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DEVELOPMENT OF OOCYTES TO MATURITY

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- (A) Aim: To demonstrate the various stages of growth of the oocytes to maturity.
- (B) Materials: Sample of fishes (either fresh or preserved), monocular microscope, ocular and stage micrometers, scissors, needles, forceps, slides, cover slips, 5% formalin, plastic trays, pipettes with teats, towel, duster cloth.
- (C) Methods:
- (1) Cut open the fish from the vent towards the anterior region, examine the gonad and determine the sex.
 - (2) Select female fishes in different maturity stages from immature to spent, based on eye determination of size of gonad.
 - (3) Determine the maturity stage by macroscopic examination, such as colour, extent in the body cavity etc. of the gonads.
 - (4) Cut out anterior, middle and posterior parts of each pair of ovaries and examine the characters of the ova under microscope.
 - (5) Calibrate the ocular micrometer using a stage micrometer.
 - (6) Measure atleast 500 ova taken from each ovary and plot the diameter against the percentage occurrence.

- (7) Repeat the above for the various specimens of each species, group them into different maturity stages of Immature, Maturing, Early Mature, Late Mature, Ripe, Spawning, Spent, etc. in relation to the macroscopic studies you have done in the field and laboratory, vide CMFRI/SI/1989/Pr.II.
- (8) Study closely the characters of ripe ovum, such as overall diameter, diameter of yolk, diameter of oilglobule, etc.
- (9) Make Camera-lucida sketches of some mature and ripe ova, with appropriate scale (Ref.CMFRI/SI/1989/Pr.IX).
- (10) Preserve all the data for future reference.