

**SOME PHYSIOLOGICAL AND BIOCHEMICAL STUDIES ON THE EFFECTS
OF THE FRUITS OF A PISCICIDAL PLANT Zanthoxylum armatum DC.
(Z. alatum Roxb.) ON FRESHWATER FISHES**

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ABSTRACT

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ABSTRACT

Many toxins both of natural and synthetic origin are being used in the modern fisheries to clear ponds from unwanted aquatic organisms prior to using them for fish nursery purposes, and to catch and transport fishes. The toxins which are used for killing the fishes are called as piscicides. The synthetic piscicides when used show both acute and chronic effects on non-target aquatic organisms. Their biodegradability is slower and residual toxicity is higher compared to natural piscicides. Therefore, the use of natural piscicides have been preferred in fishery management. One of the natural piscicides commonly used throughout the world is a phytotoxin called rotenone. Rotenone is obtained from the plants mainly belonging to the genus Derris. In India, rotenone is not available easily and is being imported for fishery purposes. Therefore, studies have been initiated on various plants/plant products to develop suitable alternative indigenous natural piscicides.

More than hundred plants available in this country have been cited to have piscicidal property. Only a few of these plants and their parts have been investigated to establish their piscicidal potentiality. However, no systematic approach has been made to investigate scientifically the nature of toxicity and mode of action of any indigenous plant or plant material. Therefore, the present study was undertaken to find out the toxicity of some of the potential piscicidal plants used in native fisheries of North-Eastern India and the mode of action of the most potent plant part on certain freshwater fishes.

