The author contends that "we are brought squarely to the conclusion that the foetal placenta is chorionic," and that "from this premise phylogenetic speculation must start." He tells us that, "so far as our present knowledge enables us to judge, the discoidal is probably the primitive placental type." With this we heartily agree, and it has always appeared to the writer of the present article that the same conclusion is, on the Balfourian hypothesis (from which Prof. Minot dissents) that both the yolk-sac and allantois were primitively concerned in rendering the chorion vascular, by far the most natural one warranted by the facts. The belief in the primitive nature of the diffuse placenta is, beyond doubt, largely attributable to its non-deciduous character. With Dr. Minot, we are opposed to Ryder's theory of the "origin of the discoidal placenta by constriction of the villous area of the zonary placenta." We would rather reverse the order, and regard the zonary type as transitional between the more primitive discoidal one and the more recent and modified diffuse cotyledonary and metadiscoidal varieties, regarding the replacement of the discoidal in the zonary type as primarily due to extension consequent upon the complete withdrawal of the yolk-sac from the chorion. Under this hypothesis the simple nature of the villi of the diffuse placenta might well be considered secondary.

Dr. Minot's paper furnishes a moral which cannot be too often borne in mind, viz. that it is not necessary to look beyond the most familiar organisms for material for legitimate work: neither a "new body" nor "a hitherto undescribed organism" are indispensable to the building up of a reputation.

Mr. Allis's paper is one for which we have eagerly watched, it being (as our readers will be aware) the first of a promised series. The author maps and classifies the sense-organs of the head with minute accuracy, at the leading stages of growth. When he tells us that "as many as thirty-seven hundred" pores "were counted on the head of a single large specimen," some idea of the laboriousness of his task may be formed; and on finding that he has worked out the detailed relationships of the parts to the individual bones, that he has, in addition to working out their development, determined the limits of individual variation and taken count of abnormalities, it is clear that his labour is a labour of love. The thoroughness of his work and the beauty of his illustrations must be seen to be appreciated; and should he complete his task, maintaining the standard of excellence with which he has started, he will have merited the regard of biologists for all time. He has brought to light the surprising fact that many of the first formed openings of the cutaneous canal system fuse to form pores, and that the dendritic systems and groups of pores which, in the adult, replace these, arise to a large extent from their repeated dichotomous division.

The author deals neither with polemics nor generalities,¹ nor does he even allude to striking facts which his figures show, foreign to his immediate inquiry. Consideration of these is doubtless deferred. He deals incidentally with the neuro-epithelium of the spiracular cleft discovered by Wright; this he regards as a sense-organ, which was "regularly developed in the epidermal covering of the head along with the other organs of the infra-orbital line, but, lying near the edge of the spiracular cleft, it wandered into this cleft as it was closed." Indeed, it is upon this observation that the author's co-editor confessedly bases his belief in the migratory origin of the gustatory organs; and Mr. Allis's allied discovery that "the nasal pits are inclosed in the same way that the lateral canals are" will be welcomed with especial interest by embryologists of the hour.

We have often wondered that our American brethren should have been so tardy in working out the structure

and development of their native *rarissima*. Their Opossum and their Urodeles are now receiving attention, a beginning has been made with *Lepidosteus*, the *Gymnophiona* remain. Zoologists of the Old World could desire nothing better at the hands of their New World *confrères* than a series of exhaustive monographs upon the structure and development of the animals named, uniformly with the one now under review. A better model of conscientious work it would be difficult to produce. G. B. H.

THE AUGUST PERSEIDS OF 1889.

THE moon being full on the morning of August 11, it was hardly to be expected that the Perseid meteors would exhibit a notable display this year. Apart, however, from the ill effect the moonlight must certainly have exercised upon the visible character of the shower, there is no doubt that the phenomenon has proved one of minor importance. I have never observed, during the previous twenty-two years, so scanty a fall of the August meteors.

I made observations on July 26, 27, 29, 30, 31, and August 3, for the express purpose of determining the radiants of early Perseids, but failed to secure an adequate number of paths to carry out that intention. In watches extending over eleven hours I counted 89 meteors, but not more than 6 of these could have been Perseids. It was evident that this system was very feebly represented. Yet in 1887 it formed a very distinct and fairly active display as early as July 19 and 22, and I have sometimes remarked decided traces of it in the second week of July. In 1878 and several other years I observed that the Perseids made a prominent shower towards the close of that month, and it was easy to find the position of its radiant on every clear night. But this has been quite impracticable in 1889, owing to the exceptional scarcity of meteors.

On August 7, 1889, I looked towards the eastern region of the firmament during the 2½ hours from 11½h. to 14h., and recorded 28 meteors only. Amongst these were 10 Perseids with a radiant point very sharply defined at 41° + 58°. They were rather small and traversed short paths; nearly all of them appeared near the centre from which they radiated. The shower was, however, of greatly inferior character to what was expected on a date so near the maximum. The ensuing nights were pretty clear, but in the brilliant moonlight meteoric apparitions were very infrequent. On August 10 only 8 Perseids were noticed in one hour before midnight.

My recent observations would seem to indicate that we have passed through a minimum of the August meteors.

The Aquarids which are generally very abundant at the end of July were also weakly displayed this year. I registered 6 of them between July 27 and August 3, from a radiant at 336° - 13°. Of the other streams which distinguish this epoch I saw several, the principal of them being a shower of Cepheids from 329° + 62° and of Cassiopeids from 8° + 52°. W. F. DENNING.

NOTES.

WE print to-day the Report of the Committee appointed by the Treasury on the Scientific Collections at South Kensington under the control of the Science and Art Department. It is some seventeen years since the Duke of Devonshire's Commission recommended their formation, and it would seem now that something may really be done after so long a delay. The Committee, it will be seen, discuss both the question of a new building and that of the proper organization of such collections. The eminence of the members of the Committee adds great weight to their recommendations, and the Report has been very favourably received by the Press.

¹ He appears to have overlooked an important paper by Fritsch, in *Stsb. Berlin Akad.*, 1888, viii., p. 273.