

prolongation of a belt which, beginning with the Gulf of Finland, runs across Sweden in a direction slightly south of west; thus including the fjord-pierced coast about Stockholm and the Lakes Malar, Wetteren, and Wenern—a belt which is suggestive of special depression. May not this Skagerak basin be only a drowned lake? It is no doubt much deeper than either Wetteren or Wenern, for the one is about 50 fathoms at most, and the other is shallower, about 20 fathoms; but making some allowance for débris, not a deeper basin than the Lake of Geneva. Mr. Hudleston seems to admit that the deeper part of St. George's Channel may be a drowned river-valley, but the slope of this, if I remember rightly, exhibits some anomalies, which, though on a minor scale, seem best explained by a certain amount of differential movement in the earth's crust. That such movements have occurred comparatively late in geological times, would, I suppose, now be generally admitted.

T. G. BONNEY.

OBITUARY.

PROFESSOR SIR FREDERICK MCCOY, K.C.M.G., M.A.,
D.Sc. (CANTAB), F.R.S., F.G.S.

BORN 1823.

DIED MAY 16, 1899.

It is with deep regret we have to record the loss of another accomplished Naturalist, Geologist, and Palæontologist, belonging really to the first half of the present century, but who has survived almost to its close. The cable announcement appeared in the London daily newspapers of May 18, of the decease of Sir Frederick McCoy, Professor of Natural Science in the University of Melbourne, Australia, in his 76th year. His last communication to the GEOLOGICAL MAGAZINE appeared in the May Number, p. 193. Professor McCoy was the acknowledged chief of the scientific world of Australasia, where his name and fame will be perpetuated by the splendid Museum of Natural History and Geology in Melbourne, of which he was the founder and lifelong presiding genius.

Frederick McCoy was the son of Dr. Simon McCoy, M.D., of Dublin, and was born in that city in the year 1823. He was educated originally for the medical profession, and attended lectures, hospital practice, etc., in Dublin and also in Cambridge; but while yet too young to be admitted to the profession he devoted himself assiduously to the study of all branches of Natural Science, classifying the collections of the Geological and Royal Societies of Dublin, with the object of applying recent Zoology to Palæontology as the basis of stratigraphical geology. About this time he accepted the offer of Sir Richard Griffith to make the palæontological investigations required for the Geological Map of Ireland for the Boundary Survey, publishing the results in a large quarto volume in 1844, with numerous plates including figures of several hundred new species of fossils, entitled "Synopsis of the Carboniferous Limestone Fossils of Ireland," and a smaller work in 1846, "Synopsis of the Silurian Fossils of Ireland." He was then invited by Colonel Sir Henry

James, R.E., and Sir Henry de la Beche to join the Imperial Survey of Ireland, just then commenced, and after completing the maps of the districts surveyed by him in the field, he was appointed by Sir Robert Peel's Government as one of the first Professors of the Queen's University in Ireland, the Chair of Geology and Mineralogy in the Northern College being assigned to him, where he lectured in the Queen's College, Belfast, and examined students in Dublin. About this time he undertook, in conjunction with Professor Sedgwick, the large work on British Palæozoic Rocks and Fossils, based on the materials in the Woodwardian Museum at Cambridge, and to make the critical examination of the great series of fossils of the older formations brought together by Sedgwick; the results of these labours being deemed worthy of the compliment of publication by the Syndics of the University Press of Cambridge, in a large quarto volume, with numerous plates of new fossils from the Carboniferous, Devonian, Silurian, and Cambrian formations, which was issued in 1852, as the second volume of a proposed joint work (but the first volume, which was to have comprised the Rocks, by Professor Sedgwick, was never published), entitled "British Palæozoic Rocks and Fossils," by Professors Sedgwick and McCoy.

Professor McCoy was then appointed by Sir J. Herschel and the Astronomer Royal, Sir G. B. Airy, as the first Professor of Natural Science in the University of Melbourne, where, having taken part in the formation of the University, he lectured on Chemistry, Mineralogy, Botany, Comparative Anatomy, Zoology, Geology, and Palæontology, for upwards of thirty years. He also established the National Museum of Natural History and Geology in Melbourne, of which he was Director to the last, raising it to a distinguished position, not only by the extent of the collections but also by the perfection of their classification. He was Chairman of the first Royal Commission on the Gold-Fields of Victoria; Member from the first of the Royal Commission on Technological Instruction; Member of the Royal Commission on Education; Member of the various Royal Commissions for International and Intercolonial Exhibitions for the Colony of Victoria. He was appointed Government Palæontologist at an early stage of the Geological Survey, determining the ages of the various tracts published on the Maps.¹ For over thirty years he prepared, and continued to publish in decades at short intervals, two works for the Government of Victoria, one entitled "Prodromus of the Zoology of Victoria," with coloured figures from the life, and another, "Prodromus of Palæontology of Victoria." He was a Justice of the Peace for Victoria. He was elected a Fellow of the Royal Society of London in 1880, and was created one of the first Doctors in Science, *honoris causâ*, by the University of Cambridge. The Royal University of Ireland also conferred on him their highest degree in Arts and Sciences. He was created a Knight or Chevalier of the Royal Order of the Crown of Italy by King Victor Emmanuel, and has been offered similar distinctions by other

¹ See the Life of A. R. C. Selwyn, C.B., F.R.S., in *Geol. Mag.*, February, 1899, pp. 49–55.

foreign sovereigns in recognition of his scientific work. In 1886 he received the decoration of C.M.G. from Her Majesty, and was created a Knight Commander of the Order in 1891. He has also received the Emperor of Austria's great gold medal for Arts and Sciences, the Murchison Medal from the Geological Society of London, and other similar distinctions. He was elected one of the few (only thirty subjects of the Queen being eligible) Honorary Members of the Philosophical Society. He was an Honorary active Member of the Imperial Society of Naturalists of Moscow, and Honorary Fellow and Member of many other British and Foreign scientific bodies.¹

The following is a list of the titles of Professor Sir Frederick McCoy's separate and smaller contributions to Natural Science; his larger works have already been mentioned in this Memoir:—

1. "Remarks on Mr. Eyton's Arrangement of the Gulls": *Mag. Nat. Hist.*, vol. ii (1838), pp. 487-490.
2. "On a new Genus of Entomostraca (*Entomoconchus Scouleri*)": *Dublin Geol. Soc. Journ.*, vol. ii (1839), pp. 91-94.
3. "On some new or rare Fish (*Trigla Blochii*, *Cottus Groenlandicus*, *Thynnus Pelamys*) occurring on the Coast of Ireland": *Ann. Nat. Hist.*, vol. vi (1841), pp. 402-8.
4. "Contributions to the Fauna of Ireland (*Vespertilio Nattereri*, *Tringa rufescens*, *Sterna leucoptera*, *Syrinx Forbesii*, *S. tenuicinctus*)": *ibid.*, vol. xv (1845), pp. 270-4.
5. "Note on the Irish Species of Cephaloptera (Pterocephala)": *ibid.*, vol. xix (1847), pp. 176-8.
6. "On the Fossil Botany and Zoology of the Rocks associated with the Coal of Australia": *ibid.*, vol. xx (1847), pp. 145-157, 226-236, 298-312.
7. "On the Plants of the New South Wales and Van Diemen's Land Coalfields": *Brit. Assoc. Rep.*, 1847, pt. ii, pp. 64, 65.
8. "On some new Fossil Fish of the Carboniferous Period": *Ann. Nat. Hist.*, vol. ii (1848), pp. 1-10, 115-133.
9. "Reply to Sir Philip Egerton's Letter on the Placodermi": *ibid.*, vol. ii (1848), pp. 277-280.
10. "On some new Ichthyolites from the Scotch Old Red Sandstone": *ibid.*, vol. ii (1848), pp. 297-312.
11. "On some new Mesozoic Radiata": *ibid.*, vol. ii (1848), pp. 397-420.
12. "On some new Genera and Species of Palæozoic Corals and Foraminifera": *ibid.*, vol. iii (1849), pp. 1-20, 119-136.
13. "Reply to Sir Philip Egerton's Letter on the Tail of *Diplopterus*": *ibid.*, vol. iii (1849), pp. 139-140.
14. "Reply to Professor Owen's Letter on the Ganoine of some Fish Teeth": *ibid.*, vol. iii (1849), pp. 140-1.
15. "On some new Palæozoic Echinodermata (*Codaster*, n.g., *Perischodonus*, n.g.)": *ibid.*, vol. iii (1849), pp. 244-254.
16. "On the Classification of some British Fossil Crustacea, with Notices of New Forms in the University Collection at Cambridge": *ibid.*, vol. iv (1849), pp. 161-179, 330-5, 392-414.
17. "On some new Genera and Species of Silurian Radiata in the Collection of the University of Cambridge": *ibid.*, vol. vi (1850), pp. 270-290.
18. "Descriptions of three new Devonian Zoophytes—*Stromatopora (Caunopora) verticillata*, *Alveolites vermicularis*, *Strephodes gracilis*": *ibid.*, vol. vi (1850), pp. 377-8.
19. "On some new Silurian Radiata (*Strephodes pseudoceratites*, *St. trochiformis*, *Cænites strigatus*, *Palæophora subtilis*, *Retepora Hisingeri*)": *ibid.*, vol. vi (1850), pp. 474-7.
20. "On some new Silurian Mollusca (*Poterioceras ellipticum*, *Phragmoceras*

¹ Chiefly derived from "Men and Women of the Time," 14th edition, 1895.

intermedium, *Holopella gracilior*, *Cucullella*, n.g., *Adontopsis angustifrons*, etc.)” : *ibid.*, vol. vii (1851), pp. 45–63.

21. “Descriptions of some new Mountain Limestone Fossils (nov. gen. *Streblopteria*, *Aviculoptecten*)” : *ibid.*, vol. vii (1851), pp. 167–175.

22. “On some new Protozoic Annulata (*Crossopodia lata*, *C. Scotica*, *Myrianites tenuis*, *Trachyderma lævis*)” : *ibid.*, vol. vii (1851), pp. 394–6.

23. “On some new Cambro-Silurian Fossils” : *ibid.*, vol. viii (1851), pp. 387–409.

24. “On some new Devonian Fossils (*Steganodictyum*, n.g., etc.)” : *ibid.*, vol. viii (1851), pp. 481–9.

25. “Contributions to British Palæontology: Some new Lower Palæozoic Mollusca” : *ibid.*, vol. x (1852), pp. 189–195.

26. “Contributions to British Palæontology: On some new Brachiopoda from the Carboniferous Limestone” : *ibid.*, vol. x (1852), pp. 421–9.

27. “On the Mode of Succession of the Teeth in *Cochliodus*” : *Brit. Assoc. Rep.*, 1852, pt. ii, p. 55.

28. “On some new Carboniferous Limestone Fossils” : *Ann. Nat. Hist.*, vol. xii (1853), pp. 188–197.

29. “On the supposed Fish-remains of the Silurian System” : *Geol. Soc. Journ.*, vol. ix (1853), pp. 12–15.

30. “On some new Cretaceous Crustacea” : *Ann. Nat. Hist.*, vol. xiv (1854), pp. 116–122.

31. “A Commentary on ‘A Communication made by the Rev. W. B. Clarke to His Excellency Sir Henry Barkly, K.C.B., etc., on Professor McCoy’s new *Teniopteris*,’ etc., etc.” : *Victoria Roy. Soc. Trans.*, vol. v (1860), pp. 96–107.

32. “Note on the Ancient and Recent Natural History of Victoria” : *Ann. Nat. Hist.*, vol. ix (1862), pp. 137–150.

33. “On the Snakes of Victoria [1861]” : *Victoria Roy. Soc. Trans.*, vol. vi (1865), pp. 7–8.

34. “On the Bones of a new gigantic Marsupial, *Diprotodon* [1861]” : *ibid.*, p. 25.

35. “Remarks on a Series of Fossils collected at Wollumbilla [1861]” : *ibid.*, pp. 42–46.

36. “On the Occurrence of *Limopsis Belcheri*, *Corbula sulcata*, and some other Recent Shells in the Fossil State in Miocene Tertiary Beds, near Melbourne” : *Ann. Mag. Nat. Hist.*, vol. xvi (1865), pp. 113, 114.

37. “Notes on the Australian Species of *Arripis*” : *ibid.*, vol. xvi (1865), pp. 187–8.

38. “Note on the Cretaceous Deposits of Australia” : *ibid.*, vol. xvi (1865), pp. 333–4.

39. “On the Canine Teeth of *Thylacoleo carnifex*, Ow.” : *ibid.*, vol. xvi (1865), p. 448.

40. “On a new Species of *Halmaturus* (*H. Wilcoxi*) from East Australia” : *ibid.*, vol. xviii (1866), pp. 322–3.

41. “On some new Species of Fossil Volutes (*V. macroptera*, *V. Hannafordii*, *V. anticalaris*, *V. anticingulata*) from the Tertiary Beds near Melbourne” : *ibid.*, vol. xviii (1866), pp. 375–381.

42. “On the Australian Tertiary Species of *Trigonia*” : *GEOL. MAG.*, Vol. III (1866), pp. 481–2.

43. “On the Discovery of Cretaceous Fossils in Australia” : *Victoria Roy. Soc. Trans.*, vol. vii (1866), pp. 49–51.

44. “On the Palæontology of Victoria (Australia)” : *Amer. Journ. Sci.*, vol. xlv (1867), pp. 279–282.

45. “On two new Species of Birds (*Pardalotus zanthopygus*, *Sphenura Broadbenti*) found in Victoria” : *Ann. Mag. Nat. Hist.*, vol. xix (1867), pp. 184–5.

46. “On the Occurrence of *Ichthyosaurus* and *Plesiosaurus* in Australia” : *ibid.*, vol. xix (1867), pp. 355–6.

47. “On the Recent Zoology and Palæontology of Victoria” : *ibid.*, vol. xx (1867), pp. 175–202.

48. “On a new Genus of Phalanger: *Gymnobelideus*” : *ibid.*, vol. xx (1867), pp. 287–8.

49. “Descriptions of two new Fossil Cowries (*Cypræa avellanoides*, *C. gigas*) characteristic of Tertiary Beds near Melbourne” : *ibid.*, vol. xx (1867), pp. 436–8.

50. "On a new Species of Victorian Honey-eater: *Ptilotis Leadbeateri*": *ibid.*, vol. xx (1867), p. 442.
51. "On the Occurrence of the Genus *Squalodon* in the Tertiary Strata of Victoria": *Geol. Mag.*, Vol. IV (1867), p. 145.
52. "On three new Victorian Birds: *Herodias grezetta*, *Sphenura Broadbenti*, *Pardalotus xanthopyge*": *Victoria Roy. Soc. Trans.*, vol. viii (1867), p. 41.
53. "On the Discovery of Enaliosauria and other Cretaceous Fossils in Australia": *ibid.*, pp. 41, 42.
54. "On the Species of Wombats": *ibid.*, pp. 266-270.
55. "Note on the *Phascolumys setosus*, Gray, and *P. niger*, Gould": *Ann. Mag. Nat. Hist.*, vol. i (1868), pp. 30, 31.
56. "On a new Volute: *V. Thatcheri*": *ibid.*, p. 54.
57. "The Australian Representative of *Cynthia cardui*": *ibid.*, p. 76.
58. "On the Fossil Eye and Teeth of the *Ichthyosaurus Australis*, McCoy, from the Cretaceous Formations of the Source of Flinder's River; and on the Palate of the *Diprotodon*, from the Tertiary Limestone of Limeburner's Point, near Geelong": *Victoria Roy. Soc. Trans.*, vol. ix (1868), pp. 77, 78.
59. "On the Spire of *Voluta Thatcheri*": *Ann. Mag. Nat. Hist.*, vol. iv (1869), p. 140.
60. "On a new Volute: *Voluta (Amoria) canaliculata*": *ibid.*, vol. v (1869), p. 34.
61. "On a new Australian Species of *Thyrsites*: *T. micropus*": *ibid.*, vol. xi (1873), pp. 338-9.
62. "Note on the Appearance in Australia of the *Danais Archippus*": *ibid.*, vol. xi (1873), pp. 440-1.
63. "On a new *Parascyllum* from Hobson's Bay [*P. nuchalis*"]": *ibid.*, vol. xiii (1874), p. 15.
64. "On a third new Tertiary Species of *Trigonia* [*T. Howitti*"]": *ibid.*, vol. xv (1875), pp. 316-7.
65. "Note on an apparently new Parrot [*Cyclopsitta Leadbeateri*] from Cardwell, N.E. Australia": *ibid.*, vol. xvi (1875), p. 54.
66. "On a Tertiary *Pleurotomaria* [*P. tertiaria*"]": *ibid.*, vol. xvi (1875), pp. 101-2, 235.
67. "On a new Victorian Graptolite [*Didymograpsus Thureauii*"]": *ibid.*, vol. xviii (1876), pp. 128-30.
68. "On the discovery of the *Trigonia acuticostata* (McCoy), in the living state": *ibid.*, vol. xviii (1876), pp. 273-4.
69. "Description of a new Volute [*Voluta Roadnightæ*], from the South Coast of Australia": *ibid.*, vol. viii (1881), pp. 88, 89.

MISCELLANEOUS.

CAMBRIDGE HONOURS. — On Thursday, 27th April last, the University of Cambridge conferred the honorary degree of Doctor in Science upon Professor T. Wiltshire, M.A., F.L.S., F.G.S., F.R.A.S., so many years Secretary of the Ray and Palæontographical Societies and for some years Treasurer of the Geological Society of London, Emeritus Professor of King's College, London. The following was the speech delivered by the Public Orator in presenting Professor Wiltshire for the honorary degree of Doctor in Science:—"Unus ex alumnis nostris, societatis geologicae, astronomicae, Linnaeanæ socius, idcirco præsertim inter peritos laudatur, quod palaeontographicae societatis in usum, palaeontologiae studiosorum ad fructum, aevi prioris monumenta a rerum natura in saxis impressa, non sine summo ingenio et labore illustrata, per annos plurimos litterarum monumentis mandaverit. Idem Universitatem nostram beneficio singulari ad sese devinxit, quod non modo bibliothecam suam, sed etiam vitae antiquae reliquias veteres in saxis conservatas et saxorum inter se diversorum exempla quam