

the occurrence of burnt earth as an evidence of man's existence in the Miocene (?) 'Monte Hermosean.' "The conclusions of the writers with regard to the evidence thus far furnished are that it fails to establish the claim that in South America there have been brought forth thus far tangible traces of either geologically ancient man himself or of any precursors of the human race." A. C. HADDON.

#### PAPERS ON INVERTEBRATES.

UNUSUAL interest attaches to the description by Dr. A. Brinkmann, in the *Bergens Museum Aarbok* for 1912, part 3, of a new genus and species of deep-sea nemertine worm—*Bathynectes murrayii*—which differs from all previously known forms in the external position of the male genitalia. A single example was obtained so long ago as 1895, while sixteen others were collected by the *Michael Sars* in 1910. The length of females ranges from 43 to 61 mm., with a breadth of from 7.5 to 10 mm., but males are considerably smaller. Although the new organism, of which figures are given, represents an entirely new type, it forms in some degree a connecting link between Planktonemertes and Nectonemertes.

In connection with the above may be noticed a paper by Dr. M. v. Gedroyc, in *Bull. Ac. Sci. Cracovie* for February, 1913, on certain new European leeches, referred to the genera *Trocheta* and *Hæmentaria*, special interest from a distributional point of view attaching to the second determination, owing to the fact that while the genus was originally described from South America, it is now known to occur in the United States, Canada, Lapland, and Poland.

The death-feigning instinct (*Katalepsie*) among stick-insects (Phasmidæ), as exemplified by the species *Cerausius morosus*, forms the subject of a very interesting article by Mr. Peter Schmidt in *Biol. Centralblatt* of April 20. These insects, it appears, are extremely prone to assume the cataleptic phase, and may do so in almost any pose—sometimes lying flat on one side, with the limbs and antennæ stretched out parallel with the body, sometimes with the legs straddled outwards and the head and thorax raised, and at other times standing on the head. As these insects are specially modified to imitate vegetation, it seems that the cataleptic condition is another adaptation—of the muscular and nervous structures—to the same end.

The beetles, spiders and scorpions, earwigs, and flies collected during the Abor Expedition of 1911-12 form the subject of four articles by specialists in part 2 of vol. viii. of *Records of the Indian Museum*, a number of new forms being described. In vol. iii., part 4, of *Annals of the Transvaal Museum*, Mr. L. B. Prout and Mr. E. A. Meyrick respectively describe new local Geometridæ and Micro-Lepidoptera.

We have received a copy of a concise "Synopsis of the Classification of Insects," drawn up by Prof. Maxwell Lefroy, and published by Messrs. Lumley, of Exhibition Road, at the price of one shilling. The arrangement of the orders is the one adopted by Messrs. Sharp and Shipley, and a brief, but apparently sufficient, definition is given of each order and family. The lack of an index is a decided drawback to the value of the work.

To the May number of *The Entomologist's Monthly Magazine* the Hon. Charles Rothschild contributes a note on the extremely rare bugs of the genus *Cacodemus*, which are parasitic on Old World bats. Three species are mentioned, one from South Africa, a second from India, and a third of which the home is at present unknown. Mr. Rothschild, it may be added, employs the name *Clinocoridae* for the bugs, whereas Prof. Lefroy, in the synopsis just mentioned, uses *Cimicidæ*.

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#### THE BRITISH ASSOCIATION AT BIRMINGHAM.

##### SECTION D.

##### ZOOLOGY.

OPENING ADDRESS BY H. F. GADOW, F.R.S., PRESIDENT OF THE SECTION.

"ADDRESS your audience about what you yourself happen to be most interested in, speak from the fullness of your heart, and make a clean breast of your troubles." That seemed good advice, and I shall endeavour to follow it, taking for my text old and new aims and methods of morphology, with special reference to resemblances in function and structure on the part of organs and their owners in the animal kingdom. First, however, allow me to tell you what has brought me to such a well-worn theme. Amongst the many impressions which it has been my good luck to gather during my travels in that enchanting country Mexico are the two following:—

First, the poisonous coral snakes, Elaps, in their beautiful black, red, and yellow garb; it varies in detail in the various species of Elaps, and this garb, with most of the variations too, occurs also in an astonishing number of genera and families of semi-poisonous and quite harmless Mexican snakes, some of which inhabit the same districts. A somewhat exhaustive study of these beauties has shown incontestably that these often astoundingly close resemblances are not cases of mimicry, but due to some other cooperations.

Secondly, in the wilds of the State of Michoacan, at two places, about twenty and seventy miles from the Pacific coast, I myself collected specimens of Typhlops which Dr. Boulenger without hesitation has determined as *Typhlops braminus*. Now, whilst this genus of wormlike, blind little snakes has a wide circum-tropical distribution, *T. braminus* had hitherto been known only from the islands and countries of the Indian Ocean basin, never from America, nor from any of the Pacific Islands which possess other kinds of Typhlops. Accidental introduction is out of the question. Although the genus is, to judge from its characters, an especially old one, we cannot possibly assume that the species *braminus*, if the little thing had made its way from Asia to Mexico by a natural mode of spreading, has remained unaltered even to the slightest detail since that geological epoch during which such a journey could have taken place. There remains the assumption that amongst the of course countless generations of Typhlops in Mexico some have hit off exactly the same kind of permutation and combination of those characters which we have hitherto considered as specific of *braminus*, just as a pack of cards may in a long series of deals be dealt out more than once in the same sequence.

The two cases are impressive. They reminded me vividly that many examples of very discontinuous distribution—which anyone who has worked at zoogeography will call to mind—are exhibited by genera, families, and even orders, without our knowing whether the groups in which we class them are natural or artificial. The ultimate appeal lies with anatomy.

Introduced to zoology when Haeckel and Gegenbaur were both at their zenith, I have been long enough a worker and teacher to feel elated by its progress and depressed by its shortcomings and failures. Perhaps we have gone too fast, carried along by methods which have yielded so much and therefore have made us expect too much from them.

Gegenbaur founded the modern comparative anatomy by basing it upon the theory of descent. The leading idea in all his great works is to show that transformation, "continuous adjustment"