Rhopilema nomadica

Taxon	Family / Order / Class / Phylum
Rhopilema nomadica Galil, 1990	Rhizostomatidae / Rhizostomeae / Scyphozoa / Cnidaria

COMMON NAMES (English only)
Nomad jellyfish

SYNONYMS

SHORT DESCRIPTION
A neritic epipelagic, swarming jellyfish, planktotroph. The bell is up to 90 cm in diameter, commonly 40-60 cm. The body is light blue, bell rounded, with blunt tuberculation of the exumbrella. The mouth arms end in vermicular filaments.

Rhopilema nomadica

Photo: Mel Cooper

BIOLOGY/ECOLOGY

Dispersal mechanisms
Planktonic larvae (planulae).

Reproduction
It has a two-stage life cycle consisting of the conspicuous, large sexually reproducing swimming medusa stage and a benthic polyp stage (the scyphistoma) that, because of its small size (usually <2 mm), remains cryptic. These polyps reproduce asexually by "budding". The medusa stage begins when polyps undergo budding of transverse fissions that form medusa; each polyp may produce several medusas. Depending upon food availability and other environmental variables, the scyphistomas form large numbers of pelagic medusas. Spawning occurs between June and August.

Known predators/herbivores
It is eaten by fish and marine turtles.

Resistant stages (seeds, spores etc.)
None.

HABITAT

Native (EUNIS code)
A7: Pelagic water column, marine neritic epipelagic.

Habitat occupied in invaded range (EUNIS code)
A7: Pelagic water column, marine neritic epipelagic.

Habitat requirements
The sexually reproducing swimming scyphomedusa appear when the water temperature exceeds 24º C.

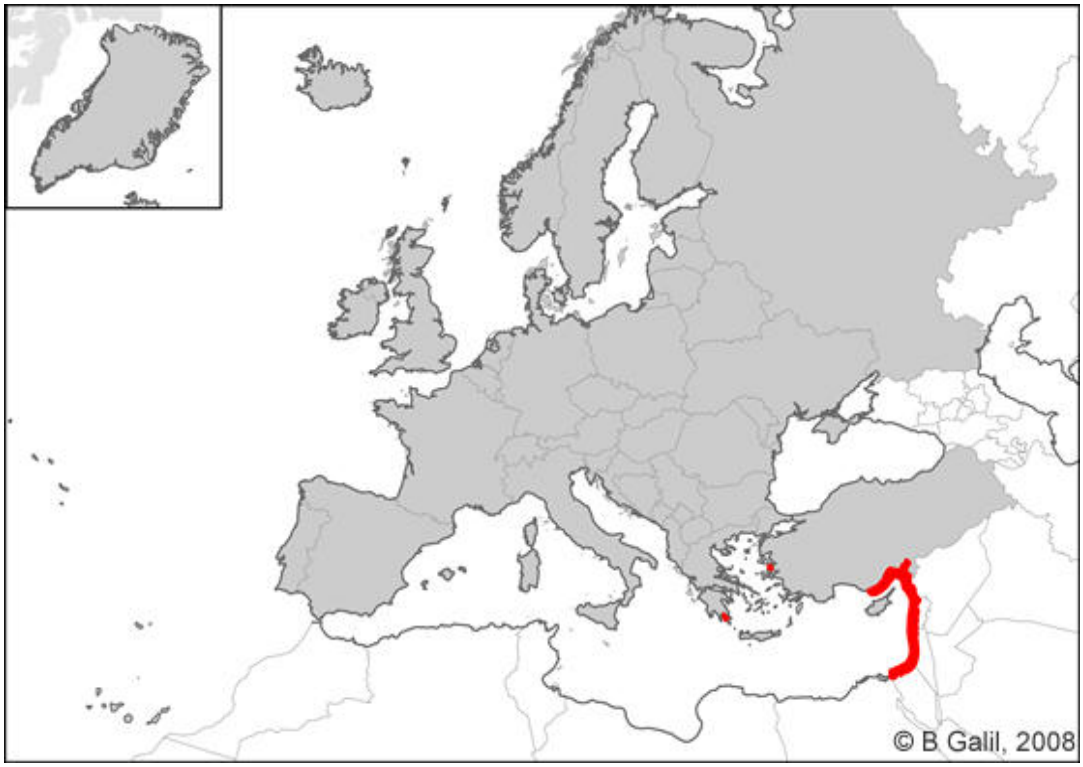
DISTRIBUTION

Native Range
East Africa, Red Sea.

Known Introduced Range
Egypt, Israel, Lebanon, Turkey, Greece.

Trend
The jellyfish entered the Mediterranean in the late 1970s. Since the mid 1980s huge swarms of this species have appeared along the Levantine coast. In 1995 it appeared off the southeastern Turkey, in 1998 off Izmir, and in 2006 off Lakonikos Gulf, Greece.

MAP (European distribution)



Legend

	Known in country		Known in CGRS square		Known in sea

INTRODUCTION PATHWAY

Entered the Mediterranean through the Suez Canal, may spread autochthonically as current-borne adults.

IMPACT

Ecosystem Impacts

Massive swarms stretching more than 100km appear along the Levant coast every summer. These swarms of voracious planktotrophs must play havoc with the limited resources of the oligotrophic Mediterranean Sea.

Health and Social Impacts

Local municipalities in Israel have reported a decrease in holiday-makers frequenting the beaches because of the public's concern over the painful stings inflicted by the jellyfish.

Economic Impacts

When the shoals draw nearer shore, they adversely affect tourism, fisheries and coastal installations. Coastal trawling and purse-seine fishing are disrupted for the duration of the swarming due to net clogging and inability to sort yield, due to the overwhelming presence of these venomous medusas in the nets. Jellyfish-blocked water intake pipes pose a threat to cooling systems of port-bound vessels and coastal power plants. Juveniles of a commercially important Red Sea carangid, *Alepes djedaba*, find shelter among the jellyfish's tentacles.

MANAGEMENT

Prevention

Erect a salinity barrier in the Suez Canal in order to reduce the number of Red Sea aliens arriving in the Mediterranean.

Mechanical

Unknown.

Chemical

Unknown.

Biological

Unknown.

REFERENCES

Avian M, Spanier E. Galil BS (1995) The nematocysts of *Rhopilema nomadica* (Scyphozoa: Rhizostomeae) - An immigrant jellyfish in the Eastern Mediterranean. Journal of Morphology 224:221-231

Galil BS, Spanier E, Ferguson W (1990) The Scyphomedusae of the Israeli Mediterranean coast, including two lessepsian migrants to the Mediterranean. Zoologische Mededlingen 64(7):95-105

Lotan A, Ben-hillel R Loya Y (1992) Life cycle of *Rhopilema nomadica*: a new immigrant scyphomedusan in the Mediterranean. Marine Biology 112:237-242

OTHER REFERENCES

Galil BS (1993) Lessepsian migration: new findings on the foremost anthropogenic change in the Levant Basin fauna. Pages 307-318 in N. F. R. Della Croce editor. Symposium Mediterranean Seas 2000. Istituto Scienze Ambientali Marine- Santa Margherita Ligure

Gusman L, Avian M, Galil B, Patriarca P, Rottini G (1997) Biologically active polypeptides in the venom of the jellyfish *Rhopilema nomadica*. Toxicology 35:637-648

Kokelj F, Avian M, Spanier E, Galil B (1995) Dermatotoxicity of 2 nematocyst preparations of the jellyfish *Rhopilema nomadica*. Contact Dermatitis 32: 244

Siokou-Frangou I, Sarantakos K, Epaminondas DC (2006) First record of the scyphomedusa *Rhopilema nomadica* Galil, 1990 (Cnidaria: Scyphozoa: Rhizostomeae) in Greece. Aquatic Invasions 1(3):194-195

Author: B. S. Galil

Date Last Modified: November 5th, 2006