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# Printable version in PDF format

# Didemnum sp. - Netherlands Coast Occurrence and Images

**NETHERLANDS COAST LINKS:** Occurrences / Location Data / Regional

Location Map / Zeeland Map

IMAGES: Bommenede / Brouwersdam / Den Osse / Goes

/ Ouddorp Inlage / Scharendijke / Zierikzee / Zijpe

/ Zoetersbout

## **Taxonomic Note**

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At present, there is some controversy regarding the taxonomic relationships of *Didemnum* sp., *Didemnum vexillum* (described from New Zealand), and *Didemnum vestum* (newly-described from New Hampshire). See papers by P. Kott listed in sections on Taxonomy and Publications. For the purposes of this website, and until taxonomic questions are resolved, the images presented here from all regions except New Zealand are attributed to *Didemnum* sp. Recent taxonomic studies by Gretchen Lambert show that *Didemnum* sp. is not *D.* sp. or *D. helgolandicum*, both described from Europe.

### First documented occurrence

The first official sighting of *Didemnum* sp. in the Netherlands was in 1991. In 1998-1999, *Didemnum* sp. suddenly became very common in the Grevelingen and Oosterschelde (see below and the Zeeland map), covering much of the available hard substratum. Most of the colonies die in winter (December and January), and therefore other organisms (ascidians, sponges, sea anemones, among others) are able

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to settle in early spring, before the didemnids begin to expand their colonies. The *D.* sp. colonies are more successful (larger) in the Grevelingen than in the Oosterschelde. They are most common at depths between 3 and 12 meters in the Grevelingen and from just below low water to 14 m in the Oosterschelde. The colonies grow over all hard substratum (rocks, mussels, oysters) and also over other organisms (hydroids, tunicates) that are normally not overgrown by other species. Source: A. Gittenberger.

### First anecdotal occurrence

# Overview of the Grevelingen and the Oosterschelde

The Grevelingen is a large sea water lake, which is separated from the North sea by a dike (see Zeeland map). There are no currents or tides. Every day a relatively small corridor to the North Sea is opened, enabling North sea plankton to enter the Grevelingen. Over the last 5 years the water temperature has varied between 2 degrees C in the winter to approximately 19 degrees C in the summer. The salt gradient in the Grevelingen is, on average, higher than in the North Sea.

The Oosterschelde is a large inlet on the North Sea with currents and a maximum tidal range of approximately 6 meters. Over the last 5 years the water temperature has varied between 2 degrees C in the winter to approximately 19 degrees C in the summer. The salt gradient in the Oosterschelde is, on average, the same as in the North Sea, and therefore lower than in the Grevelingen.

In the North Sea off the Netherlands, the annual water temperature varies between approximately 5 degrees C and 16 degrees C. Source: A. Gittenberger.

## Web sites with imagery and text

See section on Imagery of the Family *Didemnidae*.

# Web sites with text only

## **Images**

- Bommenede
- Brouwersdam
- Den Osse
- Goes
- Ouddorp Inlage

Report new occurrences to Page Valentine at pvalentine@usgs.gov

Recent research papers on *Didemnum* 

### **Recent Observations**

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- Didemnum Management Studies
- . Environmental Impacts
- Environmental Preferences and Controls
- . Genetics
- Growth Rates and Patterns
- Overgrowth on Other Species
- . Predation
- Reproduction-Larvae
- Substrate Preferences and Controls
- Taxonomy
- · Toxicity
- Preparation of Ascidians for Taxonomy

# **Links to Related Topics**

International Invasive

Sea Squirt Conference, PEI, Canada, Oct. 1-4, 2007

- Program with Abstracts (PDF)
- International Invasive
  Sea Squirt Conference,
  Woods Hole, MA, Apr. 21-22, 2005
- Imagery of the Family Didemnidae
- Environmental Impact of Tunicates
- Tunicate News/Information
- Invasive Species Web sites

- Scharendiike
- Zierikzee
- Zijpe
- Zoetersbout

# **Location Information**

Location data

Northern Europe regional map Zeeland map

#### **Contributors & Other Sources**

- Contact Information
- Other didemnid imagery
- USGS News Releases

Text in gray (italic) indicates the topic has not been addressed to date.

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U.S. Department of the Interior | U.S. Geological Survey

URL: woodshole.er.usgs.gov/project-pages/stellwagen/didemnum/htm/page42.htm

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