

him" as having weighed heavily upon science by impeding the comprehension of the value of new observations.

In discussing the antiquity of man, the present geological epoch is considered with "almost absolute certainty" as having commenced less than 100,000 years ago, and the opinion is pronounced that no facts have as yet been discovered which authorise us to place the cradle of the human race elsewhere than in Asia. As to the appearance of primitive man, our author concludes that "all that the present state of our knowledge allows us to say is that, according to all appearance, he ought to be characterised by a certain amount of prognathism, and have neither a black skin nor woolly hair. It is also fairly probable that his colour would resemble that of the yellow races, and his hair be more or less red. Finally, everything tends to the conclusion that the language of our earliest ancestors was a more or less pronounced monosyllabic one."

Once in possession of these views of our author, we can with the greater advantage read the excellent summaries and descriptions which form a large portion of the work relative to migration, acclimatisation, and "fossil races"; but perhaps the most interesting are those devoted to the "Psychological Characters of the Human Species." These tend to show in a new sense the brotherhood of man, so that if political economy could be called the "dismal science," anthropology should be considered as the most cheerful of its learned sisters. M. de Quatrefages combats some of the views of Sir John Lubbock as expressed in his "Origin of Civilisation" with great force, and has some very useful reflections on the danger of attributing all sense of honesty as absent in certain races on insufficient data. "Nothing is more common than to hear travellers accuse entire races of an incorrigible propensity for theft. The insular populations of the South Sea have, amongst others, been reproached with it. These people, it is indignantly affirmed, stole even the nails of the ships! But these nails were iron, and in these islands, which are devoid of metal, a little iron was, with good cause, regarded as a treasure. Now, I ask any of my readers, supposing a ship with sheathing and bolts of gold, and nails of diamonds and rubies were to sail into any European port, would its sheathing or its nails be safe?"

In conclusion, though many parts of this work show that to the author Darwin must have lived and written in vain, and some of the portions appear as anthropology little advanced from the time of Prichard, we cannot but still feel grateful that the general literature of this little-known, but most necessary of sciences, should have been enriched by a useful though not infallible book.

W. L. DISTANT

#### LETTERS TO THE EDITOR

[The Editor does not hold himself responsible for opinions expressed by his correspondents. Neither can he undertake to return, or to correspond with the writers of, rejected manuscripts. No notice is taken of anonymous communications.]

[The Editor urgently requests correspondents to keep their letters as short as possible. The pressure on his space is so great that it is impossible otherwise to ensure the appearance even of communications containing interesting and novel facts.]

#### Parthenogenesis in a Beetle

I do not know whether any instances have been recorded of parthenogenesis in the coleoptera, nor does the interest of the

case I am about to relate consist in the discovery of the operation of a not uncommon mode of insect reproduction in a new field, but rather in its altogether abnormal and fortuitous character in the species of beetle concerned, viz., *Gastrophysa raphani*. My own observations hitherto on this species have been uniformly to the effect that unimpregnated females lay always barren eggs, and that one intercourse with the male renders fruitful all eggs subsequently laid. I bred the female in question from the egg this year, and have kept her isolated since her exclusion as an imago. She has laid, up to the present, about twenty batches of eggs consisting of about thirty-four and fifty-one alternately in the batch. Of these, some fifteen batches have been observed; and only in one of these, No. 10, to wit, consisting of thirty-four eggs, and in one of these thirty-four only were any traces of development observed. This batch was laid between the 2nd and 4th of August. On the 5th I noticed in one an appearance which is usual about this time in fertilised eggs, which I have been accustomed to think about as the "embryonic scroll," and which, on reference to Huxley's "Anatomy of Invertebrated Animals," pp. 444-445, I am inclined to think may be what is there called "the sternal band (*Keimstreif* of the German embryologists)." This scroll is invariably present in *Gastrophysa* eggs regularly developing, and enables one to predict with certainty the position of the ventral aspect, and of the head and tail of the future larva. On the 6th this same appearance was more distinctly marked. On August 10 a further well-defined stage of development had been reached. On the 11th the ocelli were plainly visible. Next day I noted the antennæ, mandibles, palpi, and legs. The segments, warts, and spiracles were also to be seen. On the 12th and some subsequent days I saw plainly somewhat feeble but unmistakable and decided movements of the legs, especially of the tarsi and ungues. At this season of the year the egg should have been hatched in about ten or twelve days. I have no longer any hope of this, and all larval movements appear to have ceased. All the other (thirty-three) eggs have undergone the usual degeneration, but this one presents a striking contrast to them, showing all the external parts perfectly formed and distinctly visible, as far as the position of the larva (which is just the reverse of the usual one, namely, with the dorsum in place of the venter next the surface of attachment) allows them to be seen. There is an unusual appearance of brownish coloration towards the caudal end, the nature of which I have not made out. The failure to hatch out, however, does not hinder this from being a decided case of embryonal development in an egg laid by a female of *Gastrophysa raphani* whose virginity is assured; and it is a solitary instance occurring among some eight or nine hundred eggs laid by the same beetle both before and after and along with it, all of which (as far as observed) were normally and uniformly barren.

J. A. OSBORNE

Milford, Letterkenny, August 18

#### Fonts in the Rocks of Brook Courses

I BELIEVE the present an opportune time to direct the attention of geologists to the occurrence of water-graven fonts in the rocks of brook courses, as the season of field-work is come, and the summer conditions of our water-courses facilitate observations of this most curious and interesting, as well as deeply important, of river physics.

So long ago as two years, examining the rocks bared on a river channel for the purpose of making a section, I found fonts in the rocks over which the waters run (in Slievardagh coal-field, Tipperary). I had not previously known of their occurrence. Those I first found I then looked on as something exceptional, but as my investigations extended and as I learned to recognise the conditions under which fonts are graven, I found them to be pretty general in streams having rapid descents. Nor do I think their occurrence is generally known and noted by geologists and physicists. I have seen in print but one allusion to them—in NATURE, vol. xix. p. 76, where they are notified as observed in a river in East Africa during the dry season as a "noteworthy peculiarity."

In what hereinafter appears, I do not at all mean to question the theory given as explanatory of the large "well-like basins" on the African river; doubtless our traveller had his good reasons for his conclusions.

The mode of occurrence of these fonts in the Slievardagh brooks is, I venture to submit, as follows:—They are graven in the rocks by falling waters; these waters being the main stream,