

the President (Sir William Turner) before the British Association for the Advancement of Science,' H. S. Pritchett discusses 'The Population of the United States during the Next Ten Centuries' computing that by 2900 it will amount to 41 billions, and Edward Atkinson has an article on 'The Distribution of Texas.' Clinton Rogers Woodruff considers in a hopeful vein 'Municipal Government now and a Hundred Years ago' and William Barclay Parsons has an article on 'China' giving a brief outline of its political and physical status. David Starr Jordan contributes a short skit on 'Rescue Work in History' and W. W. Campbell presents an appreciative sketch of James Edward Keeler. In 'Discussion and Correspondence' attention is called in an article that deserves to be read and heeded, to the literary sins of many writers on scientific topics. There are reviews of current scientific literature and notes of the progress of science.

#### SOCIETIES AND ACADEMIES.

##### BIOLOGICAL SOCIETY OF WASHINGTON.

THE 326th meeting was held on Saturday evening, October 20th, and was devoted to a 'Symposium on Cotton.'

H. J. Webber presented some 'Notes on Cotton Hybrids,' stating that the attempt was being made to produce a plant which should possess the long staple of the Sea Island Cotton, have a seed that would admit of the ready removal of the fiber and would grow well on the uplands. Hybrids he said were as a rule more vigorous than the parent plants, although being as regards structure and appearance intermediate between them. The speaker described some of the crosses that had been made and exhibited a series of specimens showing the successful results that had followed.

L. H. Dewey spoke concerning 'Some Foreign Varieties of Cotton,' saying that while the United States annually produces cotton to the value of nearly \$400,000,000, it imports each year about \$4,000,000 worth for special purposes. Most of our imported cottons, it was said, came from Egypt where they have been developed from Sea Island cotton, by long cultivation under irrigation, in a dry and practi-

cally rainless climate. The lint varies from snow white in 'Abbasi' to brown in 'Mitaffi.' The plants are large and spreading, similar to our Sea Island plants, but larger and with yellow flowers and small '3 locked' bolls. The lint is strong, lustrous, soft, and with a well developed twist. It is used chiefly for fine knit goods and for mercerized goods.

Peruvian cotton, which is borne on perennial cotton plants, has a short, brown, finely crimped fiber, and is imported for mixing with wool which it resembles.

A white uneven lint is produced in Porto Rico from a perennial plant, and plants of the 'kidney cotton' type are cultivated in the Philippines. In Paraguay the two principal varieties grown are red cotton (*Algodon colorado*), producing a reddish brown lint, and white cotton (*Algodon blanco*) producing white lint.

Nearly all varieties mentioned were illustrated by specimens, and leading American and Egyptian varieties were illustrated by full sized plants with flowers and mature bolls.

W. A. Orton read a paper on 'Selection for Resistance to the Wilt Disease of Cotton' a malady which has caused serious injury in the Sea Island Cotton and is becoming more troublesome in the upland cotton. It is caused by a soil parasite, *Neocosmospora vasinfecta* (Atk.) Erw. Sm., which attacks the young rootlets and grows from them into the vascular bundles of the main roots and of the stem, which are filled. The brown discoloration of the wood produced by the fungus is a characteristic symptom of the disease. Trials had been made of a large number of soil fungicides, but none had been found successful and the greatest hope of remedy seemed to lie in the production by selection of immune races of cotton.

A test of twenty kinds of cotton showed that the Egyptian sorts and one American upland variety, the Jackson, were strongly resistant to the wilt disease. These plants were somewhat dwarfed by the disease and there were numerous root tufts present, which demonstrated the presence of the fungus in the soil, and showed that the plants were actually resistant. Individual plants in diseased fields are often found living when all others around them have been killed, and seed from such plants has been

saved with the intention of producing resistant races by selection and cross-breeding.

That the quality of resistance to the wilt disease is transmissible through the seed was proved by an experiment in which the seed of one such resistant plant of sea island cotton was planted beside an ordinary race. Every plant grown from the selected seed lived, while all the other cotton around it was killed. It is believed that a race of cotton entirely resistant to the wilt disease may be obtained by careful selection and cross-breeding.

L. M. Tolman discussed 'The Economic Uses of Cotton-Seed Oil' describing the methods of extracting and refining the oil of different grades, and noting the products of 2,000 pounds of seed. The rapid growth of the industry was described, as well as the various uses of the oil in salad oil, butterine, lard substitutes, etc., its value as food and digestibility as shown by recent experiments. Cotton-seed meal, a by-product in the manufacture of the oil was, the speaker said, valuable as a fertilizer and as food for cattle.

F. A. LUCAS.

THE NEW YORK ACADEMY OF SCIENCES.  
SECTION OF BIOLOGY.

A MEETING of the Section was held on October 8th, Professor C. L. Bristol presiding. The program offered consisted of reports of summer work by members of the section.

Professor E. B. Wilson reported that he spent the summer at Beaufort, N. C., where he prosecuted experimental researches upon the eggs of *Toxopneustes*. Loeb's experiments upon the eggs of *Arbacia* were confirmed, and further facts of great interest were determined. Later in the season Professor Wilson visited Woods Holl, Mt. Desert, Me., and the Bay of Fundy. He drew attention to the very great differences between the Beaufort and Bay of Fundy faunas. The transparent pelagic annelid *Tomopteris* was collected in the latter locality.

Dr. D. T. MacDougal spent the summer in studying the flora of Priest Lake, which stands at an elevation of 3,000 feet, in northern Idaho. He was especially concerned in studying the effect of air temperatures on the distribution of plants.

Professor H. F. Osborn visited the British

Museum and the Museum of Comparative Anatomy in the Jardin des Plantes, Paris. The latter has, under the hand of Dr. Filhol, reached a high degree of effectiveness. At the British Museum Professor Osborn examined the remains of the new Patagonian sloth *Neomylodon*, the form said by Ameghino to be still extant.

Mr. F. B. Sumner gave an account of experiments carried on at the marine laboratory at Naples. The work of Mr. Sumner was directed towards determining the validity of his confluence theory of the origin of the embryo in fishes. The results are regarded as confirmatory.

The work in the Bermuda Islands, carried on in previous summers by the expeditions from the New York University under the direction of Professor Bristol, was continued this summer. Mr. F. C. Waite was this year a member of the party, and reported the finding of much valuable and interesting material not heretofore collected.

Dr. M. A. Howe also worked in the Bermudas during the first half of the summer, going later to Edgartown, Martha's Vineyard and to Sequin Island, Maine. He was especially concerned with the collection of marine algæ, of which he reported the acquisition of a large number. He described also the general floral features of the Bermudas.

Dr. H. E. Crampton stated that the summer session at Woods Holl has been a successful one.

Mr. M. A. Bigelow, while at Woods Holl, confirmed his results on *Lepas* and added a number of new observations. He, with Dr. Crampton, carried on a study of the ponds along the southern shore of Martha's Vineyard, with a view to studying the variation in their fauna.

Professor F. E. Lloyd spent six weeks in company with Professor S. M. Tracy in a preliminary study of the flora of the Mississippi Sound Islands and Delta. A full series of plants was collected. Professor Lloyd described the leading features of the vegetation of that region.

F. E. LLOYD,

Secretary.

SECTION OF ANTHROPOLOGY AND PSYCHOLOGY.

THE regular meeting of the Section was held on October 22d. Reports of anthropological investigations made during the past summer were received from Dr. Franz Boas, Dr. Liv-

ington Farrand, Dr. A. Hrdlicka, Dr. Putnam and Dr. R. E. Dodge. These investigations were made in the Vancouver Islands, Oregon, New Mexico, Arizona and California.

CHARLES H. JUDD,  
Secretary.

#### DISCUSSION AND CORRESPONDENCE.

##### THE EARLIEST USE OF THE NAMES SAURIA AND BATRACHIA.

TO THE EDITOR OF SCIENCE: In glancing over my 'Address in Memory of Edward Drinker Cope,' published by the American Philosophical Society, I find I have inadvertently referred to 'Sauria and Serpentes' as 'Linnæan terms' instead of 'prior terms.' Serpentes only was used by Linnæus, that naturalist having confounded all his 'Amphibia' except the Serpentes under the group ('ordo') named 'Reptiles.' Brongniart first used the name 'Sauriens.' The slip would scarcely be of sufficient consequence to notice were it not that a question of nomenclature of some importance is involved on which I am enabled to throw some light.

Only the French form of the name—Sauriens—was used by Brongniart (1799) and it has been believed that Latreille (1804) or Duméril (1806) was the first to give a later equivalent. Meanwhile, however, Shaw (1802) used the name *Lacertæ*. There are many who hold that a vernacular name is insufficient and should be superseded by the first applicable Latin term. I do not share in that belief in respect to supergeneric groups (orders, etc.), but for the benefit of those who do, give the following facts.

Brongniart's name Sauriens was used very speedily after its proposal by Cuvier in his *Leçons d'anatomie comparée* in the 'troisième tableau' at the end of the first volume ('an VIII' = 1800), but there was no Latin equivalent. The Latin term SAURIA was first introduced by Dr. James Macartney in a translation of the first volume of Cuvier's work published in 1802. This work must be quite rare, as the only copy I have been able to find is one I purchased at a second hand bookstore when a youth. Its full title is as follows: 'Lectures on Comparative Anatomy. | Translated from the French of | G. CUVIER, | Member of the National Institute,

Professor in the College of France, and in the | Central School of the Pantheon, &c. | By WILLIAM ROSS; | under the inspection of | JAMES MACARTNEY, | Lecturer on Comparative Anatomy and Physiology in St. Bartholomew's Hospital, &c. | = | Vol. I | [etc.] | = | London, | printed at the Oriental Press, by Wilson and Co., | for T. N. Longman and O. Rees, Paternoster row. | — | 1802.

Macartney is responsible for the nomenclature. In his 'Preface,' (p. vi,) he remarks: "The names of the muscles [etc.] have been rendered into Latin" [etc.], and "the same mode has been adopted with respect to many of the terms in Natural History." He adds: "I have taken the liberty of correcting some errors in the original" [etc.], so there can be no doubt that to him is to be accredited the nomenclature adopted. His preface is dated 'London, March 18, 1802.'

All the ordinal names for reptiles are rendered into Latin in the third folded table at the end of the volume, viz.: Les Chéloniens by CHELONIA; Les Sauriens by SAURIA; Les Ophidiens by OPHIDIA, and Les Batraciens by BATRACHIA. 1802, then, is the date for those names, and not 1804, as stated by Dr. Baur in SCIENCE (N. S., VI., 172), who attributes their first Latinization to Latreille (1804). In this work also, it will be seen, is the first Latinization of Batraciens.

Dr. O. P. Hay (in SCIENCE, N. S., VI., 772) has advocated the retention of Batrachia instead of Amphibia, apparently because he thinks that "one thing is very certain, and that is that we cannot rigidly enforce, with respect to the appellatives of higher rank, the same rules that apply to genera. Common usage must and does determine much in the case of the former terms." If I accepted these ideas, I should still be in favor of retaining the name Amphibia in place of Batrachia. 'Common usage' among the Germans generally, as well as among many other zoologists, would warrant it. To me the name Batrachia, extended to cover all the class so designated, is very objectionable from a philological as well as historical point of view, and Amphibia is an excellent one.

THEO. GILL.

WASHINGTON, October 24, 1900.