

Crepidula fornicata



Taxon	Family / Order / Class / Phylum
<i>Crepidula fornicata</i> (Linnaeus, 1758)	Calyptraeidae / Neotaenioglossa / Gastropoda / Mollusca

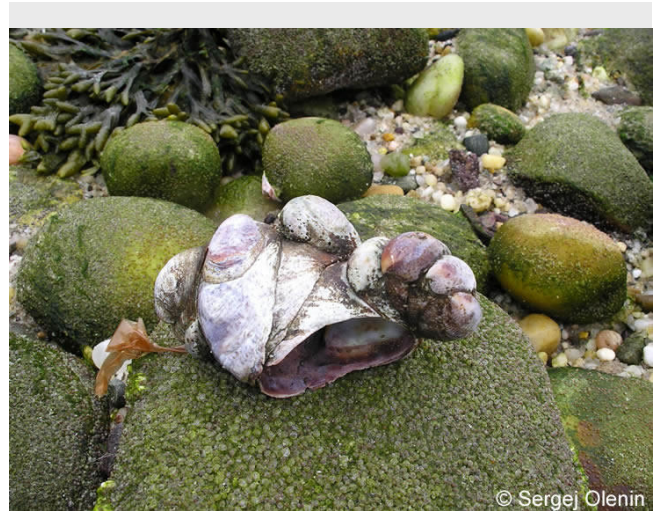
COMMON NAMES (English only)
Slipper limpet

SYNONYMS

Crepidula nautiloides auct. non Lesson, 1834,
Crepidula maculata Rigacci, 1866,
Crepidula mexicana Rigacci, 1866,
Crepidula violacea Rigacci, 1866,
Crepidula densata Conrad, 1871,
Crepidula virginica Conrad, 1871,
Crypta nautarum Mörch, 1877,
Crepidula roseae Petuch, 1991.

SHORT DESCRIPTION

The slipper limpet is a snail with an asymmetrical shell with an inner shelf. It can attain 5cm. It is a filter-feeder occurring within sheltered coastal bays and estuaries and sometimes in deeper water. It attaches firmly to objects with its muscular foot. Individuals may attach to each other to form 'chains'



‘Chain’ of *Crepidula fornicata* from the Island of Sylt, Germany

Photo: Sergej Olenin

BIOLOGY/ECOLOGY

Dispersal mechanisms

Locally disperses via free-swimming larva. Settled stages can be dispersed with flotsam or carried attached to errant crustaceans and molluscs. May also be dragged by attaching algae in areas with currents.

Reproduction

Females can annually produce 200,000 eggs in more than one brood in northern Europe. Capsules containing eggs are laid in early summer from which larvae hatch after ~ 3 weeks and they have a similar planktotrophic larval duration. Settled individuals crawl seeking out a female to attach to and then act as a male for about two years. Further males attach to form chains of up to twelve individuals with the oldest limpet at the base. Solitary individuals may become self-fertile.

Known predators

Crabs, fishes and birds.

Resistant stages (seeds, spores etc.)

It can survive aerial exposure under cool damp conditions for several days but has no resistant stage.

HABITAT

Native (EUNIS code)

A3: Sublittoral rock and other hard substrata, A4 Sublittoral sediments. As in invaded range.

Habitat occupied in invaded range (EUNIS code)

A3: Sublittoral rock and other hard substrata, A4 Sublittoral sediments. It occurs mainly in low energy shallow sheltered estuaries, bays and channels from low water to ~30m depth, exceptionally 60m, on muddy and sandy sediments with shells, stones and rocks.

Habitat requirements

It can survive light frosts and in temperatures up to ~30°C, and can endure turbid and brackish water.

DISTRIBUTION

Native Range

St Lawrence Estuary to northern Mexico, North America

Known Introduced Range

North American Pacific coast, Japan, northern Europe, southern France, Sicily, Uruguay.




Trend

It is gradually expanding its range and may be capable of colonizing other temperate and Mediterranean climatic regions.

MAP (European distribution)



Legend

	Known in country		Known in CGRS square		Known in sea
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INTRODUCTION PATHWAY

Aquaculture, subsequently spread with oyster movements, with ships as hull fouling and on moved floating structures and by natural dispersal.

IMPACT

Ecosystem Impact

May occur at densities exceeding 1700 m^{-2} and attain a wet biomass of 10kg m^{-2} resulting in trophic competition in coastal regions and causing reduced growth of commercial bivalves in some enclosed bays. Their abundance can change sediments to mud deposits of faeces, pseudofaeces and shell drifts. Such accumulating sediments on maerl beds reduce diversity and abundance of living plants. May also reduce recruitment of some benthic commercial fishes. Shells may provide a refuge for predators.

Health and Social Impact

Although it is abundant and may attain $50\text{mm} \times 25\text{mm}$ after 4-5 years of growth, it has not successfully been developed as a food.

Economic Impact

Often associated with oyster layings and on scallop beds. Slipper limpets need to be removed before marketing. It also fouls artificial structures in port regions.

MANAGEMENT

Prevention

By regulation and regular monitoring of transfers of oysters and mussels, in particular, used for stocking uninfested areas.

Mechanical

Cultivation of oysters in bags laid on trestles reduces impacts as small slipper limpets often become crushed. Slipper limpets on open grounds may compete with oysters for food unless dredged. They should be removed from bivalves used for stocking bays outside of their current range, but it is best not to make any such transfers. If removed from ships or other floating structures in dry-dock, all removed fouling biota should be destroyed and not returned to the water.

Chemical

Unknown.

Biological

Unknown.

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