

ance. It is a very useful contribution to the archaeology of a large part of the western United States.

Hints for Plant Collectors

A USEFUL little handbook, "Instructions for Collectors" (No. 10, British Museum (Natural History); sixth edition, 1957; price 2s.), with a preface by Dr. George Taylor, tells the plant collector what he should know if he is to set about the job in the right way: when, where and what to collect, how to collect, label and annotate, pack and transport. It is all here, in some seventy-two pages, with helpful notes on the proper handling of the abundant and diverse materials of the plant kingdom, from algae to xerophytes, mention being made of several new techniques which are not yet widely known but which should contribute much towards preserving plants in good condition for future study and reference.

A Cæsium Clock

IN the issue of *Atoms for Peace Digest* for February 23 (2, No. 19), the fortnightly periodical of the United States Information Service, brief details are given of the 'Atomichron', the first cæsium atom-beam clock to be available commercially in the United States, and probably in the world. It has been designed by the National Company, Inc., of Malden, Massachusetts, and developed under the guidance of Prof. J. R. Zacharias, of the Massachusetts Institute of Technology. The model costs 50,000 dollars, weighs 500 lb. and measures 84 in. × 22 in. × 18 in. It is capable of keeping time to an accuracy of five seconds over a period of 300 years, and is based on the 9 192 631 830 Mc./s. frequency of the cæsium atom. The Atomichron has already been used by the U.S. Armed Forces in navigation systems. It should find application in the improvement of astronomical observations, long-range navigation, radio communications, surveying and map-making, and in the study of basic physics, particularly the accurate determination of the velocity of light.

Kodaikanal Observatory

THE annual report of the Kodaikanal Observatory for 1955 (Delhi: Manager of Publications, 1956) deals chiefly with the astronomical and allied geophysical work of the Observatory. The meteorological and seismological data and the administrative details are published elsewhere. An expedition of seven members from the Observatory set up a camp at Hingurakgoda, Ceylon, to observe the total eclipse of June 20, 1955; unfortunately optical observations were impossible owing to cloudy weather, but geomagnetic, ionospheric and radio-astronomical observations were successfully made. During the partial eclipse of December 14, 1955, geomagnetic and ionospheric observations were made at Kodaikanal and a close watch was kept on the variations of solar activity on that day. The report contains an account of scientific co-operation between the Observatory and other institutions, including exchanges of spectroheliograms with foreign observatories, quarterly statements relating to solar flares, which were sent to the Royal Greenwich Observatory and Meudon Observatory, periodical lists of solar flares sent to a number of scientific workers in India and abroad, information relating to the central meridian passage of sunspot groups and forecasts of expected magnetic and ionospheric disturbances, supplied to certain interested institutions in India.

Other matters dealt with include sunspot activity, solar flares, prominences, radio astronomy, geomagnetic observations, ionospheric observations, cosmic rays, seismology, meteorology, library research and publications.

Kodaikanal Observatory Bulletin, No. 141, Part I (pp. 373-416. Delhi: Manager of Publications, 1956. Rs. 4/8/0), embodies the results of observations of prominences made at the Observatory during the second half of 1953, supplemented by data from Mt. Wilson and Meudon, which have provided spectroheliograms for those days on which Kodaikanal had imperfect or no photographs. Magnetic observations for the same period are also included.

Polish Scientific Publications

THE Polish Cultural Institute (81 Portland Place, London, W.1) issues a selective "Quarterly Guide to Polish Periodical Literature". The entries are classified alphabetically under subject headings and in the first issue of Vol. 2 (January 1957) those relating to scientific subjects (under biology, biochemistry, chemistry, electrotechnics, geodesy and cartography, geography and geology, mathematics, mechanics, civil engineering, philosophy, physics, physiology, and history of science) occupy some twenty pages out of the fifty-seven. The titles of articles are given in English, and there is a list of periodicals covered.

Ninth Pacific Science Congress

THE ninth Pacific Science Congress of the Pacific Science Association will be held in Bangkok during November 18-December 9, 1957, under the auspices of the Government of Thailand and the Science Society of Thailand. A number of symposia are being arranged, for which papers are invited, on subjects including geology and geophysics, meteorology, oceanography, fisheries, zoology, entomology, botany, conservation, soil and land classification, forest resources, crop and animal improvement, development of natural resources, anthropology and social sciences, public health and medical science, nutrition and museums. Details may be obtained from the Secretariat, Pacific Science Association, Bishop Museum, Honolulu 17, Hawaii. The Royal Society would be interested to know of British scientists intending to be present at the Congress.

International Congress of Pure and Applied Chemistry

THE sixteenth International Congress of Pure and Applied Chemistry is to be held in Paris during July 18-24. The Congress is to be in three divisions: that on physical chemistry will discuss physico-chemical aspects of radioactive elements, combustion of gaseous mixtures, water in chemical compounds and diffusion in liquids and gels. The inorganic chemistry division will discuss solid compounds of the transition metals, the combinations of boron with hydrogen and non-metallic elements, the chemical properties of the actinium series and of substances at high temperatures. The organic chemistry division will deal with reaction mechanisms and intramolecular rearrangements, organo-metallic and organo-metalloidal compounds, selective reactions and orientation phenomena, stereochemistry, and the structure and synthesis of natural compounds. Applications for membership of the Congress and abstracts of papers from British authors should be sent to the British National Committee for Chemistry, Burlington House, Piccadilly, W.1, as soon as possible.