Schizoporella unicornis **System:** Marine

Kingdom	Phylum	Class	Order	Family
Animalia	Ectoprocta	Gymnolaemata	Cheilostomata	Schizoporellidae

Common name

Synonym *Lepralia unicornis* , (Johnston, 1874)
Schizoporella unicornis , (Lagaaiji, 1952)

Similar species

Summary Schizoporella unicornis, or single horn bryozoan, is an encrusting bryozoan native to Japan. It has been unintentionally introduced along with the Pacific oyster (Crassostrea gigas), or by hull fouling, to several locations throughout the world. Schizoporella unicornis is an abundant fouling organism known to inhibit growth and settlement of native bryozoa.

view this species on IUCN Red List

Species Description
Schizoporella unicornis is an encrusting, colonial bryozoan. Colonies are commonly orange in color however initial growth is white to yellowish brown, later becoming dark brownish, while growing edges are yellow to light brown. Mature colonies are typically 1-4cm in diameter and may form on a wide variety of substrata such as shells, stone, kelp, vessel hulls, piers, overhangs, and other bryozoans. Inner zooids are hexagonal and outer zooids are rectangular in shape with an inflated frontal wall and wide aperature. They are arranged in alternate rows radiated from the center (NIMPIS, 2008; Ross & McCain, 1976; Hayes *et al*., 2005).

Notes
Schizoporella unicornis is reported to have high mortality rates during \"red tide\" algal blooms (NIMPIS, 2004)

Lifecycle Stages
Coronate, free swimming larvae of *Schizoporella unicornis* settle to suitable substrata after 24-48 hours and metamorphose into a zooid which may settle to an existing colony or form a new colony. *S. unicornis* has high settlement and survival success rates. Settlement of larvae is positively correlated to exhisting colonies. *Schizoporella unicornis* is a long-lived perennial species (Prince William Sound Regional Citizens' Advisory Council, 2004; Hurlbut, 1991)

Habitat Description
Schizoporella unicornis occurs on hard substrates and is found in shallow waters of intertidal zones. It is tolerant of salinities 18-30% and temperatures 7-19°C. Preferred substrates are large flat shaded surfaces free from abrasion with adequate water flow. *S. unicornis* commonly occurs on shells, barnacles, algae, rocks, docks, hulls, pilings, and underwater debris (Ross & McCain, 1976; Prince William Sound Regional Citizens' Advisory Council. 2004)

Reproduction
Sexual. *Schizoporella unicornis* is a hermaphrodite. Reproduction may be seasonal or continuous depending on location. Its eggs are contained in their ovicells, or ooecium. Sperm is released into the water column where it is collected by other zooids. Eggs are fertilized and brooded in the ovicells where they mature to free swimming larvae. Parts of existing colonies may start a new colony if seperated (NIMPIS, 2004; Prince William Sound Regional Citizens' Advisory Council, 2004).

Nutrition
Single horn bryozoans are suspension feeders which consume phytoplankton, algae, and bacteria. Zooids feed with ciliated lophophores (tentacle strauctures) that they extend from their orifice to sweep particles into its mouth (Prince William Sound Regional Citizens' Advisory Council, 2004).

General Impacts
Schizoporella unicornis is an abundant fouling organism capable of encrusting on a wide variety of substrata. This fouling can be a nuisance to shipping and ports, and has potenital to be a problem to industrial components, cooling vents, etc. as in the case with other bryozoans. Single horn bryozoans exclude or inhibit the settlement and growth of native species, thereby modifying natural communities. Their stolons are extensions that develop at colonial interfaces and have been demonstrated to redirect or reverse the growth of competitors (Prince William Sound Regional Citizens' Advisory Council. 2004; Ray, 2005).

Management Info
Preventative measures: Prevention of introduction is the only effective means of combating *Schizoporella unicornis*, as there is no known, effective means of controlling it once it has established. Regulations concerning oyster trade and shipping targeting hull fouling, may prevent the introduction of *S. unicornis* to new locations as these are the two primary means of its dispersal (Prince William Sound Regional Citizens' Advisory Council. 2004; Ross & McCain, 1976).

Principal source: NIMPIS, 2002. *Schizoporella unicornis* species summary. National Introduced Marine Pest Information System (Eds: Hewitt C.L., Martin R.B., Sliwa C., McEnnulty, F.R., Murphy, N.E., Jones T. & Cooper, S.)
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Fuller, Pam., 2008. *Schizoporella unicornis*. USGS Nonindigenous Aquatic Species Database, Gainesville, FL.

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

Review:

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ALIEN RANGE

[5] AUSTRALIA
[1] BRAZIL
[1] FRANCE
[1] IRELAND
[7] UNITED STATES
[1] BELGIUM
[1] CANADA
[1] GREECE
[1] UNITED KINGDOM

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Managment information

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Summary: The electronic tool kits made available on the Cefas page for free download are Crown Copyright (2007-2008). As such, these are freeware and may be freely distributed provided this notice is retained. No warranty, expressed or implied, is made and users should satisfy themselves as to the applicability of the results in any given circumstance. Toolkits available include 1) FISK- Freshwater Fish Invasiveness Scoring Kit (English and Spanish language version); 2) MFISK- Marine Fish Invasiveness Scoring Kit; 3) MI-ISK- Marine invertebrate Invasiveness Scoring Kit; 4) FI-ISK- Freshwater Invertebrate Invasiveness Scoring Kit and AmphISK- Amphibian Invasiveness Scoring Kit. These tool kits were developed by Cefas, with new VisualBasic and computational programming by Lorenzo Vilizzi, David Cooper, Andy South and Gordon H. Copp, based on VisualBasic code in the original Weed Risk Assessment (WRA) tool kit of P.C. Pheloung, P.A. Williams & S.R. Halloy (1999).
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Summary: English:
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Invasive species - Aquatic invertebrates is available from:
http://www.conabio.gob.mx/invasoras/index.php/Especies_invasoras_-_Otros_invertebrados [Accessed 30 July 2008]
Spanish:
La lista de especies del Sistema de informaci–n sobre especies invasoras de m–xico cuenta actualmente con informaci–n aceca de nombre cient–fico, familia, grupo y nombre com–n, as– como h–bitat, estado de la invasi–n en M–xico, rutas de introducci–n y ligas a otros sitios especializados. Algunas de las especies de mayor riesgo ya tienen una liga directa a la p–gina de alertas. Es importante resaltar que estas listas se encuentran en constante proceso de actualizaci–n, por favor consulte la portada (http://www.conabio.gob.mx/invasoras/index.php/Portada), en la secci–n novedades, para conocer los cambios.
Especies invasoras - Otros invertebrados is available from:
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