whether they are occupational health doctors, nurses, running courses for instructors, instructors themselves, or supervisors and management.

J. R. GLOVER

Emergency Surgery of the Hand. By Erik Moberg. (Pp. 74; 38 figs; 10s. 6d.) Edinburgh and London: Livingstone. 1967.

This short monograph devoted to the emergency aspects of hand surgery is intended for the use of those, who, though not experienced in this field, might have to undertake the management of hand injuries.

The author successfully condenses into 70 small pages a large amount of information and practical advice. The doctor in industry will find the comments on Diagnosis, Aftercare, Sensory Testing, and the Assessment of Sensation for Medico-legal Purposes of particular interest.

This book is not a substitute for the several comprehensive textbooks on hand surgery which have been published in recent years, but it will certainly be of value in the context for which it is intended.

J. D. CAMERON

Occupational Disease in California Attributed to Pesticides and Other Agricultural Chemicals 1965 (Pp. 35.)

A statistical record of occupational disease attributed to pesticides and other agricultural chemicals in the State of California in 1965 can scarcely fail to be of interest, since this State accounts for over one-fifth of the total usage of pesticide chemicals in the United States. Differences in the proportions of the various pesticides used make detailed comparison with Great Britain impossible, but Californian usage may be between 10 and 30 times greater than that of the British Isles. In 1965 there were just under 325,000 workers in agriculture in California compared with over 430,000 in Great Britain. These rough comparisons provide a necessary background for the British reader in assessing the report. It is compulsory under the State Labour Code for a doctor attending an occupational injury to send a 'First Report of Work Injury' to the Californian Department of Industrial Relations. The reports are also made available to the Bureau of Occupational Health in the Department of Public Health responsible for this publication which deals with illness in all occupations attributed to agricultural chemicals. It therefore represents a far more complete picture of the incidence of acute illness attributed to this cause than is available in Great Britain.

The total of 1,340 reports of injury is analysed in nine tables according to geographical location and industry, location and chemical grouping, chemical grouping and type of poisoning, type of industry, individual occupation, month of injury, and by age, sex, and clinical type of disease. The tables, some of which make considerable demands on the eyesight, are preceded by 20 pages of discussion and comment which includes records back to 1951 of all fatalities in California due to agricultural chemicals. The pattern is similar to that in Britain. Occupational fatalities in agricultural

workers contribute least to the total (there have been no deaths of agricultural workers from accidental exposure to agricultural chemicals in British agriculture since 1955), and accidents to children account for the greater number of fatalities (60%). There is no indication of the circumstances of the accidental poisonings in children, but some details of these were given in a previous publication of the record up to 1963 from the same Bureau (West and Milby Residue Reviews, **11**, 141, 1965) which showed that Californians, too, commit the tragic folly of using old beverage bottles to hold pesticides and are careless in disposing of supposedly empty containers.

This previous publication indicates that much more information on the circumstances of accidents is collected by the Bureau than is to be found in the present report. The medical reader interested in the prevention of accidents would forego much of the information in the tables on geographical location, which is meaningless without a similarly detailed knowledge of the pattern of agricultural employment, in exchange for information, for example, on the major route of entry and other relevant circumstances in the 125 cases recorded of systemic poisoning from organophosphorus compounds, or for more precise detail on what is meant by 'respiratory condition' which accounted for 51 reports of disease attributed to such chemically diverse groups as organophosphorus compounds, halogenated hydrocarbon pesticides, lead and arsenic compounds, herbicides, fertilizers, and fungicides. A further example of statistical grouping too broad to be informative is the reported total of 168 incidents, including systemic poisoning, skin conditions, chemical burns, and eye conditions, attributed to 'fertilizers' which presumably range from liquid ammonia to compound granular products.

Agricultural workers accounted for 836 of the 1,340 cases reported. The statistics show the considerable differences in exposure that exist within this group. Workers in agricultural service industries (contract spraying, etc.) have twice the incidence of farm labourers. The highest incidence is in a group not included in the agricultural workers, operatives engaged in the protection of buildings and other structures ('structural pest control'), where the incidence of illness is three times that of farm labourers.

A further difficulty in relating the Californian experience to the situation in Great Britain is that there is at present no single central point for the collection of information to which all incidents involving pesticides are compulsorily notified. The Safety Inspectorate of the Ministry of Agriculture investigates all incidents in agricultural workers where some breach of the regulations under the Agriculture (Poisonous Substances) Act, 1952 is suspected. In any year this may amount to some 15 to 20 incidents. The Poisons Reference Service of the Ministry of Health reports all incidents of poisoning in which its assistance has been sought. Reported incidents involving agricultural chemicals in the total population amounted to 127 in 16 months to the end of 1965. It is clear that the Californian experience in the use of agricultural chemicals is vastly