

Green Green Crab

Carcinus maenas

Class: Malacostraca
Order: Decapoda
Family: Portunidae
Genus :Carcinus

Distribution

This crab is native to European and North African coasts as far as the Baltic Sea in the east, and Iceland and Central Norway in the north, and is one of the most common crabs throughout much of its range. However it is now an invasive species in many other parts of the world.

Habitat

It is predominantly a shore and shallow water species. It is found on all types of shorelines, from high water level to depths of 60 m.

Food

They are predatory feeders on a wide variety of organisms.

Reproduction

Mating begins with the male finding a female who has recently or is about to moult. He may carry her around for a few days underneath his body.



This crab is easily seen in local waters.

The Green Crab is now dispersed globally. It has colonized both the Atlantic and Pacific coasts of North America as well as the Atlantic coast of South America. It occurs in Australia, Hawaii, Sri Lanka and South Africa.

It was introduced to the Atlantic coast of North America by the year 1817 and its range now extends from Nova Scotia to Virginia. The first occurrence of the species on the Pacific coast of the U.S. was in 1989 in California and it has expanded its range to the south, so also to the north into Canada. This expansion is likely to continue in all coastal directions, it is a very invasive species. They are quite abundant in Nova Scotia.

C. maenas can live in all types of marine and estuarine habitats, including those with mud, sand, or rock substrates, submerged aquatic vegetation, and emergent marsh, although soft bottoms are preferred.

Prey items include clams, oysters, mussels, snails, worms, barnacles, crabs and other small crustaceans. Young crabs feed on small molluscs and barnacles. At the larval stage they feed on plankton.

Female with eggs

After the female moults, copulation occurs. When ready to lay her fertilized eggs she creates a cavity in the sand and deposits them. She then attaches them to her walking legs and carries them around as they develop further.





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Development

Eggs hatch into free-swimming larvae. These develop offshore in several stages, from the first (zoeal) stage through to the final larval (megalopa) stage. This is their final moult before becoming juvenile crabs in the intertidal zone.

Characteristics

Despite their common name these crabs are a variety of colours including yellow, orange, and green. They grow to a carapace (shell) width of about 8cm and length of 6 cm. Size varies geographically.

Adaptations

C. maenas is euryhaline, meaning it can tolerate a wide range of salinities (from 4 to 52 ‰), and survive in temperatures of 0 to 30 °C.

Status/Threats

They are under no threat whatsoever. In many areas of the world they are considered a nuisance species to fisheries.

Sightings in Nova Scotia

Once at the megalopa stage, they settle out of the water column to search for a suitable area where they can moult into juvenile crabs. Young crabs travel to the coastal waters where they begin a moulting cycle and live as juvenile crabs. They moult many times growing larger as they do. In approximately three years the juvenile crab will become a fully developed crab and be able to mate and reproduce.



Zoea

Freshly moulted *Carcinus maenas* tend to be bright or dark green on top, as their common name implies, and yellowish on their underside; but over the moult cycle their colour changes. The top surface of the shell is often irregularly blotched with dark areas. Being wider than it is long it is roughly fan-shaped. The front of the carapace looks serrated with five small spines, or teeth located on the front edge of the shell behind each eye and three rounded lobes between the eyes.



Megalopa

The wide salinity range allows these crabs to survive in the lower salinities found in estuaries. The first pair of legs (pereopods) have well developed pincers (chelae). They can extend these claws behind their backs to defend against predators. Females can produce 185,000 eggs at a time. They are very prolific. This allows a very wide dispersal of larvae.



The full impact of the green crab in Canada has yet to be determined. They can affect shellfish aquaculture and fishing industries - eel fisheries in particular. In some areas, Fisheries and Oceans Canada (DFO) distributes nuisance permits to fisherman. Fishermen who have these permits can destroy any green crabs they catch in an effort to reduce the population size. Natural predators include birds, fish, and other large marine invertebrates.

These are easily seen on shorelines throughout Nova Scotia in the intertidal zones in shallow water.