

change are retained when, by grafts or cuttings, the plants are removed to other localities. I have here, however, and exhibit with this paper, evidence of bud variation, in which there is no possibility of hybridism,—a root of the common sweet potato, *Convolvulus batatas*, in which some of the tubers are of the red Bermuda, and the others of the white Brazilian variety. The sweet potato never flowers in this part of the country, so that seminal power could have had no influence whatever on the phenomenon. Even in the south, and I believe elsewhere, where this plant is cultivated for its roots, it rarely flowers, and I think there is little doubt but that the whole ten or twelve varieties under culture have originated without seed, and in the way we see them here. The points I wish to make in this paper are:—1st. That identical varieties sometimes appear in localities unfavourable to the idea of a common centre of origin. 2nd. Varieties have originated in which probably no hybridism or any seminal agency operated. 3rd. Varieties have certainly originated in the sweet potato by evolution, without seminal agency, and that the same variety in this way has appeared in widely-separated districts. 4th. As the discoveries of Darwin have shown, in many cases, varieties to be the parents of species, species may originate in widely-separated localities by bud variation.—“A Sketch of the Classification of the American Anserinæ,” by B. H. Bannister. The following remarks are based upon an examination of the specimens of American geese in the collection of the Smithsonian Institution. The subfamily Anserinæ by many recent authors is made to include the genera *Dendrocygna* and *Chenalopex*, and doubtlessly correctly. In the present paper, however, we shall not consider these genera, leaving them provisionally out of the sub-family; if included, they would form at least one well-marked section, following those we are about to describe. The distinguishing characters of the Anserinæ, as thus limited to the true geese, are, the lengthened tarsus, covered with hexagonal or subquadrate scales; the neck more elongated than in the ducks and less so than in the swans; the short, high bill gradually narrowing toward the tip, which is altogether composed of the large recurved nail; together with the more or less terrestrial habit of life, and the usually similar plumage of the two sexes. The geese of the North American continent have been long known, and being for the most part closely allied to, and in many cases identical with, well known European forms, they fall readily into the systematic subdivisions based upon the latter. Another basis of division of the American Anserinæ is found in the presence, in two species—one North American and the other a Southern form—of deep rough superorbital depressions and reversed relative proportions of the tarsus and middle toe, together with an exclusively sea-coast habitat, and a carnivorous diet, corresponding in some of these respects to the Oidemiæ and Somateriæ amongst the ducks. These latter characters we have taken as the basis of the two sections into which we divide the subfamily, as at present considered, since they correspond with equivalent characters in one of the subdivisions of the Fuligulinæ. The presence of the deep superorbital depressions is a very general character amongst the carnivorous Natatores, though not universal.

BOOKS RECEIVED

ENGLISH.—The Year-Book of Facts for 1871: J. Timbs (Lockwood and Co.).—A Treatise on the Action of Vis Inertiae in the Ocean: W. L. Jordan (Longmans and Co.).  
FOREIGN.—(Through Williams and Norgate).—1<sup>er</sup> Nachtrag zum Lehrbuche der Auberereitskund: P. R. von Rittinger.—Biblioteca Malacologica, II., Ipsa Cheireghinii Conchylia di Spiridon Brusina.—Populäre wissenschaftliche Vorträge: H. Helmholtz.

PAMPHLETS RECEIVED

ENGLISH.—Quarterly Weather Report of the Meteorological Office, July-October 1869.—On the Relations between Chemical Change, Heat, and Force: the Rev. H. Highton.—On Ocean Currents: James Croll.—On the Cause of the Motion of Glaciers: James Croll.—Letter to the Right Hon. Col. Wilson-Patten on the Future Establishment and Organisation of our Land Forces: Lieut.-General Sir Percy Douglas, Bart.—Report of the Cheltenham College Natural History Society for the year 1870.—Statistical Review of Ten Years of Disease in Manchester and Salford: Dr. A. Ransome.—Double Spectra: W. Marshall Watts.—On the Spectra of Carbon: W. Marshall Watts.—On the Reason why the Difference of Reading between a Thermometer exposed to Direct Sunshine and one Shaded Diminishes as we Ascend in the Atmosphere: James Croll.—An Address read at the Anniversary Meeting of the Entomological Society of London, January 23, 1871: Alfred R. Wallace.—On the Chemical Composition and Microscopic Constitution of certain Cornish Rocks: J. A. Phillips.—Proceedings of the Somersetshire Archaeological and Natural History Society for 1868-69.

AMERICAN AND COLONIAL.—Report of the Present Condition of the Geological Survey of Victoria.—Reports of the Mining Surveyors and Registrars

(Victoria) for the Quarter ending September 30, 1870.—Abstracts of English and Colonial Patents and Specifications relating to the Preservation of Food, &c.: W. H. Archer (Melbourne).—Patents and Patentees (Victoria), 1874-1865; Index to ditto for 1868 and 1869; Abstracts of Specifications of Patents applied for from 1854 to 1866, Ac-Bu (Victoria): W. H. Archer.—Descriptions of new Fossil Shells of the Upper Amazon: T. A. Conrad (from the *American Journal of Conchology*).—Report of Committee on New Remedies to the Muskingum County, Ohio, Medical Society for October, 1870 (Buffalo).

FOREIGN.—Die Geschichte der Forschungen über die Phosphorite des mittlern Russlands von W. v. Guetzeit (Riga).—Rendiconti del reale istituto lombardo, Ser. II. vol. 3, fasc 19, 20, and vol. 4, fasc. 1.—Correspondenzblatt der Naturforscher-vereins zu Riga.

DIARY

THURSDAY, FEBRUARY 16.

ROYAL SOCIETY, at 8.30.—On some of the more important Physiological Changes induced in the Human Economy by Change of Climate, as from Temperate to Tropical, and the Reverse (concluded): Dr. Rattray, R.N.—On a Registering Spectroscope: Dr. Huggins, F.R.S.  
SOCIETY OF ANTIQUARIES, at 8.30.—On the Topography of Jerusalem, with special reference to the results obtained by the Palestine Excavation Fund and the Site of the Temple of Antonia and of the Acra: Thomas Lewin, M.A., F.S.A.  
LINNEAN SOCIETY, at 8.—On Tremellineous Fungi and their Analogues: L. R. and C. Tulasne.—Bryological Remarks: S. O. Lindberg, M.D.  
CHEMICAL SOCIETY, at 8.  
ROYAL INSTITUTION, at 3.—Davy's Discoveries: Dr. Odling.

FRIDAY, FEBRUARY 17.

ROYAL INSTITUTION, at 9.—On the Wolf-Rock Lighthouse: James N. Douglass.  
GEOLOGICAL SOCIETY, at 1.—Anniversary Meeting.  
ROYAL COLLEGE OF SURGEONS, at 4.—On the Teeth of Mammalia: Prof. Flower.  
SATURDAY, FEBRUARY 18.

ROYAL INSTITUTION, at 3.—Socrates: Prof. Jowett.

SUNDAY, FEBRUARY 19.

SUNDAY LECTURE SOCIETY, at 3.30.—On the Religion of Health: Dr. Elizabeth Blackwell.

MONDAY, FEBRUARY 20.

ENTOMOLOGICAL SOCIETY, at 7.—On the Dispersal of Non-migratory Insects by Atmospheric Agencies: Mr. Müller.  
VICTORIA INSTITUTE, at 8.—Phyllotaxis; or the Arrangement of Leaves according to Mathematical Law: Prof. Henslow.  
ROYAL COLLEGE OF SURGEONS—On the Teeth of Mammalia: Prof. Flower.  
LONDON INSTITUTION, at 4.—On the First Principles of Biology: Prof. Huxley. (Educational Course.)  
ROYAL UNITED SERVICE INSTITUTION, at 8.30.—On the Turret Ships now building for Her Majesty's Navy: E. J. Reed, C.B.

TUESDAY, FEBRUARY 21.

ZOOLOGICAL SOCIETY, at 9.—Note on the *Tænia* from the Rhinoceros: Dr. W. Peters, F.M.Z.S.—Remarks on certain species of Abyssinian Birds: J. H. Gurney.—On certain Indian Reptiles: Dr. J. Anderson.  
STATISTICAL SOCIETY, at 7.45.—On Currency and Pauperism: Mr. Ernest Seyd.  
ROYAL INSTITUTION, at 3.—Nutrition of Animals: Dr. Foster.

WEDNESDAY, FEBRUARY 22.

SOCIETY OF ARTS, at 8.—On Water Meters: F. E. Bodkin.  
GEOLOGICAL SOCIETY, at 8.  
ROYAL COLLEGE OF SURGEONS—On the Teeth of Mammalia: Prof. Flower.  
ROYAL UNITED SERVICE INSTITUTION, at 8.30.—The Organisation of our Military Forces: Lieut.-Colonel Arthur Leahy, R.E. (Adjourned Discussion.)

THURSDAY, FEBRUARY 23.

ROYAL SOCIETY, at 8.30.  
SOCIETY OF ANTIQUARIES, at 8.30.  
ROYAL INSTITUTION, at 3.—Davy's Discoveries: Dr. Odling.  
LONDON INSTITUTION, at 7.30.—On the Action, Nature, and Detection of Poisons: F. S. Barff, M.A., F.C.S.

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