

in these papers, and attention was also given to the fine structure of the hypothalamic neurosecretory cells from which they arise. The modes of action of hormones received further attention in other contexts also, the relationships between hormones and the metabolism and structure of their target cells being the theme of several papers, particularly with reference to thyroxine and the adrenocortical hormones. The sex hormones, prolactin, and the parathyroid gland were examined from the point of view of their influence on metabolism and differentiation in fishes, birds and mammals, while discussion of the function of melatonin, and of the histophysiology of the epiphysis, reminded the audience of familiar features of vertebrate organization that are only now beginning to receive searching analysis.

Time had been set aside at the end of the Conference dinner to enable members to discuss whether or not similar meetings should be planned in the future; but in the event this proved to be largely unnecessary, for it was made apparent throughout the three days that, despite the continued growth and proliferation of conferences and reunions, this meeting had met a real need. Partly this was so because representatives from many countries had been able to meet together

at relatively small cost, but another reason was that this particular gathering had been planned to give younger workers the opportunity to report concisely on investigations that were still in progress, and to exchange ideas with those working on related problems in other laboratories. A contributory factor, too, was the congenial environment provided in the Zoological Society's rooms, and at Beit Hall (Imperial College of Science and Technology) and Bentham Hall (University College, London), for this made it possible to provide ample opportunity for informal discussion throughout the period of the meeting.

As a result, the participants came rapidly and unanimously to the view that they wished to have more of such conferences, and an invitation from Madame Herlant-Mewis to meet next autumn in Brussels was accepted with acclamation. The Brussels reunion, the second Conference of European Comparative Endocrinologists, will be held during September 16-18, 1963. Further announcements relating to it will appear in due course in *General and Comparative Endocrinology*, which will also publish its proceedings in abstract form.

E. J. W. BARRINGTON

EDUCATION AND TRAINING IN NUTRITION

IT is becoming increasingly recognized that the provision of food adequate both in quantity and in nutrient composition will not automatically abolish hunger and malnutrition. A book, published in connexion with the Freedom from Hunger Campaign*, is based on the thesis that it is "ignorance of the relationship between food and health" which would remain as the major bar to good nutrition. The book develops this thesis in a most readable and orderly way. It begins by giving several examples of the ways in which ignorance or misinformation can lead to malnutrition, even when nutritious foods are available. One is the practice in Indonesia where some of the children suffering from protein deficiency are not allowed to eat dried fish, because it is believed to cause worms. A second is the tendency for people moving from the countryside into the towns to buy new foods with low nutritional value because they are easy to prepare, or because they are considered to be "prestige foods".

That increased knowledge of nutrition may improve nutritional health is shown by several examples. Only one of these, in Israel, has, however, been adequately evaluated in terms of better dietary patterns in the families of those children who took part in a co-ordinated plan. In this, the children themselves were involved in growing foods in school gardens and in cooking and serving meals, as well as receiving instruction in food values.

This book is an excellent brief account of the whole problem of nutrition education for the people, of the training of professional nutritionists, and of the need to include study of the social aspects of nutrition as well as the physiological. However, one is a little sceptical of the belief on which the book is founded, that nutritional knowledge in itself is an assurance of sound nutritional habits where food supplies are

adequate. A recent survey in Britain has shown that most people believe that sugar is bad for teeth and that brown bread is more nutritious than white. This does not prevent the enormous consumption in Britain of sugar, nor does it stop people eating far more white bread than brown.

There is still a widespread belief that people can get used to poor diets without any great impairment of health or of working efficiency. *Nutrition and Working Efficiency*† makes it quite clear that the chief reason for apparent lethargy and sluggishness of the inhabitants of many tropical countries is not laziness or racial characteristics or an enviable philosophy of life, but undernutrition and malnutrition. It cites many examples of the relationship between work output and adequate availability of food, and points out that improved nutrition can, in many parts of the world, break the vicious circle of poor nutrition—physical inefficiency—low food production—poor nutrition. The need is mostly for calories, but there is often a need also for more protein and vitamins. Moreover, heavy muscular exertion, needing increased muscular development and training, may itself require increased protein supplies, so that increased calories alone may not result in improved working efficiency in those who have lived much of their lives on inadequate diets.

The main purpose of this book is to direct the attention of international and national agencies and private employers to the improvements which can be obtained through improved nutrition, and to outline the measures by which these can be achieved. These include stores where cheap food is available and subsidized food canteens, and provision should be made for the families as well as the workers. Through the stores and the canteens, the opportunity should be taken also to improve food habits and nutrition education.

JOHN YUDKIN

* FFHC Basic Study No. 6: *Education and Training in Nutrition*. Pp. vi+56. (Rome: Food and Agriculture Organization of the United Nations; London: H.M.S.O., 1962.) 2s. 6d.; 50 cents.

† FFHC Basic Study No. 5: *Nutrition and Working Efficiency*. Pp. 47. (Rome: Food and Agriculture Organization of the United Nations; London: H.M.S.O., 1962.) 2s. 6d.; 50 cents.