

PAPERS AND PROCEEDINGS
AND
REPORT
OF THE
ROYAL SOCIETY
OF
TASMANIA,
FOR
1876.



TASMANIA :
PRINTED AT THE "MERCURY" STEAM PRESS OFFICE, HOBART TOWN.
—
1877.

5. From Mr. Hissey. Four specimens of the young of the Bandicoot (*Perameles obesula*) from the pouch.
6. From His Excellency the Governor—Rock Specimens from the variegated ferruginous sandstones of Western Australia, and probably belonging to the lowest secondary formations. Egg of "Native Pheasant" (*Leipoa ocellata*), and other eggs.
7. From W. Lovett, Esq.—A specimen of the "Sooty Oyster-catcher," or "Black Red Bill" (*Hamatopus fuliginosus*), shot at Kangaroo Bluff.
8. From J. W. Graves, Esq.—A Ring-tailed Opossum, (*Phalungista viverrina*.)
9. From the Ven. Archdeacon Davies—A fossil from a hill on Mr. Pitt's property, Hunting Grounds.

[In reference to this presentation, the Rev. J. E. T. Woods remarked that it was a very fine and unusually large specimen of the coral known as *Stenopora informis*, Lonsdale, with a shell of *Myacites curvata*, Lonsdale, adhering. The both belong to the Marine Devonian period, of which so many examples occur in Tasmania.]

Presentation to Library.

1. From Sir Robert Officer—Benthams "Flora Australiensis," six vols. bound.

[The Secretary requested special attention to this valuable presentation. Being the standard work on Australian botany, it was much wanted, but the council had never been able, from want of funds, to procure it. Other works, indeed, were still required, and as several of the Fellows had already shown their practical interest in the welfare of the society by making presentations, he hoped that others, whether resident in town or country, would be induced to follow their example. Good books could not be better placed than in a library, where they could be utilised by all comers. A list of such as are required could at all times be had from the curator.]

2. From Mr. T. Roblin—Tables of Affinities of the Classes of the Animal Kingdom, by Prof. J. Reay Greene; three sheets mounted on rollers.
3. From Baron F. von Mueller—Proceedings of the Zoological and Acclimatisation Society of Victoria, vol. 4, 1875.
4. From the Royal Society of New South Wales—Transactions, 1874.
5. From the Government of New Zealand—Census for 1874.
6. From the Malacological Society of Belgium—Proceedings for 1874.
7. From the Entomological Society of Belgium.—Proceedings for 1874.

The Rev. J. E. Tenison Woods, F.G.S., F.L.S., read a paper on the Freshwater shells of Tasmania, prefacing it by some remarks on the study of fresh water shells generally. "It must not be supposed," he said, "that such studies meant no more than merely naming certain specimens new to science. To the outside public it might seem no more, but to the man of science it was different. A name when applied to a new species thenceforth became not only a tally by which it might be known and referred to, but it meant all the details of observation in its description, and it was a centre around which a multitude of useful observations would be grouped. Thus *Scalaria Australis* is a name applied to a marine shell of a peculiar, and at one time, rare genus. Other naturalists had found that its habits were most interesting and various. Thenceforth the name was the repository in which those observations were collected, and they were conveyed to the mind of those familiar with them by the mere association of the name. Finally the same mollusc had been found to contain a beautiful purple dye, and this also became, if we may so speak, a property of the name. All natural science is more or less open to the reproach that it is a science of names, but this would also be strictly true of all human knowledge, since it is only by names or words that it can be

communicated. The fresh water shells did not present a very inviting field to the naturalist in the early history of science, but they were not long studied before they were found to possess features worthy of attention. A great impetus had been given to the study by Mons. Draparnaud, a young French surgeon, whose brilliant career was stopped all too soon by the insidious ravages of consumption. His work forms a standard on the subject, as it is a model of accurate observation, careful delineation, and charming interest. It was owing to the knowledge thus given that the eminent osteologist Baron Cuvier was so much aided in his determination of the fossils of Montmartre, Paris. There bones were found associated with shells, and the bones might have been supposed to belong to marine drift, but an attentive consideration of the shells showed them to be fresh water, and of a kind whose habits of life were now known. This tended materially also to explain the conditions under which the extinct mammals of the bed existed. Much light had been thrown on the conditions of life in the coal formation from the freshwater and land shells found embedded in it. The reverend gentleman went on to describe generally the natural history of that order of Mollusca known as *Pulmo-branchiata*, that is Molluscs with lungs and gills, breathing both air and water. Water is their natural element, but they can also live out of it. As they live in creeks and waterholes, which are liable to diminish or totally dry up in certain seasons, they must have means for withstanding a drought, or the order would soon perish. They are therefore provided with an apparatus which is part lung and part gill. The organ is a respiratory sac through which the blood flows, and is aerated in a network of minute vessels, and it is filled with branchial plates or lamellae for the purpose of extracting the necessary oxygen from water. He called attention to the observation of Draparnaud, who said that if we consider the very small number of points by which the animal is attached to the shell, one is astonished to understand how so fragile a covering could withstand the action of external agents, and at the same time preserve its solidity, its colour, and its transparency, especially as upon the death of the animal it bleaches and exfoliates on slight exposure. We must then admit some sort of intercommunication between the shell and the animal which it encloses. We must admit also that it is animated with vitality, although it appears to our eyes, which are too feeble to unravel its interior structure, as if it were mere inert matter." The reverend gentleman then read the introduction to his paper.

The Governor observed that the remarks made by the Rev. Julian Woods, as to the stone implements, showed the care that should be taken not to allow preconceived theories to hurry our conclusions in matters of fact. He thought that it was very easy for even very able, honest, and painstaking men to miss facts that lay just to the right or left, or close behind them, whilst they were looking straight at their theory. The lapse of a very few years often was sufficient to cover up and bury facts or traditions that might be of great value. An instance of this had occurred in New Zealand. A very eminent scientific man there had argued, in a most interesting paper, that the race who made and used the stone knives and implements found in the kitchen mounds on the Rakaia together with moa bones were probably a race distinct from, and anterior to, the Maori, and of immense antiquity; that the moa (*Dinornis*) itself had been for ages an extinct bird; that there was no reliable evidence from Maori sources of the recent existence of the moa (*Dinornis*), still less any trace at all of any tradition of the newly-discovered *Harpagornis Moorei*, the gigantic eagle, or bird of prey, whose bones had very recently been discovered at Glenmark. These general views had been combated by Dr. Hector, and also contradicted by Sir G. Grey and others whose testimony was of greater weight upon native evidence than even Sir George's.