

bryonic pairs of jaws, and he found three pairs of processes, which he so identified. Now I have shown elsewhere that the maxillæ are formed of three lateral parts, each of which may be distinct and has its own range of variation; and if we assume that the three pairs of processes observed by Dr. Heymons are all maxillary the Hemipterous mouth becomes quite clear and the attachments of the lancets and the location of the rudimentary maxillary palpi at the base of the beak is normal.

I have previously expressed my belief that the Rhyngota are not descended from a mandibulate stem and that they separated from the archetypal form before the mouth structures were definitely formed anywhere. They were emandibulata from the start, and as such are now equivalent in rank to all the other orders of insects (excluding Thrips) combined. Nor was any labial structure ever developed in this order, and all trace of such is now lost, in the adult at least.

If we study Dr. Heymons' paper in the light of these suggestions it is the most important contribution to our knowledge of the mouth parts of the Rhyngota that has recently appeared.

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THOMAS JEFFERY PARKER.*

THOMAS JEFFERY PARKER, who died at Warrington, New Zealand, on November 7, 1897, was the eldest son of the late William Kitchen Parker, F.R.S., the world-renowned comparative osteologist. He was born in the S. W. district of London on October 17, 1850, and educated there, and his scientific training was received at the Royal School of Mines during the years 1868-1871. Leaving that institution with distinction, Parker became science master at

the Bramham College, Yorkshire; and Mr. W. B. Lockwood, now assistant surgeon at Bartholomew's Hospital, London, may be named, as an anatomist who in his school-boy days came under his influence. In 1872, at the special request of Huxley, Parker returned to London, to fill the office of demonstrator of biology at the then newly established Science College at South Kensington, now known as the Royal College of Science, London, and he held the post until his appointment, in 1880, to the professorship of biology at the University of Otago, Dunedin, New Zealand. As a teacher Parker will remain memorable in association with the development of the now universally adopted Huxleian method of laboratory instruction in biology, known and recognized throughout the world as the 'type system,' which marked the introduction of rational methods into the teaching of biological science. So earnestly did Parker enter into the task of development of this under his great master that he early became the means of effecting conspicuous changes in its methods, and he will be remembered in history as the man to whom were mainly due its progress beyond the experimental stage and the foundation, in connection with it, of the first teaching-collection of specimens and illustrative anatomical drawings based upon it—the prototype of all since established in various parts of the world.

Among Parker's published works there stands conspicuous his 'Zootomy,' a didactic laboratory treatise, and his 'Lessons in Elementary Biology,' now translated into German, a book for the study and the fire-side. Both take high rank among scientific manuals in the English language and both were the direct outcome of his connection with Huxley and his educational work, and the last-named takes rank as the most important treatise for the elementary student that has appeared since

*From the *Anatomischer Anzeiger*.

Huxley and Martin's epoch-making 'Practical Instruction in Elementary Biology.' To read this book, and a charming biography of his father which Parker published in 1893, is to realize the warmth and affection of his nature, the strength of his character, the breadth of his attainments as a philosophic teacher and his command of literary style. In these and all respects Parker's was a charming character. As a companion he was loyal and affectionate, as a worker painstaking and reliable, a friend of youth, utterly destitute of ostentation and false pride, withal an exemplary man; and among those who during the period of his association with Huxley and his great work as a teacher came under his charge and benefited by his example may be mentioned F. E. Beddard, Angelo Heilprin, H. F. Osborn, W. B. Scott and Oldfield Thomas, among well-known zoologists and anatomists.

As an investigator Parker published some forty odd papers and monographs, the best known of which are those dealing with the 'Structure and Development of Apteryx' and the 'Cranial Osteology, Classification and Phylogeny of the Dinorithidæ,' sufficient in themselves to have made him famous. On settling down in New Zealand Parker early published a short paper on a new species of Holothurian (*Chirodotes Dunediensis*), as it were in anticipation of the later resolve by him and his colleagues, who were during the early 80's appointed to the Australasian professorships of biology, to preferably investigate their indigenous fauna, leaving the refinements of histology and the like for those at home. The results of the combined labors of these men are now monumental. Their work is now saving from oblivion a knowledge of things rapidly passing away, and there will ever remain memorably associated with the desire to create a sustained interest in a series of short 'Notes from the Otago University

Museum,' which Parker during the seventeen years he was in New Zealand contributed to the pages of *Nature*, and of 'Studies in Biology for New Zealand Students,' which he instituted and which his pupils and co-workers maintained. Apart from this special interest, as involving the investigation of the Australasian fauna, Parker's published works cover a wide field. Vertebrates and Invertebrates alike came under examination, and in his series of papers on the anatomy of the Crayfishes, which culminated in a contribution to the 'Macleay Memorial Volume,' published in 1893 conjointly with his pupil, Miss Josephine Gordon Rich, there can be traced interesting continuity of ideas, and once again a primary association with Huxley, in the preparation of whose zoological masterpiece, 'The Crayfish,' Parker performed an honorable service.

The duties of office in New Zealand imposed upon Parker the Curatorship of the Otago University Museum and the conduct of a botanical class. Before leaving England he had established a reputation as a pioneer in the application of modern dry methods of micro-chemical technique to the study of vegetable histology, in a noteworthy paper read before the Royal Microscopical Society of London during March, 1879, and shortly after the commencement of work at the Antipodes he announced (Trans. New Zealand Institute for 1881) the discovery of sieve-tubes in the marine Algæ (*Macrocystis*). While for the latter Parker's memory will find a place in the history of botanical discovery, in the performance of his curatorial duties he will be remembered as having most successfully overcome the difficulties of preservation of the cartilaginous fish skeleton in a dry state, as may be witnessed in that of a large *Carcharodon* preserved in a British Museum of Natural History and in others at Otago, Cambridge and elsewhere.

In 1892 Parker paid a visit to Europe, returning in good health the following year. Family bereavement in the death of his wife then overtook him and laid the foundations of an illness from which he never recovered. Complicated by repeated attacks of influenza, this resulted in death, and during his long period of suffering and anxiety the like of which has killed many a man, he worked on undaunted, leaving unfinished an elementary book to have been entitled 'Biology of Beginners,' and some observations upon a series of 'Emen Chicks,' including those collected by Professor R. Semon during his recent sojourn in the Australian bush, which he was investigating in conjunction with Mr. J. P. Hill, the renowned discoverer of the allantoic placenta of *Perameles*. With these and other plans for future work well matured he has been cruelly torn from us, but while his memory will be a lasting heritage to those who knew and loved him, to the scientific world at large there has just been issued his final completed work, viz.: a general Text-Book of Elementary Zoölogy of some 4,000 pages in two volumes, upon which during the last 5 years he was engaged, together with his staunch friend and colleague, Professor W. A. Haswell, F.R.S. of the Sydney University. In this book, rich in original anatomical drawings, his influence will endure; and he will always be remembered as an earnest, loving man who performed his duties with a skillful hand, intent only on good work, the advancement of knowledge and the consequent betterment of the human race, an anatomist for whose life the world may be said to have been the richer and his fellow creatures the happier.

Parker was a Fellow of the Royal Society and a D.Sc. of London. He was also an Associate of the Linnæan Society of London and member of other scientific societies at home, in the Colonies and on the

Continent of Europe. He took a pioneer's part in the literary undertakings of the Royal Microscopical Society, and in his public life by his miscellaneous addresses and speeches he aroused to admiration and friendship all with whom he came in contact.

G. B. H.

A COMMISSION OF PUBLIC HEALTH.*

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there shall be established a commission of public health, to be under the supervision of a commissioner of public health, who shall have the aid of an advisory council consisting of a representative from each State and Territorial board of health, from the Department of Justice, and from the Medical Corps of the United States Army and Navy, the duties of which shall be to collect and diffuse information upon matters affecting the public health, including statistics of sickness and mortality in the several States and Territories; the investigation by experimental and other methods of the causes and means of prevention of disease; the collection of information with regard to the prevention of disease; the collection of information with regard to the prevalence of infectious, contagious and epidemic diseases, both in this and other countries; also the causative and curative influences of climate upon the same; the publication of the information thus obtained in a weekly bulletin; the preparation of rules and regulations for securing the best sanitary condition of vessels from foreign ports, and for prevention of the introduction of infectious or contagious diseases into the United States, and their spread from one State into another; which rules, when approved by the President of

* Abstract of a bill introduced in the House of Representatives, February 17, 1898, by Mr. Otjen, Representative from Milwaukee, Wis.