

behind him ready for publication a large work on the Embryology of Insects, and an immense collection of microscopic preparations, of Annelids of great value. Perhaps the most striking discovery recorded in any of M. Claparède's writings (which should, however, be judged by the accumulated value of their immense number of anatomical observations) is one among those relating to the Annelids of the Bay of Naples. Claparède found that the *Nereis Dumerilii* lays eggs, sexually fertilised, which, on hatching, produce a worm which had been placed in quite a distinct genus (*Heteronereis*), and this worm lays similar true eggs, which produce sometimes a second kind of *Heteronereis*, or at other seasons the original form *Nereis Dumerilii* again. The difference between *Heteronereis* and *Nereis* is very great, and one extending into such details as the form of the setæ of the feet. At present this appears to be the only *real* case of alternation of generations on record, if, by "generations," we understand "sexual generations."

Whilst working so largely as an original observer, M. Claparède occupied himself also in reviewing the labours of others from time to time in the *Archives Suisses* published at Lausanne. Though holding the title of Professor in the Academy of Geneva, we believe he never (certainly not of late years) gave any public lectures on zoology; yet that he was admirably fitted for such work, had he thought fit to devote his time to it, is evident from the admirable style of his writings, especially the reviews and criticisms published in the *Archives Suisses*. His criticism of Mr. Wallace's views on the Descent of Man is known to our readers. Having access to the French world of science as a speaker and writer of the French language, and being thoroughly familiar with German writings and thought, both from education and continued association, M. Claparède appears to have taken an honest delight in every now and then dealing a severe blow at some one or other of the French naturalists who might venture to exhibit superficiality or dishonesty in his field of study. Dujardin is roughly handled in the "Recherches sur les Infusoires;" Rouget also, who appears to have personally resented the correction. Balbiani's researches on the development of the Aphides are made the subject of special investigation by M. Claparède, who, three years since, studied the embryology of a species of aphid at Naples solely with the view of testing some extraordinary statements then recently advanced by the French doctor, and came to the conclusion that they were utterly unfounded, and that M. Balbiani had not done justice to the work of his predecessors, which conclusions he stated in very plain language. The attack on M. de Quatrefages, gracefully made and richly deserved, was perhaps the most entertaining. For M. de Quatrefages, charged to present to the French Academy the work which was dedicated to him, and in which, while his good work was appreciated, his errors were exposed, thought it advisable to reply to some of M. Claparède's criticisms, and displayed some temper, and even hinted that the dedication was objectionable. The sequel to this is to be found in the dedication of the second volume of the "Annélides du Golfe de Naples." It is dedicated to Delle Chiaje. Perhaps, says M. Claparède, were he alive he would object to this dedication; he would see with regret many of his errors pointed out; although so much of his work is here confirmed, human vanity would suggest to him to refuse the dedication of a work, to which, however, posterity considers he is justly entitled. It is, he concludes, easier sometimes to dedicate a book to a dead than to a living man.

The ardent naturalist, the accurate observer, the brilliant artist, the keen critic, the lucid exponent, has ceased his work, but has left a name which may well cheer the most faint-hearted among us—even those who feel to want the physical vigour of their fellows—for it is to be remem-

bered that the works which do most honour to the name of Edouard Claparède were the labours of a dying man.

E. R. L.

ALEXANDER KEITH JOHNSTON, LL.D.

A MEMOIR of Mr. Johnston would be the record of a life laboriously and successfully devoted to the spread and popularisation of a single science. Mr. Johnston's first maps, the result of a walking excursion through the north of Scotland, appeared in 1830, and were issued in a Traveller's Guide-Book. His first large work was the "National Atlas," folio, on which he was assiduously engaged for upwards of five years, having projected and drawn the greater part of the maps (forty-five in number) and written nearly all the names they contain with his own hand. This work went through many editions, and was considered the best of its time.

Having, in the course of his residence in Germany, been much interested in the writings of Ritter, Humboldt, and Berghaus, on Physical Geography, and having learned that Humboldt had expressed a desire to see an English physical atlas constructed in a manner suited to the taste of the British public, and on a scale sufficient to admit of entering fully on the details of physical phenomena, Mr. Johnston visited Germany in 1842, travelling from Hamburg to Vienna, collecting materials for such a work, and making arrangements for an extensive correspondence.

Previous to the commencement of Keith Johnston's Atlas, Physical Geography was an unknown term in Britain. Hence it was predicted that the work would be a failure, and it required great faith to enable him to persevere in his self-imposed task. He was unfortunate in his first publisher, who was not able to do much with so expensive a work; however, the first edition was sold off, and a second was called for, and published in 1856. The two editions occupied Mr. Johnston ten years of the best period of his life. These writings procured for him, in 1850, a Fellowship in the Royal Society of Edinburgh.

In 1850 appeared the first edition of his "Dictionary of Geography, Descriptive, Physical, Statistical, and Historical," 1 vol. 8vo., on a new plan, embracing numerous facts in the different branches of science not before noticed in similar works.

In 1851 the author constructed a Physical Globe of the earth, thirty inches in diameter, showing in colours its Geology, Hydrography, Meteorology, &c. &c. For this, the first Physical Globe ever drawn, the medal of the Great Exhibition of 1851 was awarded. The globe was not intended to be published.

Between 1851 and 1855, he constructed and published for educational purposes four Atlases, royal 8vo.—namely, General, Classical, Physical, and Astronomical, and one Elementary Atlas, small 4to. All these have been improved, some of them re-engraved, and as many as from five to thirty editions of each have been published, at 1,000 copies each. In 1852 he prepared an Atlas of Military Geography to accompany Alison's "History of Europe," 1 vol. 4to. This work was most favourably reviewed, and commended by military men.

In 1855 was commenced the "Royal Atlas of Modern Geography," on which the author brought to bear the geographical experience gained during the labours of a quarter of a century.

In 1865 the University of Edinburgh conferred on him the Honorary Degree of Doctor of Laws.

During the last four years Mr. Keith Johnston was engaged in the production and increase of a complete series of geographic works for schools.

From the brief notice which appeared in our last number, it will be seen that Mr. Johnston may be said to have died in harness, his active labours having been carried on till the close of his life.