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# **PREDATION ON CARIBBEAN SPONGES: THE IMPORTANCE OF CHEMICAL DEFENSES.**

*Memoirs of the Queensland Museum* 44: 426. 1999:- The conventional view has been that the impact of predation on Caribbean reef sponges is minimal: generalist predatory fishes are deterred by sponge spicules and chemistry, while the few spongivorous fishes are 'smorgasbord' feeders that circumvent chemistry by eating small amounts of many different sponge species. New data suggest that this traditional view needs to be re-examined. Generalist predatory fishes are deterred by chemistry, but not by structural elements, toughness, or nutritional quality of sponge tissue. Spongivorous fishes are not smorgasbord

feeders, but instead choose to eat chemically undefended sponge species. Transplantation experiments reveal that the grazing activity of spongivorous fishes restricts certain sponge species to refugia, including cryptic habitats on the reef and mangrove and grassbed environments, where these fish are absent. Chemical defense plays an important role in the ecology of sponges on Caribbean reefs. □ *Porifera, chemical defense, predation, Caribbean, ecology.*

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