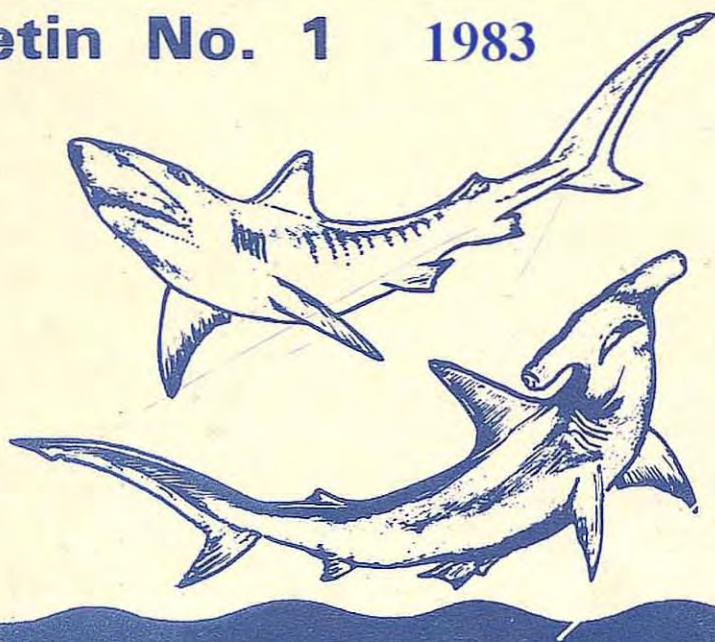


KENYA AQUATICA

Bulletin No. 1 1983



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RESEARCH INSTITUTE

EDITORIAL NOTE

The need has been felt for a long time for a bulletin covering aquatic resources out-puts of the country quickly and comprehensively. The Board of Management of Kenya Marine and Fisheries Research Institute realised this need and directed the Institute to take immediate action for ensuring that information on aquatic resources is compiled for easy communication to the people.

The editorial group has decided to start reporting activities related to aquatic resources under the title "KENYA AQUATICA". As far as possible efforts will be made to include short scientific communications, critical reviews, seminar proceeding and other ad hoc publications. This comprehensive coverage will be possible only through cooperation of various Institutions, Departments, Societies and individuals who are concerned with aquatic resources.

Kenya Aquatica is a technical and extension series for rapid dissemination of information on aquatic resources and allied information from Research Officers, Fisheries Officers and any individual for transfer of Technology to the fishermen and industry and any other relevant information needed for National Development.

Editorial Group

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We appeal to all concerned to send us regularly such publications, at the following address:

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M O M B A S A

BIOLOGICAL MEANS OF INCREASING FISH PRODUCTION IN PONDS AND SMALLER MANAGEABLE LAKES IN KENYA

Summary

In Kenya there are about 30,000 ponds ranging from 1.0 - 2.0 acres, with a total average of about 10,000 acres. The productivity of these ponds is low, 0.3 tonnes/hect/year as compared to 5-10 tonnes/hect/year in developed countries. Causes of these uneconomical low production are numerous, among them are:-

- (a) lack of indigenous professional and extension experts who can work side by side with potential fish farmers.
- (b) Lack of appreciation and awareness of the economic advantages of fish farming among local people.
- (c) Lack of indigenous techniques on production and management procedures suitable to local conditions.
- (d) Poor provisions for infra-structure required in potential aquaculture areas such as facilities for storage, transport and marketing.

In the tropical countries suitable fish for pond-farming have been identified. The problem has been the combination of the species so as to increase production as it has already been observed that polyculture yields more than monoculture.

A project has been launched to look into the possible species combination. **Tilapia**, **spirulus** and **T. andersonii** are taken as controls while six different species are used. The growing period is to be 9 months after which they will be harvested to look at the best combination. All spp used have been proved suitable for tropical aquaculture.

The experiment is still going on, but the productivity of the ponds have been very high. The phytoplanktons include **Spirogyra** sp., **Closterium** spp **Anabaena** sp. **Ceclastrum** sp. **Cosmarium** sp., **Chlorella** spp. and several bacillariophyceae e.g., **Synedra** sp., **Navicula** sp., **Nitohia** sp. Zooplankton in these ponds include **Daphnia** sp., **Diaphanesoma** **Moina** sp. **Cyclops** sp., **Chidorus** sp., whereas the rotifers were represented by **Braclliianous** sp. and **Keratella** sp. Insect larvae or nymphs are present in fairly large numbers.

The initial species combination was based on the feeding habits of the fish and the availability of the species locally. At the end of the growing season the best combination will be identified and the second part of the project will be to establish the stocking density.

J. Ochieng.