metal-arc welding and electrodes during the past half-century; welding as a career; the welded structure in a pump-house foundation; the effect of steel quality on spot-welding properties; and the use of self-adjusting arc equipment for welding a light-alloy deckhouse. The presentation of the *Journal* is excellent, permitting photomicrographs to be reproduced with admirable clarity. It should perform a most valuable function in a sphere of metallurgy and engineering which is bringing about a revolutionary change in the constructional field.

A Systemic Rust Fungus

When the uredospores of the autoecious rust *Puccinia suaveoleus* attack the creeping thistle *Cirsium arvense*, isolated uredo-pustules, usually with some teleutospores, are formed (B. P. Menzies, *Ann. Bot.*, N.S., 17, 68 and 551; 1953). The mycelium later grows down into the roots and becomes systemic. In some of the root-buds the mycelium appears unchanged and bears uredosori; in others it undergoes a somatic segregation of mating type and bears spermogonia only. Teleutospore germination is so erratic that basidiospore infection is responsible for only a small amount of the spermogonial infection observed. The spermogonial mycelium in the systemically infected shoots is heterothallic, and there are two mating types. All the spermogonia on one shoot bear spermatia of only one mating type. Therefore, segregation of mating type must take place at the base of the shoot or even in the roots. The multinucleate condition of the mycelium in both uredosoral and spermogonial shoots makes it impossible to observe segregation directly.

Common Marine Bivalves of California

A guide to some sixty species of Californian lamellibranch molluscs of economic importance has been compiled by John E. Fitch and published under the title "Common Marine Bivalves of California" (Fish Bulletin No. 90 of the Department of Fish and Game, State of California; pp. 102; San Francisco, 1953). The first twenty pages contain general information on nomenclature, habits, structure and reproduction of marine bivalves, and also give methods of collecting, culturing and preparing edible species. Then follows a key for identification of the species, with diagrams to illustrate technical terms. The main section comprises descriptions of the species, a page being allotted to each. A photograph of the outside of the shell is given; but only in the piddocks and gapers are the siphons shown. A brief description of distinguishing characters is accompanied by notes on the range of each species in California, its habits and economic use. A number of species of no economic value, but which may be taken when searching for food or bait, are included. The author has made an attempt to standardize the names by which the commoner bivalves are known, and has found it necessary to change some to accord with their phylogenetic relationships. The style of this pamphlet is clear and concise, and the black-and-white photographs are excellent. Although intended for the amateur naturalist or clam digger, this work has considerable scientific value. The method of presentation might well form a basis for other publications of a similar nature.

University of Leeds: Gifts to Departments

Gifts made to various departments in the University of Leeds include the following: to the Department of Physical Chemistry, £700 from the Anglo-Iranian Oil Co., Ltd., for research, and 5,000 dollars from the Rockefeller Foundation for research in radiation chemistry under the direction of Prof. F. S. Dainton; to the Department of Textile Industries, £250 from the Anglo-Iranian Oil Co., Ltd., for research; to the Department of Civil Engineering, £500 from the Cement and Concrete Association for scholarships and £200 a year (plus income tax) for seven years from Wm. Airey and Son (Leeds), Ltd., for scholarships in concrete technology; and to the Department of Colour Chemistry and Dyeing, £5,000 from the British Silk Dyeing Co., Ltd., Balloch, Alexandria, Scotland, for research.

Department of Scientific and Industrial Research: Grants to Research Workers and Students

The Department of Scientific and Industrial Research is offering three types of grants to British research workers and students normally resident in Great Britain: maintenance allowances (approved fees plus £245–325) to postgraduate students for a year's full-time training in the methods of scientific research; senior research awards (maximum of £600 a year) for postgraduate research; and grants for special researches to enable investigators to obtain scientific, laboratory or clerical assistance or to purchase special equipment, materials or services not normally provided by a university for scientific purposes. Generally speaking, candidates for maintenance allowances or senior research awards should not be more than twenty-seven years of age. All the awards are tenable in universities, colleges, establishments of the Department of Scientific and Industrial Research, research association laboratories and other institutions approved by the Advisory Council for Scientific and Industrial Research. The closing date for applications for maintenance allowances is April 15 and for the other awards April 1. Further information is available in a pamphlet, "Notes on D.S.I.R. Grants to Research Workers and Students" (price 6*d.*), obtainable from the Department at Charles House, 5–11 Regent Street, London, S.W.1.

Colonial Service: Recent Appointments

The following appointments have recently been made in the Colonial Service: J. R. Antoine (assistant plant pathologist, Mauritius), senior agricultural officer, Mauritius; P. C. Chambers (director of agriculture, Cyprus), director of agriculture, Northern Region, Nigeria; M. Robson (conservator of forests, Nigeria), chief conservator of forests, Western Region, Nigeria; I. Langdale-Brown, botanist, Uganda; J. P. T. Boorman, scientific officer (entomologist), Nigeria; D. N. F. Hall and J. H. Wickstead, scientific officers (fisheries), Singapore; F. H. Talbot, scientific officer, East Africa High Commission; P. J. Larkin, veterinary officer, Kenya; P. A. L. Wight, veterinary officer, Nyasaland; E. F. W. O. Brunig, assistant conservator of forests, Sarawak; N. W. Neal, veterinary officer, Uganda; J. Nicholls, livestock officer, Nyasaland; F. S. Peritz, veterinary officer, Local Civil Service, Gold Coast; J. F. Redhead, assistant conservator of forests, Nigeria; J. M. A. Sly, scientific officer (agronomist), Nigeria; S. R. Smithers, scientific officer, Gambia; H. A. W. Southon, scientific officer (entomologist), East Africa Tsetse and Trypanosomiasis Research and Reclamation Organization, East Africa High Commission; L. G. Stephens, veterinary officer, Hong Kong;