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GUIDELINES FOR MICROSCOPIC STUDY OF CHARACTERS

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(A) Aim: To familiarise with the microscopic study of the various characters of fish eggs and larvae.

(B) Materials: As in Practical No.CMFRI/SI/1989/Pr.IV.

(C) Methods:

(i) Place the ocular micrometer inside the eye piece of the microscope.

(ii) Keep the stage micrometer on the stage of the microscope.

(iii) Make a note of the magnification of both the eye piece and the objective.

(iv) Synchronise the calibrations in the two micrometers and determine how many calibrations in the ocular micrometer(called Micro Meter Divisions or simply as MMD) are required to synchronise the calibrations of for example 0.5 mm/1 mm/1.5 mm/2 mm in the stage micrometer under the particular eye piece and objective.

(v) If X number of ocular micrometer divisions synchronise with, for example 1.5 mm in the stage micrometer, then 1 ocular micrometer division is equivalent to $\frac{1.5}{x}$ mm, under the particular consumption of eye piece and objective magnifications used.

(v) After determining the specific measurement of one Micro-Meter Division (MMD), remove the stage micrometer, place the egg or larva as the case may be and record the various measurements, such as egg diameter, yolk diameter, oilglobule diameter etc. (for the eggs), total length of the postlarva, head length etc. (for larvae, post-larvae, early juveniles, etc. After determining the measurements in MMD, the value can be converted into milimetre (mm).

(vii) Record the other characters such as pigmentation, colour of the yolk/oilglobule/etc. in the live condition, ornamentation on the chorion etc.

(viii) Record the number of rays or spines in all the fins as well as the nature of muscle fibres.

(xI) Record the number of myomeres before and after the position of vent (preanal and postanal myomeres).

(x) Study the various characters as well as draw the specimen by using camera lucida (vide Practical No.CMFRI/SI/Pr.IX)