
Recent Proceedings of Societies.

Academy of natural sciences, Philadelphia.

Nov. 10. — Dr. Harrison Allen called attention to the results of his examination of the inferior limbs of animals, made with a view of determining the relation of the shape of the leg to the sustained weight. Certain features occurring in common and in contrast in the limbs of man and the lower animals were illustrated by specimens. Such forms as the sloth, the bat, and the seal were of special interest, as they place no weight at all on the posterior extremities, and it was found that these have features in common, depending on this fact. The neck of the femur is shortened, the shaft flattened, and the astragalus lengthened. The direction of the condyles of the femur, and the extent to which they are thrown back, also have constant relation to the weight supported. The same may be said of the shape of the astragalus; this bone in heavy animals being flat, while in those in which the inferior limbs are relieved somewhat from the weight of the body it is elongated. The calcaneum is modified proportionately. Incidentally it was remarked, that, in the case of an Indian skeleton found at Cooper's Point, the outer side of the astragalus is prolonged so as to articulate in a more pronounced way than usual with the end of the fibula, thus approaching the condition in the gorilla. In continuation, Dr. Allen considered the effect produced on suspended animals by the extending instead of the compressing influence of their position. — Professor Heilprin, referring to a former communication on fossils from the ferruginous sand of the coal-regions near Wilkesbarre, stated that a second lot had been received recently which contained a considerable number of distinct types. These prove even more conclusively than was at first supposed that the geological horizon indicated by them is the upper carboniferous, and not the Permian, as had been asserted. The presence of the remains of two species of trilobites places this beyond doubt, as these animals are not said to have been found above the carboniferous anywhere except in a certain locality in the Sierra Madre; and the determination of even this horizon is open to grave question. As far as the evidence to be drawn from animal remains is concerned, it may be asserted with safety that the Permian formation is not represented in the eastern United States. A list of the species and genera forming the collection, as far as they had been determined, was given. — Dr. Leidy referred to a recent observation of Mr. Holman on the reproduction of amoebae. While studying one under the microscope, it suddenly burst and disappeared. The slide was afterwards found swarming with small forms, which were probably developed from the spores or molecules of the larger individual. The same observation had been made previously by the speaker. As the amoebae usually multiply by division, this would indicate a second mode of reproduction.

Torrey botanical club, New York

Nov. 10. — Dr. Britton read a paper upon *Quercus Muhlenbergii*, Engelm., and *Q. prinoides*, Willd. The former was originally described by Muhlenberg as *Q. castanea*, and by Michaux as *Q. Prinus*, var. *acuminata*. By other authors it is generally regarded as

a variety of *Q. Prinus*. That it is distinct from the common chestnut oak of our eastern states, all are at present agreed, but its relation to *Q. prinoides*, Willd., is more obscure. This latter was formerly regarded as a variety of *Q. Prinus*, under the name *Q. Prinus*, var. *humilis*, Marshall, but it is now considered a distinct species under the name of *Q. prinoides*, Willd. That it is more nearly allied to *Q. Muhlenbergii* than to *Q. Prinus* is, however, seen by its nearly or quite sessile thin cup and small globose acorn. Professor Sargent considers them as one species, *Q. Muhlenbergii* being the large western form, and *Q. prinoides* the small eastern form. The typical *Q. Muhlenbergii* is known at five widely separated localities in Pennsylvania, all on limestone soil, however, and also upon the white crystalline limestone of Stirling Hill, Sussex county, N.J., and the lower Silurian limestone below Phillipsburg. It has also been observed in the low sandy soil in the vicinity of Bridgeton. The *Q. prinoides* is, however, widely and plentifully distributed throughout southern and south-eastern New Jersey, where it is seldom more than four feet high, and fruits at six inches from the ground. On the mountains in the northern part of the state it occurs less abundantly, but somewhat larger, reaching a height of eight or ten feet. It has a wide range in Pennsylvania, is found on Long and Staten Islands, and extends northward along the coast to Massachusetts. Dr. Britton said, All of the numerous specimens which I have examined show a remarkable persistence of leaf and fruit characters, and if I were not assured, on the very highest authority, that the low, bushy form passes gradually into the tree in the west, I should not be at all inclined to regard them as the same species. However, as this appears to be the case, I hold that our eastern shrubby form is at least a well-marked variety of Dr. Engelmann's species, and propose for it the name *Quercus Muhlenbergii*, Engelm., var. *humilis*, N. L. B. — Dr. Newberry gave an account of the fossil flora now being unearthed from the cretaceous clays of New Jersey, and compared the species with similar forms from the clays of Greenland and Aachen. Within the past two or three months a most surprising number of species have been brought to light, — perhaps one hundred and fifty distinct ones, which are being figured as rapidly as possible. They include some fifteen conifers, ten or twelve ferns, two or three cycads, and several specimens of what is undoubtedly a large composite flower. The remainder are deciduous trees and shrubs, many representing present living genera.

Calendar of Societies.

Cambridge entomological club.

Nov. 13. — R. Hayward, Some western coleoptera selected from the results of his summer's collecting; George Dimmock, Some varieties of Coccinellidae produced by breeding.

Biological society, Washington.

Nov. 14. — Richard Rathbun, Remarks on the Wood's Holl station of the U. S. fish commission; W. S. Barnard, Specimen mounting case and method; John A. Ryder, A new and practical system of raising oysters on a large scale; Frederick True, On a spotted dolphin apparently identical with the *Prodelphinus doris* of Gray.