

periodicals and serials and some 55,732 books in 1955. A selected list of bibliographies published in the U.S.S.R. and a list of dealers in Soviet publications in the United States follow, and the arrangements made for translating Russian periodicals, papers, monographs and abstracts are then briefly described. This account is supported by a table listing Russian scientific periodicals available in English and giving the agency, sponsor and subscription. Some details of abstracting services are included, and there is a list of annual publications which contain reviews of Soviet science.

Geodetic Marker at the South Pole

DURING the 1960 season of the U.S. Antarctic Research Programme the Coast and Geodetic Survey of the U.S. Department of Commerce will erect a marker permanently identifying a geodetic position near the South Pole. The 3-in. bronze disk to be erected inside a building will indicate the exact location of the South Pole Station of the U.S. Antarctic Research Programme at lat. 89° 59' 43.6" S. and long. 24.8' W. At this spot the scientific leader, Major Palle Mogensen, made 52 independent sets of astronomical observations during the antarctic night. Data resulting from these observations were brought back to the United States by Major Mogensen and passed on to the Coast and Geodetic Survey for computation of the exact position of his observing station. Scientists of the Bureau have determined that the South Geographical Pole lies approximately 1,650 ft. south of Major Mogensen's station.

Vegetation on Mars

It has often been suggested that the dark areas of Mars consist partly of vegetation, particularly in view of the seasonal variation of the intensity of the dark regions. Tests for the high near-infrared reflectivity characteristic of many plants have all given negative results. A few terrestrial plants, such as some lichens, do not show this characteristic, and possibly such plants are present on Mars. W. M. Sinton (*Astrophys. J.*, 126, 231; 1957. *Lowell Obs. Bulletin*, No. 103; 1959) has suggested and twice carried out a new test for the presence of vegetation. All organic molecules possess strong absorption bands at wave-lengths near 3.4 μ , the wave-length of the carbon-hydrogen bond resonance; the precise wave-length depends on the individual molecule. These bands have been studied by Sinton as they appear in the spectra of a number of terrestrial plants, including lichens and mosses. In all the plants tested, the carbon-hydrogen resonance bands appeared to some extent. Tests were carried out on Mars at the oppositions of 1956 and 1958. Relatively little light is received from Mars at a wave-length of 3.4 μ , so that very sensitive equipment was needed to render the work possible. A lead sulphide cell cooled in liquid nitrogen was chosen as the detector and preceded by a monochromator equipped with a lithium fluoride prism. The 1956 tests were made at Harvard and the 1958 tests at the 200-in. telescope at Mount Palomar. The radiation received from Mars was analysed theoretically into thermal radiation and reflected solar radiation. The latter shows three absorption bands at 3.43 μ , 3.56 μ and 3.67 μ . These appear to be peculiar to the dark regions of Mars. The bands are weak or absent in the bright regions, and are therefore formed neither in the atmosphere nor in the bright regions of Mars. No other new absorptions were found. Although one cannot

be certain that no inorganic molecule can explain these absorption bands, the observed spectrum does fit very closely that of organic compounds and plants. The first two bands are easily observed in plants: that at 3.67 μ seemed at first to be an enigma. However, it has now been found in the alga *Cladophora* and appears to be produced by carbohydrate molecules in the plant. Sinton's results are the best evidence yet produced for the existence of vegetation on Mars.

A New Fossil Penguin from Australia

A SPECIMEN of part of a fossil penguin named *Anthropodytes gill* sp. nov., found by E. D. Gill in 1950 in western Victoria, Australia, has been described by G. G. Simpson (*Proc. Roy. Soc. Victoria*, 71, 113; 1959). The actual find (now housed in the National Museum of Victoria) consists of the right humerus, nearly complete, but lacking most of the head. *Anthropodytes* does not show any unmistakable signs of special affinity with any previously named genus, but of the fourteen known genera of fossil penguins in which the humerus is known the closest resemblance is to *Archæospheniscus* from New Zealand. Although *Anthropodytes* was not found *in situ*, evidence relating to attached fossils, situation, and the fluorine test presented by E. D. Gill (p. 121, *loc. cit.*) strongly suggest that the specimen came from an adjacent marine Miocene formation.

Molluscan Fauna of the Netherlands

THE Netherlands' Malacological Society, Amsterdam, has this year celebrated its twenty-fifth anniversary, and to commemorate the event the Society has published a special supplement to its journal (*Basteria*, Vol. 23) devoted to the Netherlands as an environment for molluscan life. The book contains seven chapters, all in English, with summaries in Dutch. The opening section deals with the history of the study of the Dutch recent Mollusca and this is followed by accounts of the general ecology of the marine, brackish-water, fresh-water and terrestrial mollusc fauna in the Netherlands. Two other chapters are concerned with the nudibranch molluscs and with the dead shells which are found washed up on the beaches. The authors who have contributed to this volume are all well-known authorities on their subjects and the result of their efforts makes good reading not only for those specifically interested in the Mollusca but also for all zoologists who are interested in ecology.

The Agricultural Institute of Ireland

THE Council of An Foras Talúntais (The Agricultural Institute), as part of its educational activity in the promotion and encouragement of agricultural research, announces the award of junior postgraduate agricultural research scholarships for the academic year 1959-60 to the following candidates, who will undertake postgraduate studies in the University departments listed: Mr. James Coyle (University College, Dublin), at the Department of Chemistry at the University of Leeds; Mr. Julian Hart (University College, Cork), at the Department of Statistics, University College, Cork; Mr. James Kavanagh (University College, Dublin), at the Department of Botany, University College, Dublin; Mr. Ronan F. Lambe (University College, Galway), at the Department of Chemistry, University College, Galway; Mr. John L'Estrange (University College, Dublin), at the