

Hagene, and R. Dubois: Xanthyl compounds derived from amino acids.—Albert Michel-Lévy and Henri Termier: The Trapp rocks in the region of Raon-Étape (Vosges).—Etienne Patte: The isle of ashes, an Indo-Chinese volcano of recent appearance. This volcanic island was discovered in the process of formation by the Japanese ship *Wakasamaru* on March 2, 1923. The volcano was very active a fortnight later. By May 27, the area of the island had been reduced by about one-third, and the eruption had ceased.—F. Ehrmann and J. Savornin: Complement to the stratigraphic scale of the Kabylie des Babors, Algeria.—G. Pontier: The fossil elephants of England. The mutations of *Elephas antiquus* in the upper Pliocene and English Quarternary.—H. Colin and H. Belval: The soluble hydrocarbons of the wheat grain in the course of development.—A. Policard and G. Mangenot: The state of the oil in the reserve cell of the fatty seeds. The seed in germination.—E. Grynfeltt: The anatomical constitution and the signification of the pavilion of the uterine tube in woman.—Jules Amar: The phenomena of respiration. From a consideration of the total surface of the red blood corpuscles and the volume of oxygen consumed per minute, it is concluded that the hæmatic absorption is subordinate to the preliminary solution of the oxygen in the blood fluid. The true function of the red corpuscles is to increase, by their oxygen absorption, and to regularise, like a flywheel, the oxygen reserve of the higher animals.—R. Faillie and J. P. Langlois: The energy expenditure of the organism in walking down hill on an inclined plane.—R. Herpin: The swarming in full daylight of a *Pionosyllis lamelligera*.—Emile F. Terroine and H. Barthélémy: The composition of the organisms in the course of ovogenesis in the frog, *Rana fusca*. There is not a synthesis of fat at the expense of the tissues, but a transport to the ovary of fat previously accumulated in the organism. At the moment the eggs are delivered, the animal, without the ovaries, contains a very small proportion of fatty matter.—Ch. Dejean: The origin of the vitreous body and of the zonule.—O. Duboscq and P. Grassé: The small flagellæ of *Calotermes flavicollis*.—Etienne and Edmond Sergent and A. Catanei: Vaccination against paludism of birds obtained by the inoculation of a small number of living sporozoites.

MELBOURNE.

Royal Society of Victoria, June 7.—E. J. Hartung: The Mount Wilson solar observatory. A general account of the spectroheliograph and the establishment of the observatory on Mount Wilson was given. The solar tower telescopes, and the great reflectors for stellar and nebular work, were described and some of the lines of investigation which these instruments have rendered possible, were discussed. In conclusion reference was made to the projected Australian solar observatory on Mt. Stromlo, from which much may be expected.

June 14.—Mr. Wisewould, president, in the chair.—E. F. J. Love: Acceleration of gravity at the Melbourne Observatory. On taking Wright's determination into account, together with those utilised by the author in his previous paper, the value of g is increased, and the mean error diminished by 0.001 cm./sec.⁻². Reasons are given for regarding Wright's recent suggestion of variation in g with the time as unnecessary.—Sydney Pern: Different types of Australian boomerangs and their flight. The different types of war and return boomerangs, found amongst the various tribes were described, and also the methods of making

the boomerangs, and how they were thrown. The author attributed the origin of the boomerang to the slow evolution of the throwing stick, which, when flattened and slightly twisted, was capable of greatly increased range. This stick took a slightly circular course, and by modifying it, a boomerang which would return was eventually developed. The different flights possible with the return boomerang were illustrated by wire models, and the method of throwing them to attain these different flights were explained. Four different ways of making the return boomerang were shown.

SYDNEY

Linnean Society of New South Wales, April 18.—Mr. A. F. Basset Hull, president, in the chair.—W. F. Blakely: The Lorantheaceæ of Australia, Pt. iv. A continuation of the systematic descriptions, eleven species and six varieties being dealt with, of which six species and five varieties are described as new.—H. I. Jensen: Some notes on the Permo-Carboniferous and overlying systems in Central Queensland. A summary of the results of geological reconnaissance work in the country lying between the Charleville Railway line and the Longreach Railway line in Western Queensland. Notes are given on the geological sequence in the Carnarvons and on the Bowen formations in the type district.—Vera Irwin-Smith: Studies in life-histories of Australian Diptera Brachycera. (i.) Stratiomyiidae. No. 4. The respiratory system in larva, pupa and imago of *Metoponia rubriceps* Macquart. A contribution to the subject of the post-embryonic development and comparative morphology of the respiratory system in Diptera and in insects in general.

May 30.—Mr. A. F. Basset Hull, president, in the chair.—H. J. Carter: Revision of the genera Ethon, Cisseis, and their allies.—T. Harvey Johnston and G. H. Hardy: A revision of the Australian Diptera belonging to the genus Sarcophaga. This group of flies is of medical and veterinary interest. Eight names are placed as synonyms for the first time, one new species is described, one is given a new name, and one, which evidently has been imported from North America, is added to the list, making twenty-three species now known from Australia.—A. A. Lawson: The life-history of *Microcachrys tetragona* (Hook.). Practically a complete account of the gametophyte structures of one of the rarest and most interesting of the Australian Podocarpaceæ.—J. McLuckie: Studies in symbiosis. iv. The root-nodules of *Casuarina Cunninghamiana* and their physiological significance.

Official Publications Received.

U.S. Department of Agriculture: Bureau of Biological Survey. North American Fauna, No. 46: A Biological Survey of the Pribilof Islands. Pp. vi+255. (Washington: Government Printing Office.)

Publikationer fra Det Danske Meteorologiske Institut Meddelelser. Nr. 5: Meteorological Problems. I. Travelling Cyclones. By V. H. Ryd. Pp. viii+124. (Kjbenhavn: G. E. C. Gad.)

South Australia: Department of Mines. Mining Review for the Half-year ended December 31, 1922. No. 87. Pp. 95+1 plate. (Adelaide: R. E. E. Rogers.)

Madras Agricultural Department. Year Book 1922. Pp. ii+84+5 charts. (Madras: Superintendent Government Press.)

Madras Agricultural Department. Bulletin No. 85: A Summary of the Results of the Experiments on Paddy conducted at the Manganallur Agricultural Station. By N. S. K. Pillai. Pp. v+85+12 charts. (Madras: Superintendent Government Press.) 1 rupee 14 annas.

Report on the Operations of the Department of Agriculture, Madras Presidency, for the Official Year 1921-22. Pp. ii+chart+29+5. (Madras: Superintendent Government Press.) 4 annas.