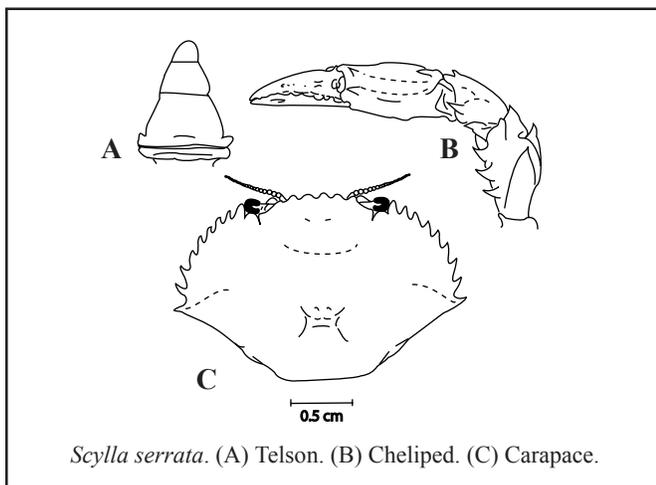


Samoan Crab
Mangrove Crab, Mud Crab

Phylum Arthropoda
 Subphylum Crustacea
 Class Malacostraca
 Order Decapoda
 Infraorder Brachyura
 Family Portunidae

**DESCRIPTION**

This is the largest portunid in Hawaii, exceeding 18 cm in width of carapace. The carapace is smooth, the front bearing four blunt teeth and along the anterolateral border nine sharp teeth of about equal size. The claws of the males become very large. It is either entirely grayish green or purplish brown in color.

**HABITAT**

This crab inhabits muddy bottoms in brackish water along the shoreline, mangrove areas, and river mouths.

DISTRIBUTION**HAWAIIAN ISLANDS**

All main islands

NATIVE RANGE

Indo-Pacific, from South Africa to Tahiti, north to Okinawa, and south to Port Hacking, Australia and the Bay of Islands, New Zealand.

PRESENT DISTRIBUTION

Throughout the Indo-Pacific, from Japan, China, Philippines, and Hawaiian Islands to Australia, Indonesia, East and South Africa, and the Red Sea. Also introduced to Gulf of Mexico (Florida), status unknown.

MECHANISM OF INTRODUCTION

Intentional, to establish a commercial crab fishery. Crabs from Samoa released on Oahu, Molokai, and Hawaii.

IMPACT

Prized, sought-after commercial species. Ecological impact unstudied in Hawaii, but it is a large, active and aggressive carnivorous species that undoubtedly feeds on native invertebrate species.

ECOLOGY

Feeding

S. serrata is primarily a carnivore, eating mollusks, crustaceans, and polychaetes, as well as small amounts of plants and debris.

Reproduction

Crabs are gonochoristic (having male and female individuals in the same population). Mating of *S. serrata* take place as early as the first year of life after the female undergoes a precopulatory molt. Recent studies in northern Australia, have shown that the transition of immature crabs to physiological maturity probably occurs between 90-110 mm carapace width (Knuckey, 1996). During copulation, a male approaching a female in premolting condition climbs over her, clasps her with his chelipeds and the anterior pair of walking legs, and carries her around. They may remain so paired for 3 to 4 days until the female molts. The male then turns the female over for copulation, which usually lasts 7 to 12 hours. Although the spermatozoa of *S. serrata* are non-motile, sperm can be retained by the female, and fertilization may not take place for many weeks or even months after spawnings (Chen, 1976). While most of the life cycle of *S. serrata* is spent in inshore waters, especially estuaries, the females migrate offshore with the fertilized eggs attached to the pleopods, where they hatch in a few weeks (Hill, 1996).

REMARKS

The Samoan crab was first introduced into Kaneohe Bay, in order to start a fishery in 1926. Between 1926 and 1935, 98 crabs were released on Oahu, Hawaii, and Molokai, all from Samoa (Brock, 1960). By 1940 it had "already become thoroughly established about our shores, entering estuaries of streams and ascending far up some of the larger rivers" (Edmondson and Wilson, 1940). Edmondson (1954) noted that large specimens may exceed 20 cm in breadth and weigh several pounds. Maciolek and Timbol (1981) reported it from the Kahana Estuary, Oahu, based on collections made from 1969 to 1971. Eldredge (1994) noted that as of 1992 it was one of the major species collected in certain areas of the island of Hawaii.

Brock (1960) attributed part of the success of the crab, in light of the relatively few individuals released, as being due in part to the fact that some of the estuarine areas where this species was released have a low rate of tidal flushing, a situation which may be conducive to the rapid growth of a population within the estuarine area.

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