

that they fall unfertilised. The greater part of the second series also fall, and the crop of seeds is mainly made up of a few of the last opening ones of the series, and the comparatively few hermaphrodite ones which are found in those of the third class. It is a matter for curious speculation what special benefit it can be to the plant to spend so much force on the production of female flowers too early to mature, and then producing such an immense mass of pollen to go utterly to waste. Examining the flowers of the allied European evergreen ivy, *Hedera Helix* L., I find similar laws of distribution of the sexes as in *Aralia spinosa*, with the addition of a somewhat different structure in the male from the female flowers. In Europe the plant is described as often having a single umbel as a flower spike. It is quite likely in these cases that the flowers are hermaphrodite. In all the cases I have met with here, the inflorescence is a compound of several umbels—a terminal one female, and the lateral ones male, as in *Aralia*. But there are rudiments of stamens in the flower, and in occasional instances I find a filament developed; but never, so far, with any polleniferous anthers. The flowers of the central female umbel have rather longer and stronger pedicels than the lateral male ones. The calyx is united with the ovary for one-half its length, and the latter much developed in the unopened flower. In the male the segments of the calyx are two-thirds free, and the petals are much longer than in the female flowers. As in *Aralia spinosa*, the male flowers do not open until some time after the female ones; and not before some of the latter, impatient of delay, have fallen unfertilised. I have so often and in so many varied ways demonstrated to the Academy that in plants the male element is a later and inferior creation, that it seems almost supererogatory to point out that these plants illustrate the same principle.

October 4.—Prof. Leidy made the following communications in palæontology. He directed attention to a collection of fossils from Sweet Water River, Wyoming Territory, recently received as part of the results of the geological exploration of Prof. Hayden. The most numerous and characteristic remains are those of a species of *Merycochærus*, about two-thirds the size of *M. proprius*, from the head-waters of the Niolorara river. The species was named *M. rusticus*. Other remains found in association with the former are referable to a species of *Hipparion*, to *Canis vasser* and *Merycodus necatus*. Two additional fossils, from a tertiary deposit near Fort Bridger, are referable to a small species of *Lophiodon*, which was named *L. modestus*, and a small suilline pachyderm, which was named *Hyopsodus paulus*.

October 18.—Prof. Leidy directed attention to a collection of fossils received from the Smithsonian Institution, from Rev. Thomas Condon, of Dalles City, Oregon. The specimens were obtained from a tertiary deposit in the valley of Bridge Creek, a tributary of John Day's River, Oregon. The greater number and more striking remains belong to a species of *Oreodon* larger than any previously discovered. The skull is about fourteen inches in length, and is intermediate in character to that of *O. major* and *Merycochærus proprius*. The species was named *Oreodon superbus*. Among other remains of the collection are those of *Oreodon Culbertsoni*, *Agriochærus antiquus*, *Leptomeryx Evansi*, and *Anchitherium Bairdi*. A fragment of an upper jaw with two true molars probably belongs to *Lophiodon occidentalis*. Other fossils indicate ten species of *Rhinoceros*, probably *R. occidentalis* and *R. hesperius*. Others probably indicate *Elotherium superbum* and *E. ingens*. A small fragment of an upper jaw with a molar tooth apparently indicates a larger species than *Anchitherium Bairdi*, and was referred to a species with the name of *A. Condoni*.

October 25.—Prof. Leidy stated that he had recently received several boxes of fossils collected during Prof. Hayden's expedition in Wyoming Territory. Among the mammalian remains are those of a pachyderm about the size of an ox, and related to the *Chalicotherium* and *Titanotherium*. These were referred to a species with the name of *Palæosyops paludosus*. A fragment of a lower jaw, with true molars like those of the peccary, but with pointed lobes, was referred to a species with the name of *Microsus cuspidatus*. The animal was about the size of a rabbit. The remains of a lower jaw of an ursine animal, about the size of a raccoon, was referred to a species with the name of *Notharctus tenebrosus*.

November 1.—Prof. Leidy exhibited the tooth of a mosasaurid reptile from the miocene tertiary deposit of Gay Head, Martha's Vineyard. From the peculiar minutely-lettered appear-

ance of the enamel, the tooth was referred to a species with the name of *Graphiodon vinearius*. He also referred to a now extinct species of crocodile, indicated by portions of a skull collected in Prof. Hayden's expedition, from a tertiary deposit of Big Sandy River, Wyoming. The skull, when perfect, measured eighteen inches long. It has nearly the form of that of *Crocodylus vulgaris*. The upper jaw is deeply indented back of the fourth tooth, and a pair of deep pits occupy the front of the palate. The species was named *Crocodylus Elliotti*.

BOOKS RECEIVED

ENGLISH.—The Truth of the Bible: B. W. Savile (Longmans).—Physical Geography: Mary Somerville, new edition (Murray).—Voyage round the World, 2 vols.: Marquis de Beauvoir (Murray).—Natural History of the Azores: F. C. Godman (Van Voorst).—New Zealand and the South-Sea Islands: Capt. Meade (Murray).—Body and Mind: H. Maudsley, M.D. (Macmillan).—A Manual of Zoology: H. A. Nicholson, M.D. (Blackwood).

FOREIGN.—(Through Williams and Norgate)—Plantarum novarum Fasc. 1 H. Van Heurck.—Synonymia botanica, 1^{te} Hälfte: Dr. L. Pfeiffer.—Lehrbuch der Chemie, 1^{te} Lieferung: Dr. G. F. von Gorup-Besanez.—Die Beziehungen zwischen dem Atomgewichte und der Natur der chemischen Elemente: Dr. H. Baumhauer.

DIARY

THURSDAY, DECEMBER 29.

ROYAL INSTITUTION, at 3.—Burning and Unburning: Prof. Odling (juvenile lectures).

SATURDAY, DECEMBER 31.

ROYAL INSTITUTION, at 3.—Burning and Unburning: Prof. Odling.

MONDAY, JANUARY 2, 1871.

ENTOMOLOGICAL SOCIETY, at 7.

TUESDAY, JANUARY 3.

ROYAL INSTITUTION, at 3.—Burning and Unburning: Prof. Odling. ZOOLOGICAL SOCIETY, at 9.—Notes on the breeding-places of *Stenotornis caripensis*: Hon. A. Gordon.—Descriptions of thirty-four new species of Shells from Australia: Mr. George French Angus.

ANTHROPOLOGICAL SOCIETY, at 8.—The Manx of the Isle of Man: Dr. Richard King.—The Anthropology of Lancashire: Dr. Beddow, Pres. A.S.L.—On Forms of Ancient Interment in Antrim: Dr. Sinclair Holden.

THURSDAY, JANUARY 5.

ROYAL INSTITUTION, at 3.—Burning and Unburning: Prof. Odling.

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