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

**Review:**

**Pubblication date:** 2007-01-17

**ALIEN RANGE**

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

**BIBLIOGRAPHY**
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**Managment information**

Centre for Environment, Fisheries & Aquaculture Science (CEFAS)., 2008. Decision support tools-Identifying potentially invasive non-native marine and freshwater species: fish, invertebrates, amphibians.
**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).
The decision support tools are available from:
http://cefas.defra.gov.uk/our-science/ecosystems-and-biodiversity/non-native-species/decision-support-tools.aspx [Accessed 13 October 2011]
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Hayes, K., Sliwa, C., Migus, S., McEnnulty, F., Dunstan, P. 2005. National priority pests: Part II Ranking of Australian marine pests. An independent report undertaken for the Department of Environment and Heritage by CSIRO Marine Research.
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**Summary:** English:
The species list sheet for the Mexican information system on invasive species currently provides information related to Scientific names, family, group and common names, as well as habitat, status of invasion in Mexico, pathways of introduction and links to other specialised websites. Some of the higher risk species already have a direct link to the alert page. It is important to notice that these lists are constantly being updated, please refer to the main page (http://www.conabio.gob.mx/invasoras/index.php/Portada), under the section Novedades for information on updates.
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.
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