

sextant that I had taken out to check our chronometers. He begged me to teach him its use. After a few lessons, I found him one day trying to find the image of the sun in an artificial horizon, having pushed all dark glasses out of the way. I had warned him against this, and got rather angry with him. He replied, "I am an Egyptian, and I cannot see the sun with the dark glasses. When an Egyptian says he is going to do something he is going to do it, and I am going to see the sun through this sextant even if I lose my eyesight." I had to lock up the sextant.

It was some years before I heard of Esmatt again. Through diplomatic influence, the Naval Observatory at Washington had been persuaded to take him in as a kind of apprentice. They found him, as I had done, persevering and enthusiastic, but incapable of assimilating any knowledge. They tried to persuade him to return home and take up some other occupation, but Esmatt Effendi had made up his mind to stay. The authorities of the Observatory learned afterwards that all the time he was half starved, and had to sell his books and a great part of his clothing to pay for his board and lodging. Matters ultimately reached a crisis and he was told to leave. He finally consented, on condition that the authorities would give him a testimonial which would enable him to find a position at home. They considered the matter, and ultimately resolved that it was worth while to stretch a point, and they sent him the requested testimonial. To their surprise, they found Esmatt again at his desk next morning. He was reminded that they had kept their part of the bargain and that he must keep his. Esmatt stood up, took the testimonial out of his pocket, waved it in front of their faces, and said, "The man who deserves this testimonial deserves to work in the Observatory of Washington." The rest of this story, which I give on the authority of

one of the principal astronomers concerned, must be left to the imagination.

CONCLUSION.

It is with some hesitation that I conclude these reminiscences with the account of an incident that revives painful recollections, and the publication of which I should, for obvious reasons, have preferred to be left over until after my death. It concerns a distinguished personality whose memory is cherished by many friends, but their ranks are now rapidly thinning, and for this reason I feel compelled to disregard personal considerations.

Early on during the War, I was one morning surprised to find paragraphs in the daily press implying that a wireless apparatus had been found and "seized" in my house, with more or less veiled references to the purpose for which the apparatus was likely to have been erected. The complete story may be told some day; at present it is sufficient to say that I do not blame the newspapers.

Though I knew that the implied accusation was not likely to impress my friends, the matter, in view of my position at the time, was serious, and it was with fear and trembling that I entered the Athenæum a few days later and selected a solitary place in the coffee-room. I was leaving again directly after luncheon, and as I was putting on my coat in the hall I suddenly felt some one stepping up behind to help me. Surprised at this politeness, which is somewhat unusual in the Club, I turned round and looked into the kindly face of Lord Roberts, with whom I had no personal acquaintance. The hall was then full of members of the Club, and it was obvious that the action was intended to be, and in fact was, a demonstration. Such incidents are not likely to be forgotten.

Obituary.

PROF. W. A. HASWELL, F.R.S.

THROUGH the death of Prof. W. A. Haswell, at the age of seventy-one, zoology has lost one of its foremost exponents, and the University of Sydney a teacher and investigator of world-wide reputation.

William Aitchison Haswell was born in Edinburgh in 1854, and was educated at the Edinburgh Institution and the University, where he gained the Bell-Baxter Scholarship as the most distinguished natural science graduate of his year. As quite a young man he went out to Australia and, settling down in Sydney, there spent the rest of his life. In 1880 he held the post of curator of the Queensland Museum. Then, returning to Sydney, he delivered public lectures on zoology, and became in 1882 acting curator of the Australian Museum, and published his valuable Catalogue of the Australian sessile- and stalk-eyed Crustacea. In the same year he was appointed lecturer in zoology and comparative anatomy in the University of Sydney, under Prof. W. J. Stephens, who at that time held the chair of natural history. Young and enthusiastic, Haswell threw himself with great energy into the study of the rich fauna of Port Jackson and the adjacent coasts, and in the course of a few years published, in the Proceedings of the Linnean Society of New South

Wales, numerous papers, mainly of a systematic character, on the Crustacea, Annelida, and Bryozoa of the Australian seas. In particular we owe to Haswell the first description, in 1882, of the giant Phoronis that occurs in Port Jackson, which he named *Ph. australis*, and in the same year he exhibited drawings of the early stages of its development before the Linnean Society.

During this period, however, Haswell by no means confined himself to invertebrate zoology, but contributed to the Linnean Society valuable papers on vertebrate morphology, on such diverse subjects as the anatomy of birds, the structure of the paired fins of Ceratodus, the skeleton of elasmobranch fishes, and the early stages of the development of the emu (1887). He also described in 1886 in the *Q.J.M.S.* the remarkable striate muscle fibres in the "gizzard" of the polychæte worm *Syllis*, and in 1889 published a very interesting comparative study of the same fibres. In 1888, also in the *Q.J.M.S.*, he gave the first detailed account of the anatomy of that remarkable ectoparasitic trematode, *Temnocephala*, a form which will always be associated with his name.

Such was the reputation Haswell had established for himself as an original investigator and teacher that the Senate of the University of Sydney, when the

Challis professorship of biology was instituted in 1889, appointed him to the chair, without advertisement—at the time a most unusual proceeding—and this he held continuously until his retirement in 1917. All through these years his scientific activity continued unabated.

In 1893 Haswell published, in the Macleay Memorial Volume, his great monograph on the Temnocephalæ, a group which occupied his attention right up to the end of his working days, for the last paper he wrote is entitled "Critical Notes on the Temnocephaloidea," and was published in the Proc. Linn. Soc. N.S.W. so recently as December 29, 1924. In the volume above mentioned he also described the remarkable new type, *Actinodactylella*, from the gill-cavities of the Gippsland burrowing crayfish, *Engæus fossor*. In numerous papers, published mainly in the *Q.J.M.S.* and the Proc. Linn. Soc. N.S.W., he contributed largely to our knowledge of the Turbellaria, both fresh-water and marine, and the Cestoda, and by his discovery of the histriobdellid, *Stratiodrilus*, and his detailed accounts of its anatomy and development, he greatly extended our knowledge of the "Archi-annelida," whilst to him we are indebted for the only available account of the early development of the Port Jackson shark (*Heterodontus*).

Outside the ranks of professional zoologists, Haswell is perhaps best known to the scientific world as the joint-author, with his staunch friend the late Prof. T. Jeffrey Parker, of the monumental "Text-book of Zoology," which, issued in 1898, is now in its second edition and is accepted as a standard text-book in zoological laboratories all over the English-speaking world.

Amidst all his academic work Haswell found time to take an active interest in the various Australian scientific organisations. He was for long on the Council of the Linnean Society of N.S.W., and acted as its president in 1892-93; he was president of Section D of the Australasian Association for the Advancement of Science in 1891, and he was for many years a trustee of the Australian Museum. In 1916 he edited the Reports of the Australasian Antarctic Expedition.

Haswell was a man of wide knowledge and culture. Shy and somewhat reserved in disposition, he was a loyal, warm-hearted, and ever helpful friend and a kindly and charming host. He was a keen trout-fisher, enjoyed a game of golf, and was an ardent gardener. In 1894 he married Josephine Gorden Rich, a pupil of Jeffrey Parker and joint-author with him of a paper on the myology of *Palinurus*, and she always took a lively interest in her husband's work. She and an only daughter survive him.

Haswell was elected a fellow of the Royal Society in 1897, and was a member of numerous societies both at home and abroad.

The writer will ever bear his old chief in grateful memory for the forbearance and many kindnesses he showed him during an association of some fourteen years.

J. P. H.

PROF. JOHN CLELAND, F.R.S.

PROF. JOHN CLELAND, who died on March 5, in his ninetieth year, held the chair of anatomy in Queen's College, Galway, from 1863 until 1877. In the latter

year he succeeded Dr. Allen Thomson as occupant of the chair of anatomy in the University of Glasgow, which he held until 1909, retiring at the age of seventy-four to spend the happy evening of his days at Crewkerne, Somerset.

Cleland was a man of imposing appearance who impressed on the generations of students who passed through his class-rooms his love of knowledge, his wide culture, and independence of outlook. He was beloved by his students. All his life long he was fighting a rear-guard action. He was born and bred in pre-Darwinian days and grew up in the school represented by John Goodsir and Richard Owen. He believed in evolution—particularly the brand represented in the "Vestiges of Creation." He could not abide the dogmatic assurance with which Huxley proceeded to sweep the "underlying element of spirit" from all biological processes. For him Darwin's law of "Natural Selection" was true and potent, but in his opinion this law was powerless in the production of purposive adaptations. He was a student of "morphological design" and believed that a "unity of cause" worked through "the ordered sequence to be seen in all biological events." The "morphological beauty of the skull" was almost one of his religious tenets. Those who know the researches and writings of John Goodsir will realise how strong was the influence which the master exerted on John Cleland seventy years ago. With him goes the last representative of the transcendental and philosophical anatomists of the nineteenth century.

Cleland was born in Perth in 1835, the son of a medical man. He was turned from the Church to medicine by his mother, and began his studies in the University of Edinburgh in 1852. Goodsir, then a man of thirty-eight, was at the height of his fame and immersed in researches of the most diverse kinds, but was particularly enamoured of Owen's speculations regarding the "original design" which was supposed to underlie the head and body segments of vertebrate animals. When Cleland became junior demonstrator to John Goodsir in 1857—Sir William Turner was then senior demonstrator—he applied himself chiefly to the morphological problems of the vertebræ and of the skull. He published many dissections made on rarer animals, but the work he will be best remembered by is that done on the human skull. Unfortunately, in 1857, Goodsir's great gifts were already being sapped by the disorder which carried him off ten years later; it is vain to speculate now as to the course events would have followed if Goodsir had retained his full powers of mind; his disease certainly fanned his tendency towards transcendentalism, and it was this side of his mind which had the strongest influence on his junior demonstrator.

In 1861 Cleland left Edinburgh to demonstrate anatomy under Prof. Allen Thomson of the University of Glasgow, one who was a master of scientific method. In 1863 he was appointed to his first chair, in Queen's College, Galway. His best known research was done while he was there, and was published in the *Philosophical Transactions* (1870, vol. 160, p. 117), on "An Enquiry into the Variations of the Human Skull, particularly in the Antero-posterior Direction." This inquiry has not received the attention it deserves, for in