CONCLUDING REMARKS

(A) The important informations about toxicity data which the present study can provide are as follows -

1. Determination of the toxicity of Malathion, BHC and Carbaryl for Heteromegastes fossilis and of Carbaryl for Tilapia (Sarcotherodon) mossambica.

2. The acute toxicity ranges Lc₀, Lc₅₀, & Lc₁₀₀ values of the above mentioned pesticides - 2.4, 3.2, 3.8 ml/litre for Malathion; 6.6, 7.0, 7.5 ml/litre for BHC; and 5.0, 5.5, 5.8 ml/litre for Carbaryl in the case of Heteromegastes fossilis. The values were 1.5, 3.8, 4.1 ml/litre for Carbaryl in the case of Tilapia (Sarcotherodon) mossambica.

3. The effect of Malathion, BHC and Carbaryl on the physical behaviour of Heteromegastes fossilis and that of Carbaryl on the physical behaviour of Tilapia (Sarcotherodon) mossambica.
4. Pathological changes in the tissues viz. liver, gills, kidney, intestine and skin of *Heteropneustes fossilis* and *Eilapia* (*Sarco-therodon*) *mosambica* on exposure to sublethal concentration of the above mentioned pesticides.

5. After exposure to Malathion to sublethal concentration, there was a gradual damage in all the tissues viz. liver, gills, kidney, intestine and skin of *Heteropneustes fossilis*.

6. After exposure to BHC in *Heteropneustes fossilis*, there was severe damage in all tissues followed by recovery in the kidney and the liver.

7. After exposure to Carbaryl in *Heteropneustes fossilis*, there was gradual damage in all tissues concerned, but there was an initial recovery in the liver and almost complete recovery in the kidney.

8. After exposure to Carbaryl in *Eilapia* (*Sarco-therodon*) *mosambica*, there was a gradual damage in the liver, gills, kidneys, intestine and skin.
9. Qualitative detection of Malathion, BHC, and Carbaryl in the tissues viz. liver, gills, kidney and intestine of *Heteropneustes fossilis* assessed by Thin layer chromatography.

10. Malathion breaks up into 2-3 metabolites depending upon the solvent system used. No spot was detected in the kidney after 10 and 30 days of exposure.

11. After exposure to BHC, it breaks up into three metabolites. In the kidney however, no spot was detected after all exposure to BHC.

12. Carbaryl breaks up into a maximum number of four metabolites i.e. in liver in the solvent system Cyclohexane : Acetone, and in the remaining tissues one to three spots were detected.

(B) Additional investigation required for the problem of Pollution.

1. To evaluate the impact of the responses at the ecological level.
2. Evaluation of the effect of pesticides on more critical stages of life history as spawning, hatching and early stages of development.

3. Exploration of the possibility of biodegradation of pesticides in water by organisms.

4. To find out the exact % of the pesticide accumulated in a particular organ.

5. More studies on the qualitative detection of Carbaryl in fishes and other organisms.

6. A large quantity of pesticides are annually drained into the surface water which are not degraded by bacterial action and therefore, accumulated in the soil, fauna and flora of the aquatic system.

7. The problem of pollution, produced by pesticides should be studied in different water system for the proper management of water quality. As such to counterattack the effect of pesticides in water, suitable chemicals should be manufactured and added to the water, so as to control this hazardous problem.