Thus we have concluded that two possible phases of secretion may occur in the human uterine gland cells—one just before or during menstruation—as might be concluded by the loosening out and breaking up of the Golgi apparatus, the other quite certainly a 'solid', probably protein secretion, which only appears at pregnancy.

This work was made possible by the Irish Medical Research Council. A fuller account will be published later.

J. BRONTË GATENBY.
OLIVE E. AYKROYD.

Zoology Department,
Trinity College,
Dublin.
June 16.

Spontaneous Yellow Fever in Rhesus Monkeys in the Absence of Mosquitoes

BEFORE a satisfactory method of prophylactic immunization had been devised, yellow fever was by no means uncommon among laboratory workers, some 37 cases having been reported. In every instance, those who contracted the disease had been in close contact with material containing either the virulent pantropic or the neurotropic strains of yellow fever virus, and the portal of entry was the skin, conjunctiva or nasopharyngeal mucosa.

During the past winter, two rhesus monkeys, *Macaca mulatta*, kept under laboratory conditions, at an interval of 71 days, have developed and died from spontaneous yellow fever. The monkeys were in two separate animal houses. In the case of the first animal, no other monkey infected with yellow fever had been in the same room for just over three months, while the second animal was in a room where no other infected monkeys had been for nearly six months. No virulent pantropic virus was in use in the laboratory during the period.

The method of infection is at present unknown, but human agency can be ruled out, since the stock of virulent yellow fever virus is under strict control and can be fully accounted for. Mosquitoes were entirely absent from the animal houses, but certain ectoparasites, monkey lice and rat fleas, *Ceratophyllus fasciatus*, were found. In addition, cockroaches, *Blatella germanica*, and a small ant, *Monomorium pharaonis*, were present. Experiments are at present being carried out to determine whether these arthropods were in any way responsible for the spontaneous infection of the monkeys.

G. M. FINDLAY.
F. O. MACCALLUM.

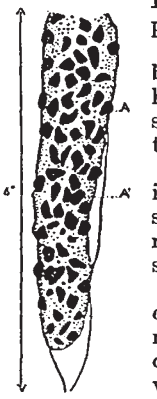
Wellcome Bureau of Scientific Research,
London, N.W.1. July 12.

Reproductive Cycle in *Salmo salar* Linn.

IT is known that in *Salmo salar* Linn. there occurs regularly a very small percentage, possibly of the order of 0·1 per cent, of mature female fish in which discharge of ova may be delayed or does not take place. Such fish are found many months after the normal spawning time heavy with ripe ova. In certain parts of Scotland they are termed 'baggots' or 'baggits' by fishermen.

Beyond the tacit assumption by some that a high rate of mortality supervenes, data of the subsequent behaviour and condition of such fish are scanty.

It is desirable, therefore, to record an instance where a marked degree of recovery appears to have taken place. Part of an ovary and some scales from an outwardly normal 16 lb. spring fish caught by rod in the River Dee near Llangollen in March were sent by Mr. G. M. King to Mr. W. J. Menzies, chief inspector of salmon fisheries, Edinburgh, from whom I received the former specimen, accompanied by the following data:



"The scales show the fish to have been a two years' smolt, and then to have ascended into fresh water as a small spring fish, after approximately two years in the sea, in 1937.

"There is a perfectly good spawning mark for the winter of 1937–38 since when the fish has made approximately a year's normal growth in the sea."

External examination showed the ovary to have an apparently full normal complement of aged ova, opaque and straw-coloured, between which were visible abundant young healthy ova—coral pink in colour—of the type normally present in female fish ascending in the spring. A section of the ovary (see accompanying diagram) showed a compact mass of old (A) and new (A^1) ova, the former in various stages of resorption, most of them shrunken and further distorted in shape by the pressure of the infiltrating new crop.

The general condition of the specimen was consistent with the probability that had the fish remained in the river the young ova would have developed to full maturity by the autumn spawning period. Whether they in turn would have been undischarged remains uncertain pending knowledge of the controlling mechanism in teleostean fishes.

R. M. NEILL.

Natural History Department,
University,
Aberdeen.
June 29.

Large-scale Plankton Culture

THE new Oceanographic Institute which Göteborg's Vetenskaps- och Vitterhetssamhälle owes to the munificence of the late Mr. K. A. Wallenberg is provided with a vertical plankton shaft, two metres in diameter and twelve metres deep, which affords facilities for culture experiments on a fairly large scale. Sea water is passed through a sand filter and sterilized by a powerful quartz lamp before entering the shaft from below. It is cooled by means of a refrigerating plant which sends cold brine to two systems of cooling coils, one near the top, the other halfway down the shaft. The illumination plant consists of two mercury lamps of 50,000 lumen each and four sodium lamps of 10,000 lumen, mounted under a large reflector.

In our experiments, the shaft was filled with stratified sea water: an upper column of 28 per mille salinity, 5·5 m. high, to which nitrate, phosphate, silicate and soil extract had been added, and a lower column of 35 per mille salinity which served to raise the column of culture medium to near the top of the shaft. The temperature was kept at about 9° C. in the experiments with phytoplankton and at 6° with zooplankton. With half the set of lamps burning a surface illumination of about 30,000 lux was maintained for 8–10 hours per diem. At 1 m. depth the intensity was reduced to one half or less.