and twilight, it supplies the times for each five days, the latitudes corresponding with those of the "Nautical Almanac", but the latter supplies the times for each day, which is a considerable advantage. In addition, for the southern hemisphere, the "American Ephemeris" gives a table with corrections to apply for the corresponding latitude in the northern hemisphere for a date about six months earlier or later. There is a certain amount of inconvenience in turning back the pages for references and, on the whole, the British scheme, while occupying more space, has the advantage of simplicity. Under phenomena, opposition, conjunctions, etc., of planets, the "American Ephemeris" gives the information in a very convenient form by using the symbols for the planets and also for oppositions, conjunction, etc.; but this system does not readily lend itself to showing in tabular form the conjunctions of planets with bright stars, which occupies about half a page in the "Nautical Almanac".

The list of active observatories, which was discontinued in the "Nautical Almanac" after 1941, has been resumed in the 1955 issue, and includes 225 active observatories, but in general is restricted to those observatories the accurate positions of which are required for reduction of observations. The American list contains 223 active and 90 inactive observatories, but includes also the names of many observatories which do not appear in the "Nautical Almanac"—likewise the latter has the names of many observatories which do not appear in the "American Ephemeris". For this reason, each publication may be regarded as complementary to the other with regard to names of the observatories throughout the world.

LAURENTIAN HORMONE CONFERENCE, 1953

Recent Progress in Hormone Research

The Proceedings of the Laurentian Hormone Conference. Edited by Gregory Pincus. Volume 10. Pp. viii+511. (New York: Academic Press, Inc.; London: Academic Books, Ltd., 1954.) 9.80 dollars.

THE Laurentian Hormone Conference, inaugurated in 1943, continues to provide a forum for the discussion of current endocrinological research. Vol. 10 of its proceedings gives an account of the meeting that took place in September 1953, and deals with six main subjects: the interaction of neural and hormonal mechanisms; thyroid hormone; comparative endocrinology; protein hormone (in particular, insulin and corticotrophin); the influence of hormones on blood formation; and clinical endocrinology. This is a very wide field for one conference, and the fourteen reports which were prepared as opening papers will not appeal equally to all research workers.

Invertebrate endocrinology was the only topic completely new to the Conference. Here Dr. D. Bodenstein presented a useful review of endocrine mechanisms in insects, and the discussion it stimulated led directly into a paper by Ernst and Berta Scharrer on the hormones produced by neurosecretory cells. This subject is one of the growing-points of comparative endocrinology. By neurosecretion is meant the release by nerve cells of substances in aggregates large enough to be visible in supravital preparations at moderate magnifications. Much evidence, part

histological, part experimental, now indicates that the neurons of the hypothalamic nuclei supraopticus and paraventricularis secrete the hormones that up to now have been regarded as the product of the posterior lobe of the pituitary gland. The Scharrers regard the latter as a storage organ, and they also note that the fibres which transmit the neurosecretory material from the hypothalamus to the posterior lobe come into contact with the primary capillary loops of the vessels through which the anterior pituitary receives its blood supply. Accordingly, they suggest that the neurosecretory substance, which is the visible counterpart of the active principle of the posterior lobe, might also be responsible for the chemical control of the secretion of the anterior lobe.

This paper stimulated an interesting discussion. Dr. M. Vogt suggested that, while the hypothalamic nuclei may be responsible for elaborating the posterior lobe hormone vasopressin, oxytocin is produced in the posterior lobe itself. Prof. G. Harris did not agree that the Gomori-stainable material seen in the axons which pass through the median eminence on their way from the hypothalamus to the posterior lobe could be responsible for the activation of the anterior lobe, his reason being that there is no evidence that electrical stimulation of the supra-optico-hypophyseal tract will liberate any anterior pituitary hormone. On the other hand, Dr. R. W. Porter, who earlier in the Conference had presented a paper dealing with the part played by central neural mechanisms in the so-called stress response, had reached the apparently contrary view that the median eminence, of which probably the major component is the supraoptico-hypophyseal tract, is essential for the transmission of hypothalamic influences to the anterior pituitary. Another question that was raised was whether the same neurones which are involved in neurosecretion also have resting and action membrane potentials, and whether they are capable of being excited by electrical stimuli, or of conducting impulses. To this, as to many other questions, there were no answers.

As one reads through the papers and the record of discussions, one is inclined to feel that far too many points are raised, and far too few answered. One wonders, for example, why the possibility was not suggested that anterior pituitary hypofunction after lesions in the median eminence, like that after stalk section, is due to nothing more specific than the interruption of the gland's main blood supply, which cannot fail to be interrupted either completely or partly when the median eminence is damaged. One wonders, too, why, in the discussion of H. A. Lardy and G. F. Maley's paper on the metabolic effects of thyroid hormone *in vitro*, critical questions about the main hypothesis under discussion should be raised not once, but twice—and still left unanswered. But thoughts like these are perhaps as ungracious, as it is invidious, to direct them to a few out of so many excellent papers. The Laurentian Conference is an intimate affair, almost a club. It meets once a year, and clearly those who attend would not repeat their visits if the free discussion and speculation the Conference allows did not provide a stimulus to their further work. But some may wonder every now and then whether the progress of endocrinology would not be better assured if some of the kites flown at the meeting were occasionally better fashioned, and their strings under more critical control.

S. ZUCKERMAN