

XII. MARINE RESOURCES

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There is nothing to indicate a lessening of the fishing potential of Jaluit except possibly on the outer slopes of the windward ocean reef. The windward reef is not used for fishing except for torch fishing at night and in times of exceptionally calm water. The actual fishing potential within the lagoon may increase, because additional fertilizer in the form of organic detritus has been carried into the lagoon where it can stimulate the production of fixed algae and phytoplankton. Moreover, the masses of tree roots in the water are already covered with a film of algae that is being browsed upon by small herbivorous fish and the roots offer hiding places for small fish. These small fish are the food of the larger carnivores.

The Marshallese on the atoll have reported that even immediately after the typhoon the fishing was better than before. It is likely that this merely represents a greater fishing effort rather than any true increase in larger fish, for if the postulated mechanisms do increase the fishery, it would be only after a lag of a number of months.

If there is an increase in productivity in the lagoon, it should last for several years, the length of time for the recycling nutrients to be flushed to sea and for the root masses to decompose entirely.

Another possible effect of the typhoon would be to increase the toxicity of the fish in the lagoon. Before the typhoon, Jaluit Atoll had the reputation of having more poisonous fish than any other atoll in the archipelago. Several workers (Randall 1958, Dawson 1959) have suggested, without any direct proof, that the toxicity of the fish results from direct feeding upon poisonous algae, or feeding upon herbivores that eat the poisonous algae. If the fertilization of the lagoon increases the amount of the hypothetical poisonous algae there may be an increase both in the toxicity of the species now known to be dangerous and in the number of species found to be toxic. However, the Marshallese eating the fish from the lagoon report no change in toxicity patterns.

Note: For information on poisonous fishes in Jaluit reference may be made to Hiyama 1943 and Bartsch et al 1959.--Ed.