GLOBAL INVASIVE SPECIES DATABASE

FULL ACCOUNT FOR: ***Tubastraea coccinea***

Tubastraea coccinea **System:** Marine

Kingdom	Phylum	Class	Order	Family
Animalia	Cnidaria	Anthozoa	Scleractinia	Dendrophylliidae

Common name orange-cup coral (English), orange-tube coral (English), colonial-cup coral (English), tubastrée orange (French)

Synonym
Astropsammia pedersenii ,
Caryophyllia aurantiaca ,
Coenopsammia affinis ,
Coenopsammia aurea ,
Coenopsammia coccinea ,
Coenopsammia ehrenbergiana
Coenopsammia manni ,
Coenopsammia radiata
Coenopsammia tenuilamellosa ,
Coenopsammia urvillii ,
Coenopsammia willeyi ,
Dendrophyllia affinis ,
Dendrophyllia aurantiaca ,
Dendrophyllia danae ,
Dendrophyllia ehrenbergiana ,
Dendrophyllia manni ,
Dendrophyllia surcularis ,
Dendrophyllia turbinata ,
Dendrophyllia willeyi ,
Lobophyllia aurea ,
Placopsammia darwini ,
Tubastraea aurea ,
Tubastraea pedersenii ,
Tubastraea willeyi ,
Tubastraea tenuilamellosa

Similar species *Cladopsammia eguchii*

Summary Tubastraea coccinea (orange-cup coral) has been introduced to all continents except Antarctica and is thought to compete with native benthic invertebrates for space and to compromise their communities. The reduction of native sponges and native corals could also have significant flow-on effects for entire ecosystems.

view this species on IUCN Red List

Species Description
Tubastraea coccinea (orange-cup coral) are non-reef building coral species that extend beautiful translucent tentacles at night (Hawaii Coral Reef Network 2005). The orange cup coral is a heterotroph (consumer) that does not contain zooxanthellae (endosymbiotic dinoflagellates or algae) as most corals do (Blomquist *et al*. 2006).

Lifecycle Stages
The reproductive age of the *Tubastraea coccinea* is around 1.5 years and growth averages at approximately 3cm² per year (Vermeij 2006). It increases in local abundance by reaching maturity at a small size and producing planula at an early age (Vaughan 1919; Van Moorsel 1989; Fenner and Banks 2004, in Vermeij 2006).

Habitat Description
Tubastraea coccinea (orange-cup coral) inhabit shaded vertical surfaces and caverns down to huge depths. Orange-cup-corals are also found in very cold water throughout the world (Hawaii Coral Reef Network 2005). Orange-cup corals often dominate tropical habitats not occupied by other coral species, such as wrecks and cryptic reef habitats (Vermeij 2006). They also colonise artificial structures (Fenner and Banks 2004, Sammarco *et al*. 2004) but experiments have demonstrated similar preferences for granite, cement, steel and tile (Creed & De Paula 2007). In Brazil they are most abundant in the shallow sub-tidal zone at shallow depths between 0m and 3m (De Paula & Creed, 2004, 2005, Creed 2006).

Reproduction
Tubastraea coccinea is hermaphroditic and produces planulae (flat, free-swimming, ciliated larva) asexually (ameiotically) (Ayre and Resing 1986). Gonads are unlikely to be involved in the asexual production of brooded larvae (Ayre and Resing 1986). It is able to form “runners” (a thin tissue outgrowth lacking polyps) which extend at a growth rate of up to 10.4cm per year until they encounter unoccupied patches of substratum. New polyps then form at the end of the runners (Vermeij 2005).

Nutrition
Cup-coral species rely upon capturing zooplankton as food (Hawaii Coral Reef Network 2005).

General Impacts
Although *Tubastraea coccinea* (orange-cup coral) is listed on the Convention on International Trade in Endangered Species website and database (see *Tubastraea coccinea* in CITES species Database) it often competes with other benthic invertebrates for substratum space (Vermeij 2006). This may put native species at risk, particularly sponges and native corals. Local exclusion or extinction of such species may occur and the removal of the native corals may reduce the production of the entire ecosystem, compromising ecosystem functions (Creed 2006).

Management Info
Manual: In Brazil a control and eradication programme called “Projeto Coral-Sol” is removing *Tubastraea coccinea* from the environment (Joel Creed, pers.comm., 2007).

Pathway
Mobile platforms could have contributed to dispersal of *Tubastraea coccinea* (orange-cup coral) to the Gulf of Mexico oil and gas platforms (Fenner and Banks, 2004, Sammarco *et al*. 2004).

Principal source:

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ALIEN RANGE

[1] AMERICAN SAMOA
[1] ARUBA
[1] ATLANTIC - WESTERN CENTRAL
[1] BAHAMAS
[1] BES ISLANDS (BONAIRE, SINT EUSTATIUS AND SABA)
[1] BRITISH INDIAN OCEAN TERRITORY
[1] CAYMAN ISLANDS
[1] COLOMBIA
[1] CUBA
[1] DOMINICA
[2] ECUADOR
[1] FRENCH POLYNESIA
[1] HONDURAS
[1] INDIA
[1] JAMAICA
[1] KENYA
[1] KOREA, REPUBLIC OF
[1] MADAGASCAR
[1] MALDIVES
[1] MAURITIUS
[1] MOZAMBIQUE
[1] NEW CALEDONIA
[1] NORTHERN MARIANA ISLANDS
[1] PANAMA
[1] PUERTO RICO
[1] SEYCHELLES
[1] SRI LANKA
[1] TANZANIA, UNITED REPUBLIC OF
[1] TURKS AND CAICOS ISLANDS
[1] VENEZUELA
[1] VIRGIN ISLANDS, BRITISH
[1] ANGUILLA
[1] ATLANTIC - EASTERN CENTRAL
[5] AUSTRALIA
[1] BELIZE
[1] BRAZIL
[1] CAPE VERDE
[1] CHRISTMAS ISLAND
[3] COSTA RICA
[1] DJIBOUTI
[1] DOMINICAN REPUBLIC
[1] EGYPT
[1] GUADELOUPE
[1] HONG KONG
[1] INDONESIA
[1] JAPAN
[1] KIRIBATI
[1] KUWAIT
[2] MALAYSIA
[1] MARSHALL ISLANDS
[1] MEXICO
[1] MYANMAR
[5] NEW ZEALAND
[1] OMAN
[1] PHILIPPINES
[1] SAUDI ARABIA
[1] SINGAPORE
[1] TAIWAN
[1] THAILAND
[8] UNITED STATES
[1] VIET NAM
[1] VIRGIN ISLANDS, U.S.

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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).
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The guidance document is available from http://www.cefas.co.uk/media/118009/fisk_guide_v2.pdf [Accessed 13 January 2009].

General information

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