March 8.—Dr. Carson, vice-president, in the chair. Prof. Leidy made the following remarks:—The reptilian remains from the cretaceous formation near Fort Wallace, Kansas, presented to the Academy by Dr. T. H. Turner, and described by Prof. Cope under the name of *Elasmosaurus platyurus*, belong to an Enaliosaurian, as originally suggested by Prof. Cope. The anatomical characters of the different regions of the vertebral column, those of the shoulder and pelvic girdles, and of the preserved portions of the skull and teeth, are decidedly Plesiosaurian.

March 15.—Dr. Ruschenberger, President, in the chair. The following paper was presented for publication:—"Cross Fertilisation and Law of Sex in Euphorbia." By Thomas Meehan. Mr. Charles Darwin's interesting observations on cross fertilisation have opened a new world for original discovery. The list of plants which seem to avoid self-fertilisation is already very large. I think *Euphorbia* may be added to the number. Certainly this is the case with *E. fulgens*, Karw. (*E. jacquiniaflora*, Hook) which I have watched very closely in my greenhouse this winter. Several days before the stamens burst through the involucre, which closely invests them, the pistil with its ovarium on the long pedicel has protruded itself beyond, exposed its stigmatic surfaces, and received the pollen from the neighbouring flowers. The way in which the pollen scatters itself is curious. In most flowers a slight jar or a breath of wind will waft the pollen to the stigmas, but I have not been able to notice any to leave the flowers in this way; for as soon as the anther cells burst, the whole stamen falls from its filament-like pedicel and either drops at once on the pistils of other flowers or scatters its pollen grains by the force of the fall. This *Euphorbia* also furnishes another contribution to the theory of sex which I have advanced. The plan on which the male and female organs are formed is evidently a common one; and the only reason why some flower-heads have a pistil in the centre, and others are wholly staminate, is, that there is greater axial vigour when the female flower is formed. Whenever the common peduncle (below the scarlet involucre) is weak, a pistil never appears in that head of flowers. A few which seem strong neither have them, but the great majority of the strong peduncles are those which bear the female blossoms. Another interesting fact is that the number of male flowers is less in those heads which also bear a female, than in those which are wholly staminate. This seems to add to the point I made in my paper on *Ambrosia*, that after the flowers have been partially formed in embryo, and before the sex has been finally determined, the female flower, being primordially the stronger, has the power of absorbing the males or their partially formed elements into its system. It is certainly remarkable that in both these instances the number of male flowers should decrease in proportion to the existence or vigour of the central female one. The male and female flowers of *Euphorbia fulgens* are formed much alike. the female occupies the centre, and seems really but a prolongation of the main stem, on the top of which is an articulation from which the ovarium springs. The capsula readily falls from this articulation when mature. From the base of the female central peduncle spring weaker peduncles, colourless, appearing indeed almost like filaments, articulated at about the same height as the female, only above the point bearing a short filament and anther—the caduceous part before referred to. No one can fail to see the correspondence of plan in these different parts, and I think that nothing but the favourable position in the direct line of axial vigour made the central flower a female one. Cases occasionally occur in which a tolerably strong head of wholly male flowers will develop the central axis into a pedicel almost as long and vigorous as those which bear female flowers. But the flow of vital force—if I am correct in using this term—not being quite sufficient, the final goal of natural perfection in the female form was not reached. These cases do not occur often, but are well worth looking for, as they show so clearly the dividing line between the forces which govern the male or female sex.

March 22.—Dr. Carson, vice-president, in the chair. The following paper was presented for publication: "Descriptions of Fossils collected during the U.S. Geological Survey under the charge of Clarence King." By F. B. Meek.

April 5.—Dr. Carson, vice-president, in the chair. Prof. Leidy made the following remarks on "Discosaurus and its Allies." The body of the last vertebra in the series of caudals belonging to the Kansas saurian, described by Prof. Cope under the name of *Elasmosaurus*, has the length less than the depth or breadth, which latter is the greater diameter. It is moderately contracted towards the middle, the sides below the neural arch and the surface below the costal articulations being fore and aft concave, and bounded in front and behind by an acute margin from the articular ends. A ridge extends fore and aft between the chevron articulations, and the included surface is concave, and exhibits a single lateral venous foramen. The costal articular processes project from the middle of the side of the body, reaching nearer the fore than the back end of the latter. They are transversely oval, about three-fourths the length of the body, and the height about half. They form a deep concavity, with acute margins extending peripherally. The articular ends of the body are transversely oval and defined from the intermediate portion of the latter by an acute everted margin. A short distance within the position of the latter the surface is marked by a narrow groove, and within the circle of this groove the surface projects in such a manner as to appear like a distinct disc or epiphysial plate applied to and coössified with the body. The surface of the disc is convex at the periphery and moderately concave towards the centre. The articular surface beyond the groove defining the disc appears as an everted ledge, and the triangular articular facets for the chevrons appear as deflections of the ledge. The extension of the latter inferiorly is greater at the posterior extremity of the body than at the anterior extremity, thus producing a larger provision of surface in that position for the articulation of the chevron. The neural arch in the specimen has apparently been so much laterally compressed, that its original condition cannot be ascertained.

BOOKS RECEIVED

ENGLISH.—Lay Sermons, Addresses, and Reviews: By T. H. Huxley. (Macmillan and Co.)

FOREIGN.—(Through Williams and Norgate)—Essai de Philosophie Positive au xix^me siécle: A. d'Assier.—Ueber die Chimie des Weines: Dr. C. Neubauer.—L'ancienneté de l'homme: Le Marquis de Nadaillac.—Description physique et naturelle de l'île de Crête, Vols. 1 and 2, with Atlas, Tome i. and ii.; V. Raulin.—Cryptogames vasculaires du Brésil: A. L. A. Fée. Mémoires de l'Académie impériale des Sciences de St. Petersburg, vii^me série, Tome xv., No. 2, Flora Caucasi, part 1: F. J. Ruprecht.

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