

Contrary to what happens in these Bosminidae, there is considerable uniformity in consecutive samples of *Moina micrura* Kurtz of the same lagoon. It is interesting that this species formed part of the population of the Salada Grande lagoon, according to samples obtained by Olivier² until June 1951, when a species new to science, *Moina eugeniae* Olivier³, replaced it completely. The application of statistical methods to this phenomenon led to the conclusion that there are no intergradations between these species. Further, there have been found resistant eggs or 'winter eggs' in summer months.

A more detailed account of this work will be published elsewhere.

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Meiotic Prophase in Female Mice

In a preliminary study of chiasmata in female mice the meiotic prophase was observed in sixty-two females from a variety of strains, mostly outbred. It was found that in all strains the oogonial nuclei in newly born females are without exception in the resting stage probably following the last mitotic division. At about 12 hr. of age the first part of meiotic prophase is appearing and at the age of 60-72 hr. it is completely over. Later the ovary contains oocyte nuclei which are in the 'dictyotene' stage. In this stage they remain until sexual maturity is reached and ovulation starts.

The first part of the meiotic prophase, always visible between 24 and 48 hr. after birth, starts with leptotene and passes through zygotene and pachytene. These stages can be easily seen in squash preparations of the whole ovaries.

The beginning of the dictyotene stage is marked by the appearance of first follicle cells which gather around the oocyte. In most animals the first follicle cells appear at the age of 48 hr. and a few hours later all the oocytes are surrounded by follicle cells.

The accompanying photomicrographs (Fig. 1) show four stages of the first part of prophase in the ovary. (1) Well-spread chromosomes at the end of leptotene; in several of them the beginning of pairing is visible. (2) Zygotene stage when most of the chromosomes show pairing. (3) A group of four chromosomes in pachytene stage separated from the rest of the nucleus by squashing. They are joined to form a chromocentre, a formation which is very similar to that known in spermatogenesis. By following the morphological details of the chromosome pattern the four chromosomes can be identified from Slizynski's¹ or Griffen's² pachytene map. (4) The end of pachytene, probably just before chiasmata begin to open.

It is interesting to note that in females there is no trace of the 'puffy' region¹ or the nucleolus³, which are characteristic of the sex bivalent during prophase in males. Nor is there any chromosomal vesicle from which, according to several authors³⁻⁵, one or both sex chromosomes emerge or grow out during the

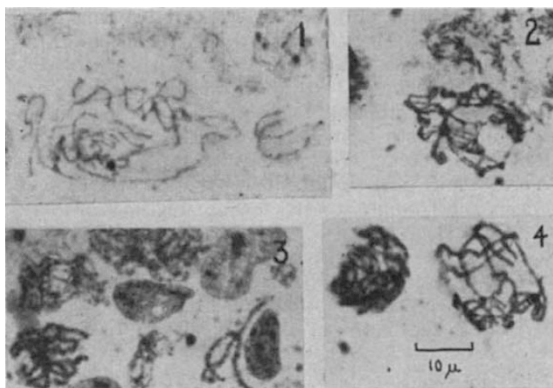


Fig. 1

prophase in males. The absence of these structures from oogenesis suggests that they may perhaps be associated with the Y- and not with the X-chromosome.

The timing and the rapid end of the first part of prophase present interesting possibilities from the point of view of studying radiation damage and sensitivity period of the chromosomes in female mice.

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Nature of the Spawning Area of Herrings

HERRING spawn has frequently been found in the stomachs of fish. It has also been brought up loose in the trawl on several occasions. Hitherto it has not been taken by other means, and consequently the exact nature of the sea-bed in a spawning area was not known.

During November 1956, while working with R.V. *Sir Lancelot* in the Sandettie-Ruytingen area of the English Channel, herring spawn was found in samples taken with the van Veen grab.

A survey of the area (lat. 51° 06' 0" N., long. 01° 40' 30" E.) revealed that spawn was generally attached to flints ranging from 1 to 10 in. in length where these occurred over gravel.

The heaviest concentration was found within an area 2 miles long and 350-400 yards wide. The long axis of this narrow strip lay in line with the main direction of tidal movement.

It is significant that herring eggs were found in the stomachs of eight species of fish taken with herrings in the trawl in this area.

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