VINSON, J.—Esquisse Grammaticale de la Langue de God. *Rev. Linguistique*, Oct.

ASTON, W. G.—A Comparative study of the Javanese and Corean Languages. *J. of Roy. Asiatic Soc.*, Aug.

Grammaire Samoane. *Rev. Linguistique*, Oct.

OPPERT, G.—On the Ancient Commerce of India. *Madras J. of Literature*, I.

GEOLOGY AND PALÆONTOLOGY.

FOSSIL CRAWFISH FROM THE TERTIARIES OF WYOMING.—Two specimens of fossil crawfish quite well preserved have been kindly loaned us for description by Professor Leidy, who received them from the fish beds of the western border of Wyoming, through Dr. J. Van A. Carter, of Evanston, Wyoming. Of the two specimens, the smaller presents a dorsal, and the larger a lateral view, both being slightly distorted by pressure; the length of the smaller from the tip of the rostrum to the end of the telson is 38 mm., and of the larger 53 mm. They do not differ generically from existing species of Cambarus, though with some resemblances to Astacus, but as the gills are not represented it is not possible to say to which of these two genera the species belongs; still the weight of characters ally it nearest to *Cambarus affinis*, as seen in the long narrow pointed rostrum, and the form of the chelæ and the second antennal scales. These scales are also much as in *C. obesus* var. *latimanus* and *bartonii*, but rather narrower, the lateral terminal spine being long, slender, acute. The flagellum of the second antennæ are of the usual size, extending to the terminal fourth of the abdomen. The distal end of the scape of the first antennæ reach to near the end of the last joint of the scape of the first pair, the species in this respect being more like Cambarus than Astacus. The carapace is of the proportions of living species of Cambarus. The first pair of legs are rather shorter and stouter than in our living crawfishes, and the chelæ are rather shorter, while the surface of the carapace and legs is much more coarsely tuberculated than in our Cambari, and in this respect resembles large specimens of *Astacus fluviatilis* of Europe, though the tubercles are larger.

The abdomen is of the usual proportions, but the surface is more coarsely tubercled; the telson and broad rami of the last pair of feet are spined as in living species of Cambarus. It is interesting to observe that this species is nearest related to *Cambarus affinis*, which as observed to me by Mr. P. R. Uhler, who kindly gave me some species for comparison, is the more generalized American species of the genus, and probably the oldest one. It would be interesting to know whether this fossil form is actually a Cambarus or an Astacus, and to ascertain which of these two genera, now restricted, the latter to the Pacific slope of the Sierra Nevada, the former to the Central and Eastern zoö-geographical provinces, was the first to obtain a foothold on our continent. There is a probability that the present fossil form is a member

of the American genus Cambarus. The species may be called, therefore, *Cambarus primævus.—A. S. Packard, Jr.*

On the Sauropterygia of Boulogne-sur-Mer.—Dr. H. E. Sauvage has recently published an interesting memoir on the above subject, including in it many general remarks on the affinities and contents of the order *Sauropterygia.* He uses the results of the latest investigations on the subject, referring especially to those of Seeley. He describes several species heretofore very little known, and adds a number of new ones to Scientific Literature. Those which Dr. Sauvage finds in the Upper Jurassic beds of the Boulonnais are: *Pliosaurus gamma* Ow.; *P. grandis* Ow.; *P. suprajurensis* Sauv.; *Polytychodon archiaci* E. E. Desl.; *Plesiosaurus carinatus* Ow.; *P. phillipsi* Sauvg.; *P. morinicus* Sauvg.; *P. infraplanus* Phil.; *P. plicatus* Phil.; *P. ellipsospondylus* Ow.; *Colymbosaurus dutertrei* Sauvg.; *Muræuosaurus manseli* Hulke; *Polycotylus suprajurensis* Sauvg.

A new Hippidium.—A species apparently of this genus of horses has been discovered by Prof. Thomas Condon in the Loup Fork beds of Cottonwood creek, Oregon. It is represented as yet by superior molar teeth only, which are larger than those of any of extinct American horses, excepting the *Equus excelsus*, about equaling those of *Hippidium neogæum* Lund. The crowns of these teeth are very long and slightly curved, and the roots are short. The internal columns are relatively small, are subequal in size, and are flattened in outline. A peculiarity of the species is seen in the great transverse width of the lakes which, at the middle, is equal to the anteroposterior diameter. The crescents, and especially the inner ones, are correspondingly narrow. The enamel borders are simple, there being only a few notches on the adjacent faces of the lakes. One loop projects from the inner enamel border, almost reaching the anterior inner column. Cement abundant. Diameters of second premolar: anteroposterior, m. .035; transverse behind .021; height of crown .035. Diameters of a superior molar: anteroposterior, .027; transverse, do., including external ridge, .027; longitudinal externally, .045. The species of the genus heretofore described from the United States (*H. pernix* and *H. robustus*), are represented as having teeth with short crowns and long fangs, and of materially smaller size. The species may be called *H. spectans.* The teeth are about the size of those of the quagga.—*E. D. Cope.*

GEOGRAPHY AND TRAVELS.[1]

United States Geological and Geographical Survey of the Territories. Work of 1877–8, Primary Triangulation and Yellowstone Park Maps.—Among the posthumous works of Dr. F. V. Hayden's Survey of the Territories, there have recently

[1] Edited by Ellis H. Yarnall, Philadelphia.