Charybdis hellerii **System:** Marine_terrestrial

Kingdom	Phylum	Class	Order	Family
Animalia	Arthropoda	Malacostraca	Decapoda	Portunidae

Common name Indo-Pacific swimming crab (English), spiny hands (English), Ishigani New Caledonia (Japanese), New Caledonia-íshigani (Japanese)

Synonym
Goniosoma hellerii , (A. Milne-Edwards, 1867)
Goniosoma merguiense , (DeMan, 1888)
Charybdis merguiensis , (Sakai, 1934; Barnard, 1950; Guinot, 1962)
Charybdis (Goniosoma) merguiense , (Alcock, 1899; Nobili, 1906, Chopra, 1935; Leene, 1973; Shen, 1937)
Goniosoma sexdentatum , (De Man, 1879)
Charybdis amboinensis , (Leene, 1938)
Goniosoma spiniferum
Charybdis vannamei , Ward 1941

Similar species

Summary

Charybdis hellerii is an Indo-Pacific, portunid crab that has invaded several locations in the Mediterranean Sea, by Erythrean invasion through the Suez Canal, and the South Atlantic in the Caribbean and United States via ballast water fouling. Charybdis hellerii is a potential threat to native crab populations and benthic communities and its introduction should be avoided by adhering to ballast water management guidelines.

view this species on IUCN Red List

Species Description
Charybdis hellerii is a small crab measuring from about 5-8 cm wide. It is dark green with a light purple on the upper inner surface of palm and dark purple on dorsal surfaces of distal 4 segments of walking and swimming legs. The carapace has pale green to whitish areas on frontal, hepatic, and epibranchial regions. It is most easily identifiable by the spine on the posterior of the carpus on the fifth leg which bears its chela, or claws giving it one of its common names: spiny hands. Its dorsal carapace is naked and its anterolateral margin has 6 prominent black-tipped teeth. Its frontal region bears 6 prominent teeth, 2 inner orbitals, and 4 blunt submedians. Chela are stout with palms bearing 5 strong black-tipped spines on the distal posterior margin. Propodus also with a row of spines on the posterior margin. Adult females are typically 47 to 62 mm and adult males 74 to 83 mm carapace width (Perry, 2009; GSMFC, 2003).

Lifecycle Stages
Charybdis hellerii has an incubation period which lasts about 13 days, its zoeal development averages 40 days, and a megalopa stage that takesanother 4 days. This relatively long larval development of about 44 days facilitates wide dispersal. Its juvenile growth and maturation is relatively rapid taking about one year. This results in a short generation time a characteristic that contributes to rapid population growth. Finally, *C. hellerii* have high fecundity and are capable of bearing broods in rapid succession. These developmental and reproductive characteristics facilitate the potential of *C. hellerii* for rapid invasion of new locations (Dineen *et al.*, 2001).

Habitat Description
Charybdis hellerii inhabits the littoral zone of coastal waters with depths of up to 30-50 m. In its native range, it prefers soft bottom substrates but is also known to occur in rocky bottom areas and intertidal coral reefs. Typically found in high salinities of over 28 ppt *C. hellerii* exhibits cryptic behavior, taking advantage of a large variety of structured habitats such as riprap jetties, coralline ledges, mangrove roots, gravel, rocks, and dense algae with populations often limited to them (Dineen *et al*., 2001; Spiridonov, 1990).

Reproduction
Sexual, oviparous, with females capable of storing sperm at least 5 months. *C. hellerii* experiences reproductive peaks during the winter and spring contrary to other crab species which experience reproductive peaks in summer, a strategy to minimize competition other crab species (Dineen *et al*., 2001) .

Nutrition
Charybdis hellerii has generalized carnivorous diet allows for opportunistic exploitation of many different food sources (Dineen *et al*., 2001).

General Impacts
Charybdis hellerii may compete with native crab species and inflict changes in natural benthic communities. *C. hellerii* introductions may also affect crab fisheries if it displaces native species or results in the reduction of their numbers (Dineen *et al*., 2001).

Management Info
Preventative measures: Ballast water fouling is the means of introduction of *Charybdis hellerii* in most instances. Due to the high amount of invasive introductions by way of ballast water fouling, the International Maritime Organization (IMO) in conjunction with the Global Environment Facility and the United Nations Development Programme have established GloBallast, an organization devoted to implementing guidelines and regulations related to ballast water management. Compliance with GloBallast ballast water management guidelines is recommended to prevent the introduction of *C. hellerii* and other potential invasives (IMO, 2009).

Principal source:
Dineen, J.E. Clark, P.F., Hines, A.H., Reed, S.A. & Walton, H.P. 2001. Life history, larval description, and natural history of *Charybdis hellerii* (Decapoda, Brachyura, Portunidae), an invasive crab in the western Atlantic. *Journal of Crustacean Biology 21*(3): 774-805
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Harriet Perry. 2008. *Charybdis hellerii*. USGS Nonindigenous Aquatic Species Database, Gainesville, FL.

Compiler: National Biological Information Infrastructure (NBII) & IUCN/SSC Invasive Species Specialist Group (ISSG)

Review: Paul F. Clark, Department of Zoology, The Natural History Museum, London.

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ALIEN RANGE

[1] BRAZIL
[1] COLOMBIA
[1] CUBA
[1] CYPRUS
[1] EGYPT
[1] FRENCH GUIANA
[1] ISRAEL
[1] LEBANON

[1] MEDITERRANEAN & BLACK SEA
[1] TURKEY
[1] VENEZUELA
[1] SYRIAN ARAB REPUBLIC
[4] UNITED STATES

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Summary: An online database that provides taxonomic information, common names, synonyms and geographical jurisdiction of a species. In addition links are provided to retrieve biological records and collection information from the Global Biodiversity Information Facility (GBIF) Data Portal and bioscience articles from BioOne journals.
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