printing did not do much for natural sciences, until science had made printing commercially successful, and until text books were brought within reach of the many. A great factor in modern progress has been the development of accuracy in the mechanical arts. This has placed instruments of precision for weighing, testing, and measuring in the hands of many investigators, and we should not be slow to recognise that the mediæval monks were without these advantages, and without easy access to books of reference.

Modern clubs have been likened to the monasteries of the Middle Ages, but the parallel is not on "all fours," because club men are not always bachelors, nor do they generally profess to devote their leisure to that scientific investigation which is the bond of union among the members of these Royal Societies in Tasmania and in other parts of the Empire. To these free, modern associations is committed, for future ages, the pursuit and development of reproductive leisure, in the same way that the staving off of ignorance and confusion was a function for which the monasteries deserved credit in the dark ages.

The "Royal Society of London for improving natural knowledge" is an "association of men interested in the advancement of mathematical and physical culture." It is the oldest in Europe, and was founded in 1660.

The Royal Society of Tasmania.

The Royal Society of Tasmania was founded in 1843, and its leading objects are "to investigate the physical character of the island and to illustrate its natural history and productions." The official designation adopted in 1844 is "The Royal Society of Van Diemen's Land for Horticulture, Botany, and the advancement of Science." A hundred years ago a Society such as this would have been impossible in Tasmania. Five hundred years ago (and five hundred years is but a short period in the life of a nation) it was hardly possible in England. A thousand years ago, outside the monasteries, men of leisure and ability seldom knew how to read or write; the

best of them, instead of cultivating science, devoted their energies to "the Crusades," the "Feudal Wars," and the "Chase." As civilisation progressed the building of castles and churches attracted the attention of the leisured classes. Later on the cultivation of the arts found an increasing number of patrons, but Poets, Painters, and Sculptors cannot enjoy the leisure necessary to pursue their art unless there pre-exists a class of men, combining wealth and leisure, prepared to patronise them. The evolution of the power of leisure, traceable in the social history of England, is but a reproduction of the same development of human opportunities in the prosperous period of ancient Greece and Rome, not to mention the more ancient civilisation of Egypt, Assyria, India, and China. But the pursuit of pure science was rarely undertaken in ancient times by men of leisure. There is perhaps an exception in the well-known work of "Euclid," who appears to have been an Alexandrian Greek. His work bears internal evidence that it was compiled as a feat of intellectual gymnastics rather than for any practical purpose. Many serious thinkers in classical times were distracted from giving attention to natural sciences by a fashionable craving for metaphysical speculations and for philosophical discussions, which included abstract politics. Under these conditions the progress of the world was slow and intermittent, but under modern conditions, when leisure is so largely devoted to science, the progress of the world has become rapid and continuous. And as abstract politics have been mentioned, we may pause to reflect that by politics the Greeks meant the art of administering municipal affairs. Cities, with a fringe of country, were the political units of the age, and they were occasionally federated together. Politics, both theoretical and practical, have always offered an opening for the energy of the leisured classes, this, to my mind, is quite as praiseworthy as the pursuit of natural science, but not so productive of material prosperity for the masses of the people. Travel and exploration offered a splendid field for the energy of men of leisure, from the first journey of the Prodigal Son to the present day; now, however, it may be said that the discovery of the tantalising North and South Poles barely furnishes sufficient excitement for organised expeditions in this range of intellectual adventure. But there still remains an apparently inexhaustible field for the reproductive employment of leisure—notwithstanding all that has been heretofore discovered therein, in the objects which this Royal Society has in view, viz., the study of nature; this is before us as fresh as ever, its vastness does not fade with familiarity, the more we learn of nature the better we realise our comparative ignorance, and appreciate the number and the importance of new ways to useful knowledge that are still untrodden. Tasmania affords exceptional opportunities to the geologist, and I here venture to express pleasurable astonishment at the monumental work on the geology of Tasmania, compiled by Mr. Robert Mackenzie Johnston. When we realise that an officer of this State, in his important position, has found time — I can hardly call it leisure—to cultivate the science of geology with such original genius, and to place practical results on record for the benefit of others in an attractive form, we verily have before us an eloquent appeal to all men with brains and leisure to rise up and try to do likewise.

I may remind you that the work done in 1904 by this Society included the following papers: — "Insects and Diseases," by Dr. J. S. C. Elkington; "Observations regarding some Economic Aspects of the Eisenbach Social Equality Programme," by R. M. Johnston, I.S.O., F.S.S.; "Reservation of Crown Lands at Schouten and Freycinet Peninsula for the Preservation of Native Fauna and Flora," by Mr. J. F. Mather; "Notes on Japan," by Dr. Hocken; "The Establishment of a Federal Meteorological Department," by H. C. Kingsmill, M.A.; "Notes on Some Stone Knives of the Tasmanian Aboriginals," by Colonel Legge, R.A.; "Notes on the Discovery of Two Tasmanian Aboriginal Waddies at the Brown March," by Alex. Morton; "Eisenbach Social Equality Theory," by C. B. Target; "Notes on the Aboriginal Dancing Boards in Western Australia," by W. D. Campbell. One evening during the session was devoted to entertaining His Royal Highness Duc d' Abruzzi, Commander of H.I.M.S. Liguria, and officers. A large number of Tasmanian views were shown by Mr. J. W. Beattie. Two or three evenings were taken up in discussing Mr. R. M. Johnston's paper and Mr. H. C. Kingsmill's paper. I have been asked to suggest some line of inquiry for which Tasmania appears to offer exceptional opportunities.

As far as I can gather, no generally accepted theory has yet been formulated to explain mechanically how gold and other precious metals came to be where they are found, and as so many different metals are found in Tasmania, it may be possible to arrive inductively at their genesis, and if a more satisfactory theory than that these metals came from below as gas can be propounded, it may be of practical importance in following known indications of gold, or, so to speak, arguing down, from surface. The re-opening of

abandoned mines will be encouraged, if confidence can be increased in the potentialities for deep workings. The systematical exploration of the crust of the earth also deserves better attention; boring by the heavy steam-driven diamond drill is most important, so much so that here and elsewhere it has received State assistance; but I earnestly trust that the use of the diamond drill is in its infancy, and that its scope can be greatly extended, e.g., by driving it electrically, or by diminishing the cost and weight of the machine, or by simplifying it so as to bring it more within the possibilities of handling it by unskilled labour.

In conclusion, I may be allowed to express satisfaction at the interest shown by the ladies of Tasmania in natural science. Although there are many other occupations generally requiring their attention, there is no reason why women endowed with scientific tastes should not be encouraged in devoting their leisure to research. In recent times a discoverer of radium has been a lady, and it may be mentioned that traces of this precious substance are reported in Australia. But for the fair daughters of Eve to devote their leisure to science is — and probably should be — an exception rather than the rule. In fact, the first instance recorded of misapplication of leisure is when Eve, wasted with an apple and a serpent, precious opportunities which will never recur. The ladies of Tasmania are, therefore, to be specially congratulated on the facilities nowadays offered by the Royal Society to employ their leisure otherwise. As to the apple, the men of Tasmania are protected from a repetition of that temptation by the phenomenal abundance of this beautiful fruit; in fact, Tasmania is out-rivalling Eve by offering apples of irresistible beauty, in and out of season, to the old Adams of the older world. The right to enjoy leisure involves corresponding duties; and active membership of this Royal Society is one of the duties of leisure which I venture to extol.

His Excellency was loudly applauded at the conclusion of his paper.

The Right Rev. Dr. Mercer, Bishop of Tasmania, said he could not well conceive a more appropriate bringing together of interesting matters than was contained in the excellent address they had just listened to. It implied a careful looking into their lives, and seeing whether they employed their leisure as they should do or not, and went on to make some excellent suggestions on the employment of leisure. He remembered reading of the leisure obtained by the Greek race of old. No doubt their marvellous works of Art and Poetry generally were evidences of a leisured class. But how was it brought into existence? It flourished, as had been pointedly expressed, "on the dung-hill of slavery." No doubt there must still be a leisured class if there was to be progress in Science, Art, and Literature. To make everybody perform a certain amount of work of a manual or kindred character every day would result in retrogression rather than progression. No doubt progress was largely dependent on the existence of a leisured class, and he was thankful to say that there were good evidences of a leisured class in Tasmania —a leisured class of a right kind —and that it was growing. (Applause.) He was sure His Excellency would agree with him that there were two kinds of leisured classes — those who spent their time in idleness, and the putting away of time, and a leisured class who employed their time and talents in self-culture, and to the general progress of the race. It was leisure of the latter kind that they had in view that evening. Not for one moment would he lose sight of the fact that they must also have leisure for amusements, pure and simple, as "all work and no play makes Jack a dull boy." That applied to all of us, from children up to dry-as-dust professors, who sometimes became so immersed in their studies that when they met their fellow-citizens they had forgotten what they were like. He happened one day to be in conversation with Lord Kelvin, who asked him, "What kind of logarithms do you see?"—mentioning two very abstruse ones. He (the Bishop) did not use either, as he was not a mathematician. But men who became so severely immersed in their studies would talk thus, just as some of them would say, "Have you seen such and such a paragraph in 'The Mercury' this morning?" This led him to say that he hoped the Royal Society would take up work and subjects of a more extended character, and as to which His Excellency had that evening set a good example. (Applause.) He (the speaker) was particularly anxious that the society should appeal to a larger number of people than in the past. If they confined themselves to purely scientific subjects, even though it included geology and botany, two of the most fascinating of scientific subjects, they appealed to too severe and narrow a circle, whereas if they now and then—he would not say always—had papers read of a general character, such as would interest a larger circle of people, he could not help thinking that it would be for the good of the society as well as for that of the community. We in Tasmania were too small a community to support as fully

as might otherwise be the case a society that limited itself to rather stiff subjects. Whilst he said that, however, he by no means meant that there was no place for scientific papers—most emphatically there was a place for them, and the publication of them in the records of the proceedings of the Society constituted a valuable State asset—but occasionally such subjects of more general interest, such as His Excellency had so ably handled that evening, were calculated to interest a larger circle of people, and to further the aims of the Society. (Applause.) He felt a keen interest in the Society and its welfare, and that it might do an increasingly large amount of good in the community was his sole object in making these suggestions. (Applause.) He now heartily and cordially moved that the thanks of that large and representative gathering be accorded to the President, His Excellency, for his thoughtful and stimulating presidential address. (Warm applause.)

Mr. Bernard Shaw seconded the motion, which was passed with acclamation.

His Excellency thanked all present for the kind way in which they had passed the resolution.

After the meeting, light refreshments were served in the large rooms of the Museum, the Art Gallery and other rooms being lighted. A very pleasant reunion of members and friends resulted.