

SCIENTIFIC SERIALS.

American Meteorological Journal, December.—The winds of the Indian Ocean, by W. M. Davis. The facts for this discussion are drawn from the "Atlas of the Indian Ocean," published by the *Deutsche Seewarte*, and the author reproduces two charts (1) for January and February, when the heat equator and the belt of low barometric pressure have advanced to about latitude 10° south in the middle of the Indian Ocean, and (2) for July and August, showing the position of the high pressure belt about 5° more northward than before, in consequence of the increased velocity of the circumpolar whirl. The most striking feature of this second chart is the extension of the south-east trade wind across the equator, as the south-west or summer monsoon. The author clearly points out the sufficiency of the rotation of the earth to influence the course of the winds, and explains the causes of the monsoons. He shows that it is not only true that continents are unessential to their development, but that they may even destroy their normal conditions.—South American meteorology, by W. H. Pickering. This paper chiefly deals with the climate of Arequipa, Peru; altitude 8,060 feet. The temperature seldom falls below 40° or rises above 75°. The winds blow with great regularity, except in the rainy season, a sea-breeze prevailing during the day, and a land-breeze for some hours before sunrise. The mean annual rainfall does not exceed four inches, while on the sea-coast rain is a great rarity; the rainy season occupies the first three months of the year; rain in the morning is practically unknown. (This and the previous paper were read before the New England Meteorological Society on October 21 last).—A South American Tornado, by W. G. Davis. This tornado occurred on November 13, 1891, and devastated the village of Arroyo Seco, near Rosario. An illustration, taken from a photograph, shows a number of heavily laden railway carriages which were upset or carried to a distance by the violence of the wind. The cause appears to have been the differences of temperature and humidity in adjacent strata of the atmosphere.—Errors of the psychrometer, by H. A. Hazen. This is a summary of a paper recently read by Mr. W. W. Midgley before the Royal Meteorological Society. The important point is that Prof. Hazen entirely confirms a statement made by Mr. F. Gaster at that meeting, that the temperature of the dry bulb thermometer is not affected by the proximity of the water cup of the wet bulb thermometer, a statement which was contrary to the general opinion of the meeting. We believe that a further confirmation of this fact will be brought forward by Mr. Gaster later on, from recent careful experiments.

Anthropologie, Tome iv. No. 4, July-August, 1893.—Mons. Maurice Delafosse contributes an interesting paper on a little-known tribe of fair negroes, called the *Agni*, who dwell on the Ivory Coast between the River Tanoué on the east, and the Rio San Pedro on the west. These albinos are neither so tall as some of the tribes of Senegal, nor so powerfully built as the natives of Dahomey. Their height varies from 1'65 m. to 1'80 m.; their body is well proportioned, they are quick and graceful in their movements, and they have sharp, bright eyes of unquestionable beauty. Their colour is in general of a beautiful bronze, more often light than dark. The *Agni* tattoo themselves, but the men are not circumcised. In the same number M. Eugène Mouton describes a *digito-dorsal* movement peculiar to man; and there is a paper by M. D'Acy on ornamented neolithic hammers, tomahawks, and axes.

SOCIETIES AND ACADEMIES.

LONDON.

Royal Society, December 14, 1893.—"Note on some Changes in the Blood of the general Circulation consequent upon certain Inflammations of an acute local character," by Dr. C. S. Sherrington, F.R.S.

Linnean Society, December 21, 1893.—Prof. Stewart, President, in the chair. Gen. Sir H. Collett and Mr. H. H. Johnson were admitted, and Messrs. G. E. Greene and A. G. Tansley were elected.—Mr. P. L. Simmonds exhibited a collection of New Zealand mosses found by Mr. G. W. Simmonds while surveying in H.M.S. *Pandora*. Mr. Murray offered some remarks on the nature and value of the collection, which the owner was understood to say would be presented to the Botanical Department of the British Museum.—The Presi-

dent exhibited and described two curious examples of associated ants and plants, namely, *Iridomyrmex caudatus* with *Myrmecodia Beccari* and *Camponotus planatus* with *Pseudomyrma Belli*, the plant being *Acacia Hindsi*.—Mr. J. E. Harting exhibited some shells of *Planorbis corneus*, which had been found by the river-side at Weybridge, which from some unascertained cause were curiously bisected. Alluding to the piscivorous habits of the water shrew, *Sorex fodiens*, he suggested that it might be the work of this little animal. Mr. A. D. Michael thought it likely to be the result of frost, the lower half of each shell being preserved by being imbedded in or adherent to the frozen mud. Referring to a MS. letter of Dr. Stephen Hales (the author of "Vegetable Statics," and a friend and neighbour of Gilbert White), which was exhibited by Mr. G. Murray, an excellent engraved portrait of him was exhibited by Mr. Harting, who made a few remarks upon his life and work. As this portrait was not to be found amongst the 600 engravings of "scientific worthies" lately presented to the library by the late Lord Arthur Russell, he offered it for the acceptance of the society.—On behalf of Mr. H. N. Ridley, Director of the Gardens and Forests Department, Singapore, the Secretary read a paper dealing with all the *Orchidæ* hitherto recorded from Borneo. In the discussion which followed, Mr. C. B. Clarke made some remarks on the distribution of these plants in the Indian and Indo-Malay regions, and on the way in which a knowledge of the species had been gradually acquired and extended.—On behalf of Mr. R. Spruce (whose death since the reading of this paper the Society has to deplore), Mr. A. Gepp read a paper on the *Hepaticæ* collected by Mr. W. R. Elliott in the islands of St. Vincent and Dominica, and took occasion to describe in some detail the nature and extent of Mr. Spruce's work, which he characterised as a most careful and excellent contribution to botanical science. The paper was accompanied by a series of minute and beautiful drawings.

Royal Microscopical Society, December 20, 1893.—Mr. A. D. Michael, President, in the chair.—Mr. E. M. Nelson exhibited and described a new pattern microscope specially designed for agriculturists.—Mr. Nelson also exhibited a new form of metallic chimney for microscope lamps.—On behalf of Mr. J. W. Lovibond, Mr. Nelson exhibited some new coloured screens for use with the microscope.—Mr. J. W. Gifford read a paper on a new monochromatic light screen, illustrating the subject by means of the lantern.—Mr. T. F. Smith read a paper on the resolution of *Pleurosigma angulatum*, illustrated with photomicrographs shown by the lantern.

PARIS.

Academy of Sciences, January 2.—M. de Lacaze-Duthiers in the chair.—A mechanical problem, by M. J. Bertrand.—On the equation to the derived partials occurring in the theory of the propagation of electricity, by M. Emile Picard. An application of Riemann's method to the problems considered by M. H. Poincaré at the previous meeting.—A chemical study of the nature and causes of the green colouration in oysters, by MM. Ad. Chatin and A. Muntz. The authors trace a connection between the percentages of iron contained in the coloured parts and colourless parts of the oysters and the intensity of the colouration. The branchiæ contain much more iron than the remainder of the body, and are most deeply coloured. The proportion of iron corresponding to a deep green or brown coloration is about 0.07 to 0.08 per cent. of the dried branchiæ. The mud of the oyster beds where colouration occurs contains a large proportion of sulphide of iron. Though it is insoluble in the solvents for chlorophyll and hæmatosin, the green colouring matter resembles those pigments in containing a large proportion of iron.—Graphic determination of position at sea, by MM. Louis Favé and Rollet de l'Isle.—Regulation of the compass by observations of the horizontal force, by M. Caspari.—A new isomeride of cinchonine, by MM. E. Jungfleisch and E. Léger. A base to which the name cinchonine δ has been given is obtained from hydrobromocinchonine by boiling with 85 per cent. alcohol and subsequent separation of unaltered base, apocinchonine, and cinchoniline. It forms very long prisms insoluble in water, but soluble in alcohol, benzene, chloroform, and acetone. It melts at 150°. For a 1 per cent. solution in 97 per cent. alcohol $\alpha_D = +125.2^\circ$. In aqueous solution +2HCl, we have $\alpha_D = +176.9^\circ$, and with 4HCl its rotation becomes $\alpha_D = +178.2^\circ$. The base and its salts decompose rapidly in air with formation of brown products less alkaline than the base itself. The salts of cinchonine

δ are generally very soluble in water, but the hydrochloride, hydrobromide, and basic oxalate form exceptions, and may be easily crystallised.—On the ophites of the Western Pyrenees, by M. P. W. Stuart-Menteath. The author controverts the supposed necessary connection between the Trias and the Ophites of this region, and shows that the presence of the latter is due to the faults of the district. He also shows that the intercalation of the ophites parallel to the surrounding beds is not an invariable case, many instances being now known of penetration of neighbouring strata, and that the granites, porphyries, and ophites of the Pyrenees are not independent of each other, but rather that the latter become important as the former die out.—On the composition of the waters of the Dranse du Chablais and the Rhone at their entrance into the Lake of Geneva, by M. A. Delebecque. The varying quantities of solid residue in the waters of these two rivers are given for various times in the year. The proportions of the substances dissolved vary, calcium sulphate being found more abundantly in winter, and the alkalies in greater proportion in summer. An approximate calculation gives for the amounts of dissolved matter carried annually into the Lake of Geneva by the Rhone and by the whole of its affluents, respectively, the figures 750,000 and 1,150,000 tons.

NEW SOUTH WALES.

Linnean Society, November 29, 1893.—Prof. David, the President, in the chair.—The following papers were read:—A Thylacine of the earlier Nototherian period in Queensland, by C. W. De Vis. The occurrence of a Thylacine, for which the name *Thylacinus rostralis* was proposed, larger than the existing species, and differing from it in other expressive features, was recorded from the Darling Downs deposits. A number of fragmentary portions of the cranium have been for some time in the Queensland Museum; but the most valuable evidence has been furnished by a recent acquisition, in the shape of the major part of the left side of an adult skull, with all the teeth except the second upper premolar in place, together with the first four cervical vertebrae.—A second note on the *Carenides*, with descriptions of new species, by T. G. Sloane. Nine new species were described, and the opportunity of reviewing the classification of the group has been taken, synoptical tables of the more important genera being furnished.—Additions to and emendations in the reference list of the land and freshwater mollusca of New Zealand, by Henry Suter. In the "Reference List" published in last year's Proceedings, a further account of several new species was promised. Descriptions, which will be fully illustrated, of these novelties have now redeemed this promise. Critical notes on various other New Zealand land mollusca accompany the descriptions. The existence in New Zealand of an undetermined species of *Gundlachia*, the young of which were formerly mistaken for an *Ancylus*, was also announced.—On the Australasian *Gundlachia*, by C. Hedley. Two Australian species, *G. Petterii*, Johnston, and *G. Beddomei*, Petterd, were figured and described, and the dentition of the former was also elaborated. A summary was given of the whole genus, with especial reference to its discontinuous distribution, and probable path of migration.—Description of *Cæcum amputatum*, an undescribed mollusc from Port Jackson, by C. Hedley. The newest addition to the Port Jackson molluscan fauna, figured and described by the author, stands nearest to *C. auriculatum*, de Folin, from the Mediterranean. It is the first of its genus observed in extratropical Australia.—Notes on the red-crowned parakeet (*Cyanorhamphus Cooki*) of Norfolk Island, by A. J. North. Having recently examined two specimens of this parakeet forwarded by Dr. P. H. Metcalfe, of Norfolk Island, the author has found it to be specifically distinct from *C. nova-zealandia*, as maintained by Count Salvadori, in whose views as to the incorrectness of the habitat assigned to *G. Cooki* by Gray, and the necessity of regarding *C. Rayneri* as a synonym of *C. Cooki* he therefore concurs.—Fourth contribution to a knowledge of the geographical distribution of Australian batrachia, with description of a new cystignathoid frog, by J. J. Fletcher. The collections recorded are mainly from the Lower Clarence and the Northern Tableland of N.S.W.; and a new species of *Crinia*—with vomerine teeth, the tympanum indistinct, the throat very dark, the belly maculate and granulate, a light vertebral line—from Jervis Bay, proposed to be called *C. Hasswelli*, was described.—Description of a new Australian *Acacia*, by J. H. Maiden and R. T. Baker. A well-defined and somewhat remarkable species from Murrumbidgee, near the Goulburn River, N.S.W., was described.

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It bears some superficial resemblance to *A. decurrens*, var. *normalis*, but the length of the leaflets, the fewness of the glands, the pinnae, and the flowers in the heads (six or eight only), are the principal distinctive differences upon which the specific rank is based. This species commemorates Baron Ferd. von Mueller, the eminent botanist, to whom we are indebted for the classical "Iconography of Australian Acacias."

NETHERLANDS.

Zoological Society, November 25, 1893.—M. Hubrecht in the chair.—M. Hubrecht contributed a paper on the development of the Shrew (*Sorex vulgaris*), and especially on its placentation. The placenta is an embryonal organ; the part which the tissue of the mother plays in its formation is considerably smaller than has been supposed.—M. Seydel exhibited models of embryonal skulls of Anguis and Lacerta, made of wax after the method of Born.—M. Bolsius dealt with the anatomy especially of the generative organs of *Branchiobdella parasita*.—M. Vosmaer treated on the so-called membrane of Sollas, in sponges of the genus Sycon.—M. Hoek described a hermaphroditical ray (*Raja clavata*). A specimen of a length of 44 centimetres (without the tail) was in possession of a single pterygopodium (the left one) only. On dissecting it was found to be furnished with a complete set of female reproductive organs (ovaries, oviducts, oviductal glands, uteri), and at the left side with a well-developed testis containing mature spermatozoa.

BOOKS, PAMPHLET, and SERIALS RECEIVED.

BOOKS.—Electromagnetic Theory: O. Heaviside, Vol. i. (*Electrician Publishing Company*).—Eau Sous Pression: F. Bloch (Paris, Gauthier-Villars).—Anuario publicado pelo Observatorio do Rio de Janeiro, 1893 (Rio de Janeiro).—The Crinoidea of Gotland, Part 1.—The *Crinoidea Inadumato*: F. A. Bather (Stockholm, Norstedt).—Index-Catalogue of the Library of the Surgeon-General's Office, U.S. Army, Vol. xiv. (Washington).—Results of Rain, River, and Evaporation Observations made in N.S.W. during 1892: H. C. Russell (Sydney).

PAMPHLET.—Report of the Meteorological Council to the Royal Society for the year ending March 31, 1893 (Eyre and Spottiswoode).

SERIALS.—Geographical Journal, January (Stanford).—Natural Science, January (Macmillan).—Handbuch der Paläontologie Erste Abthg. iv. Band, 3. Liefg. (Williams and Norgate).—Observatory, January (Taylor and Francis).—Bulletin of the New York Mathematical Society, December (New York, Macmillan).—Revue Générale des Sciences, No. 24 (Paris).—Annals of Scottish Natural History, January (Edinburgh, Douglas).—American Journal of Science, January (New Haven).—Journal of the Royal Statistical Society, December (Stanford).—The Physical Society of London, Proceedings, Vol. xii. Part 3 (Taylor and Francis).—Contributions from the Botanical Laboratory of the University of Pennsylvania, Vol. i. No. 2 (Philadelphia).—Medical Magazine, January (Southwood).

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