

teeth and jaws of apes, with perhaps still more human characters, are abundant in the Mio-Pliocene deposits of northern India. Indeed, the theory that man arose in central Asia from ground apes, which had been driven from the forests by the upheaval of the Himalayas, is still the best which has been proposed.

Man had reached the stage of *Homo sapiens* before he crossed the narrow seas from Asia to Australia. The fossils *H. wadjakensis* and *H. soloensis* from Java, and some fossil skulls from South Africa seem to represent his forerunners on the mainland.

*H. sapiens*, who had already learned the art of trimming stone by pressure flaking, seems to have been the first human immigrant to America by way of Bering Straits. Late palæolithic stone implements like those found in the Gobi desert were discovered last year in Alaska. Implements much like those of the Solutrean stage in Europe have now been found in several localities in the southern United States in association with extinct mammals of Pleistocene age. Human remains were first found directly associated with extinct mammals in South American caves by the Danish naturalist, P. W. Lund, whose centenary has just been celebrated by the scientific men of Brazil in Minas Geraes.

### The Pituitary Gland

THE anatomical and physiological connexion between the pituitary and diencephalon form the subject of Prof. P. T. Herring's presidential address to Section I (Physiology). The diencephalon itself is the site of integration of nervous impulses concerned in the regulation of many of the fundamental processes of life. The pituitary body is the only one of the diverse structures of the diencephalon which receives an accession of epithelium from an outside source—the buccal epithelium. These epithelial elements of the pituitary form one of the most important structures of the diencephalon.

The pituitary body provides the brain with an armamentarium of hormones, which are secreted in several ways. Quite a large number of hormones are now allocated to the pituitary, and more may be discovered. Some of these exert their actions directly upon peripheral tissues through the blood stream; others act locally upon nervous mechanisms in the hypothalamus. All are under the control of this part of the brain.

From the anterior lobe are secreted hormones which stimulate growth and exercise a controlling influence over the gonads, thyroid, parathyroids, thymus, cortex of the suprarenals and the

mammary glands. Some also influence metabolism, especially of carbohydrate and fat.

Pituitrin, an extract of the posterior lobe, has so far been separated into two fractions. One has a pressor effect. There are, however, anomalies in its action. It is also considered that the secretion of the posterior lobe is essential for the preservation of capillary tone. The other portion of pituitrin acts upon uterine muscle. The relationship of the secretion of the posterior lobe to the metabolism of carbohydrate and of fat is still obscure. Many other activities of the posterior lobe have been described and postulated, but one may well question if all be normal functions.

Nevertheless, one is compelled to conclude that the active principles of the pituitary are such as are necessary for the regulation of common and fundamental processes in the life of the animal. The diencephalon and pituitary body form a working unit, and have far-reaching importance in the control of fundamental physiological processes. It is probable that the pineal body is another part of the same mechanism, but its functions are still to be discovered.

### Personality and Age

IN his presidential address to Section J (Psychology) on this subject, Dr. Ll. Wynn Jones directs attention to recent investigations with adult subjects. Most of the psychological measurements of the present century have been concerned with the mental traits of the child or the adolescent. Until recently, the later decades of human life had not been systematically studied. Adult populations are relatively inaccessible, the selection of samples presents statistical difficulties, and it is not easy to differentiate between what is largely native and what is largely acquired. Nevertheless, by the use of questionnaires, introspections, biographies, as well as various psychological tests, there has recently accumulated a mass of objective data concerning adults, resulting from the work of such investigators as Profs. Charlotte Bühler, Giese, Catherine and Walter R. Miles, Edward K. Strong, Terman, and Thorndike.

In brief, the effect of age, as such, on the ability to learn and, indeed, on most psychological abilities, is much less than has been generally supposed, not only up to middle age but even up to old age. It is true that elderly individuals, who still consider their powers to be at their zenith, may be objects of pity, but still more so, it would seem, are those who consider their abilities to have deteriorated long before that is actually the