

with a watery mixture of sand and salt, known as *sabakha*, which often has a crust over salty sludge. In the October issue of the *Geographical Journal*, Dr. J. Ball discusses in detail his proposal to utilise this depression for power production. He suggests the construction of four pipe lines to bring in the waters of the Mediterranean, which lies about fifty-six kilometres to the north. For a lake area of 13,500 square kilometres with a level below the sea of 50 metres, he calculates a permissible influx of 56,700,000 cubic metres a day. The level would be maintained by the heavy loss of water due to evaporation, which he calculates at 4.6 millimetres a day where the rainfall is not more than 20 millimetres a year. This process would, of course, lead to increasing salinity of the lake and the eventual filling up of the depression by saline deposits, but Dr. Ball calculates that this would not occur for many centuries. His plan foresees the gradual formation of a lake of the maximum depths extending over nearly two centuries. Dr. Ball has worked out his scheme in much detail and gives all the figures in his paper. It should be noted that the distance over which the power would need to be transmitted to the Nile delta is about 560 miles.

Ellsworth Antarctic Expedition

ONE of the major problems of the antarctic, the relation between the Ross Sea and the Weddell Sea, is the objective of the Ellsworth expedition which has sailed for the Ross Sea in the *Wyatt Earp*. The sole aim of Mr. L. Ellsworth and Mr. B. Balchen is to fly from the Bay of Whales, early in January, across to the Wilhelm Barrier in the south of the Weddell Sea on a course that will take them within about four hundred miles of the pole on the Pacific side. The *Geographical Journal* of November gives some details of the expedition. No landing will be made in the Weddell Sea and the party will return at once to the base. The double journey of a total of 2,900 miles should be made in about twenty hours. A Northrop low-wing monoplane has been built for the flight and tested in Canada and Norway. It is not contemplated that more than a week will be spent in the Ross Sea, though a year's supplies are being carried.

Journal of the University of Bombay

THIS journal is mainly intended for the publication of the results of researches carried out by the teachers and students of the University of Bombay. It is to be issued six times in the year; the parts issued in January and July are to be devoted to history, economics and sociology, the part for March to biology, the part for September to the physical sciences and mathematics, and the parts for May and November to arts and law. We have received the biological part, dated March 1933, which contains thirteen papers, three on botanical subjects, seven on zoology, and others on the rabbit ovulation test for pregnancy, the characters of the Indian pelvis and the biophysics and biochemistry of the blood in tuberculosis. The zoological papers include

descriptions of the vascular system of the sea-slug, *Oncidium*, the skeleton of the globe-fish, *Tetrodon*, the reproductive and excretory organs of *Thalassema bombayensis*, and of the history of the thymus of the plaice. This last investigation was carried out in the University of Liverpool, but the others represent work done in Bombay. The papers are illustrated by line drawings in the text and by plates. Several of the line drawings are somewhat crudely executed; but the fault in some cases is in the original drawings, though in others a smoother paper would probably be more suitable for clear reproduction of details. At the end of the part are abstracts of four M.Sc. theses in Bombay for the year 1931-32.

Disappearance of 'Submerged Forests'

THE disappearance of the last traces of the 'submerged forests' at the old peat beds of the Lancashire and Cheshire coast, where the tides have now washed away all trace of the prehistoric tree stumps that littered the shores so abundantly at West Kirby, Hoylake, Dove Point and Leasowe on the Cheshire shore, and Hightown and Blundellsands on the Lancashire shore, has robbed geologists in particular of one of the most extensive of these collections on the British coasts. The submerged forests near Liverpool have perhaps been more closely studied than any others of these remains, and a generation ago the stumps that littered parts of the coast numbered many hundreds and were widely known. None now remains. Numerous remains of the antler deer (*Cervus elaphus*), wild oxen (*Bos longifrons* and *B. primigenius*), the metacarpel of a roe deer (*Capreolus capræa*) and of domestic animals as the horse, dog, and in 1873 the skull of *Homo sapiens*, have been taken from these submerged forests in the Liverpool area. Smith (*Proc. Historic Soc. Lancs. and Cheshire*, 18) describes an unusually fine pair of horns of the larger form of the red deer taken at Leasowe, 1863, each antler forty inches long and the pair measuring seven feet from tip to tip, while Liverpool Museum received a large number from Hightown in 1916 (*Proc. Liverpool Geol. Soc.*, 14). Roots of *Osmunda* and shells of *Buccinum*, *Turritella*, *Scribicularia*, *Tellina* and *Natica* have also been obtained from the blue silt below the peat beds.

Botanical Society and Exchange Club of the British Isles

UNDER the editorship of the new secretary, W. H. Pearsall, this report (Arbroath: T. Buncle and Co, 1933) contains a mass of interesting information relating to British field botany. Lists and critical notes on many new varieties, subspecies and adventive species, and new county records are given. Articles on critical species and genera are contributed by the late Dr. Drabble on "*Ranunculus bulbosus* and its varieties in Great Britain" and "*Valeriana officinalis* and its allies in Great Britain". Mr. Pearsall gives a revision of the genus *Zannichellia* and new keys and descriptions of the British species of *Carex*. A. E. Wade contributes notes on the genus *Myosotis* and J. S. L. Gilmour writes on "The Taxonomy of Plants intermediate between *Medicago*

sativa and *M. falcata* and their history in East Anglia" and shows that *M. sylvestris* is of hybrid origin. Other articles include "The Adventive Flora of the Port of Bristol" by C. I. Sandwith, "Plant Nomenclature" by Dr. Sprague, and a well-illustrated account of environmental adaptation in various sand dune plants at Braunton Burrows by Dr. F. R. E. Wright.

Australian Entomology

INTEREST in the remarkable insect fauna of Australia began to be taken soon after Capt. Cook reached the continent in 1770. There has since arisen an increasing number of writings on Australian insect life. Of late, the stimulus given by applied entomology has led to a great and important literature on the insect pests of the economic animals and plants of the continent. In September 1932, a "Bibliography of Australian Entomology, 1775-1930", by Mr. Anthony Musgrave, was published by the Royal Zoological Society of New South Wales. In his capacity as entomologist to the Australian Museum, Sydney, Mr. Musgrave has listed the title of every known book, memoir and article bearing upon the subject. These are arranged under the authors' names, which are set out alphabetically. A feature of special interest is the series of biographical notes on many of the writers and collectors who have helped to build up our knowledge of Australian entomology. In the production of this bibliography, which runs to 380 closely printed pages, both the author and the Society have conferred a boon on entomologists throughout the world.

Hydrographical Observations from Danish Light-Vessels

THE recently published "Mean Values of Observations from Danish Light-Vessels" is a pamphlet issued as a special reprint from the Nautical Meteorological Annual, 1932, of the Danish Meteorological Institute. There are numerous tables summarising observations made at Danish light-vessels, such as the salinity at 8 a.m. of the sea-water at the surface and at various depths down to the ocean bottom, frequencies of horizontal visibility of the atmosphere between certain limits in miles, and frequency of ocean currents of various velocities, at different depths of the ocean. These are all long-period averages, mostly referring to 1901-30 or 1903-30, but for sea surface temperature going back to 1881, and for visibility beginning only in 1918, when the modern system of measuring visibility was introduced, and extending only to 1927. This is clearly not a work for the ordinary student of meteorological literature, but one for the specialist in hydrographic work and for the sailor, and even to those it must be mainly a work of reference. The number of individual observations on which it is based is very large, and the statistical value of the averages is proportionately great.

Revision of Ordnance Maps

IN the report of the Progress of the Ordnance Survey for the year 1932-33 (London: H.M.

Stationery Office, 1933. 3s. 6d. net), attention is directed to the difficulties and delay in revision of the sheets owing to financial restrictions. The reduced staff available for field work on large-scale plans means that revision has to be limited, more and more, to areas completely altered or built over since the last edition of the sheet. Field work thus tends to become original survey and the time needed for each sheet increases. While the yearly output of 25-in. plans was more than two thousand in 1923, it has now fallen to about seven hundred. In the earlier year the number of man-days spent in the field upon the revision of one 25-in. sheet was about eleven; it is now about fifty-two. The delay is thus progressive as time goes on, and has already become very serious. Since the revision for the one-inch sheet is based on large-scale plans, the new edition of small-scale maps is seriously impeded. Whereas in 1913 a one-inch reviser could do 96 square miles per month in open country or 40 square miles in close country, he can now do only 18 per month in country round London. Nevertheless, the new relief edition of the one-inch map is making steady if slow progress.

Water Flow of the Nile

Two further volumes of the Egyptian Government's work on the Nile Basin have been published ("The Nile Basin". By H. E. Hurst and P. Phillips. Vols. 3 and 4. Cairo: Government Press. 10s. each). Vol. 3 deals with the gauge readings of the Nile and its tributaries taken at about a hundred stations between El Leisi, a few miles above Cairo, to stations on Lake Victoria and Lake Albert. Most of the data begin within this century, but it is of interest to note that on Roda Island the Nile levels have been recorded each year since the Arab conquest of Egypt. Records of other Arab nilometres are also known but are of little value as their relation to present levels cannot be determined. Vol. 4 records ten-day and mean monthly discharges of the Nile and tributaries at about forty stations, which have been computed in various ways.

The 'Iconoscope' for Television

AN article under this title appeared in NATURE of October 21, p. 648. A paper by Dr. V. K. Zworykin has now appeared in Great Britain (*J. Inst. Elect. Eng.*, No. 432). He describes clearly the theory, characteristics and mode of operation of his system, which has now reached the commercial stage. The device used for the registration of the image is called an 'iconoscope'. It consists of a vacuum tube, an electron-emitting 'gun' and a photo-sensitive surface of a unique type. This surface is scanned by an electron beam from the gun which serves as a type of inertialess commutator. The principle of operation permits the storing of energy and very largely increases the output as compared with the ordinary types of television scanners. The reproduction of the image is accomplished by another cathode ray tube with a fluorescent screen called the 'kinescope'. It modulates the impulses from the