

Culture of the Freshwater Mussel, *Anodonta woodiana* at the Freshwater Aquaculture Center

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A freshwater polyculture success story: *A. woodiana* breeders and juveniles show good growth when cultured in fishponds at the Freshwater Aquaculture Center.

Studies on the culture of the freshwater mussel *Anodonta woodiana* with fishes in fertilized ponds have been conducted at the Freshwater Aquaculture Center, CLSU, Nueva Ecija, Philippines. The bivalve is believed to have been accidentally introduced sometime in '60's from Indonesia or Taiwan where the species is endemic.

A. woodiana was found capable of breeding throughout the year. Heavy reproduction of the bivalve has been recorded in ponds with *Tilapia nilotica* and *Cyprinus carpio*. In an aquarium experiment, glochidia of *A. woodiana* were found attached to the fins of *T. nilotica* adults and fry.

A production of 284 kg/ha for *A. woodiana* juveniles with 58 mm mean length and 26 g mean weight was obtained after 4 months with the stocking of *T. nilotica* fingerlings at 10,000/ha and *A. woodiana* breeders at 720/ha. Presence of the bivalve at such density did not adversely affect fish growth.

A. woodiana juveniles estimated to be 60 to 90 days old, 50 mm long and 17 grams in weight, were preferred by consumers over larger ones. This new fishpond product has great potential for Philippine markets.

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Rawa Pening Project Salatiga, Java

Aquatic weeds, their control, and their effects on the fisheries and ecology of Rawa Pening Lake and the surrounding countryside are the major subjects of the Satya Wacana Christian University research project. The lake, at an elevation of 460 m in central Java, was transformed from a marsh to a lake by construction of a dam in 1916. The lake water is used for irrigating about 24,000 ha and for generators of two hydroelectric plants producing 20 MVA. The lake also supports a subsistence-level fishery reported at 600,000 kg in 1971 but is now less

than 150,000 kg. Surface area drops from 2500 ha to about 650 ha in the dry season.

Control measures on water hyacinth started in the 1930s and the plant still threatens to eliminate the lake through evapotranspiration and deposition of organic matter. *Hydrilla* and other submerged weeds clog most of the lake not covered with water hyacinth.

There are five main fields of research: ecology and hydrobiology of Rawa Pening, techniques for weed control and weed utilization, techniques for improving fish production and harvest, water sanitation and management, and social and economic aspects.

Dr. F. Goltenboth from the University of Tubingen, Germany is project leader and Ir. E. Sugandi from Satya Wacana is project assistant. Dr. Kenneth Carlan-

der is helping establish limnological and fisheries research this year on a grant from NSF-SEED and a faculty leave from Iowa State University, Ames, U.S.A. The major project is financed by Brot fur die Welt, Stuttgart, Germany. The program now involves 14 Satya Wacana staff members and 20 students from the Biology, Agriculture, Sociology, and Economics faculties.

A field station on the lake was completed in August 1977 and has two laboratories, a workshop, toilet facilities, and living quarters for a resident administrator. A boat, outboard motor, rearing pens and field equipment are available. Arrangements can be made for research by visiting scientists. For further information contact Dr. F. Goltenboth, Department of Biology, Satya Wacana Christian University, Jl. Diponegoro 54-58, Salatiga, Java Tengah, Indonesia.