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# Didemnum sp. - Sandwich, Massachusetts, Images

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# June 03 / 4 Dec. 03 / 3 Feb. 04 / 4 Oct. 04

Click here for video of Didemnum sp. in tide pool at Sandwich, Massachusetts.

# October 4, 2004

**Video imagery DB\_STP\_MAvideo2.** Tunicate colonies of *Didemnum* sp. encrusting cobbles boulders and macro algae; shows typical colony growth upward from base of cobbles and boulders; also shows degenerating colony peeling off rock and being grazed by periwinkles (*Littorina littorea*). Sandwich tide pool (41 deg 46.42 min N lat, 70 deg 29.30 min W lon). Water depth, intertidal range to 11 feet (3.4 m). Video recorded at low tide. October 4, 2004. Video credit: Dann Blackwood (USGS). Location no. 1.

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### June 2003



Image MC\_STP\_03

**Image MC\_STP\_03**. Tunicate colonies of *Didemnum* sp. in early stage of invasion of the Sandwich tide pool. *D.* sp. colonies are encrusting a boulder and overgrowing colonies of *Botryllus schlosseri* (dark green) and *Botrylloides violaceus* (small dark yellow colony in right center of the image). Boulder was lifted out of the water for photo; tunicate colonies are contracted. Sandwich tide pool (41 deg 46.42 min N lat, 70 deg 29.30 min W lon). Water depth, intertidal range to 11 feet (3.4 m). Collected at low tide. June, 2003. Collector: Mary Carman. Photo credit: Mary Carman, WHOI. Location no. 1. **Click here to download image.** 

## December 4, 2003



View of the Sandwich tide pool on the south side of the east entrance of the Cape Cod canal.

**Image DB\_STP\_DSC0161**. View of the Sandwich tide pool on the south side of the east entrance of the Cape Cod canal at low tide, looking east. Water depth, intertidal range to 11 feet (3.4 m). Collected at low tide. December 4, 2003. Photo credit: Dann Blackwood, U.S. Geological Survey. Location no.



Image DB\_STP\_DSC0132

Image DB\_STP\_DSC0132. Tunicate colonies of *Didemnum* sp. encrusting boulders, dark red algae, and the surrounding gravel seabed. Sandwich tide pool (41 deg 46.42 min N lat, 70 deg 29.30 min W lon). Water depth, intertidal range to 11 feet (3.4 m). Collected at low tide. December 4, 2003. Collectors: Mary Carman and Page Valentine. Photo credit: Dann Blackwood, U.S. Geological Survey. Location no. 1. Click here to download image.



Image DB\_STP\_DSC0146 Tunicate colonies of *Didemnum* sp. encrusting a boulder and overgrowing dark red algae and pink calcareous algae. Sandwich tide pool (41 deg 46.42 min N lat, 70 deg 29.30 min W lon). Water depth, intertidal range to 11 feet (3.4 m). Collected at low tide. December 4, 2003. Collectors: Mary Carman and Page Valentine. Photo credit: Dann Blackwood, U.S. Geological Survey. Location no. 1. Click here to download image.

Image DB STP DSC0146



Image DB\_STP\_DSC0149

Image DB\_STP\_DSC0149 Tunicate colonies of *Didemnum* sp. advancing over a boulder surface and overgrowing barnacles and a green encrusting sponge (cf. *Halichondria sp.*). Sandwich tide pool (41 deg 46.42 min N lat, 70 deg 29.30 min W lon). Water depth, intertidal range to 11 feet (3.4 m). Collected at low tide. December 4, 2003. Collectors: Mary Carman and Page Valentine. Photo credit: Dann Blackwood, U. S. Geological Survey. Location no. 1.



Image DB STP DSC0155

Image DB\_STP\_DSC0155 Tunicate colonies of *Didemnum* sp. advancing up the side of a boulder and overgrowing barnacles, green algae, and dark red algae. *D.* sp. is exposed here at low tide. Sandwich tide pool (41 deg 46.42 min N lat, 70 deg 29.30 min W lon). Water depth, intertidal range to 11 feet (3.4 m). Collected at low tide. December 4, 2003. Collectors: Mary Carman and Page Valentine. Photo credit: Dann Blackwood, U.S. Geological Survey. Location no. 1. Click here to download image.



Image DB\_STP\_DSCN1840

Image DB\_STP\_DSCN1840 Tunicate colonies of *Didemnum* sp. encrusting the surface of a boulder and enveloping dark red algae. Note contrasting smooth and appendaged surfaces of the tunicate. Sandwich tide pool (41 deg 46.42 min N lat, 70 deg 29.30 min W lon). Water depth, intertidal range to 11 feet (3.4 m). Collected at low tide. December 4, 2003. Collectors: Mary Carman and Page Valentine. Photo credit: Dann Blackwood, U.S. Geological Survey. Location no. 1. Click here to download image.



Image DB\_STP\_DSCN1843

Image DB\_STP\_DSCN1843 Tunicate colonies of *Didemnum* sp. overgrowing dark green algae (rockweed) attached to a boulder. Sandwich tide pool (41 deg 46.42 min N lat, 70 deg 29.30 min W lon). Water depth, intertidal range to 11 feet (3.4 m). Collected at low tide. December 4, 2003. Collectors: Mary Carman and Page Valentine. Photo credit: Dann Blackwood, U. S. Geological Survey. Location no. 1.

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Image DB STP DSCN1846

Image DB\_STP\_DSCN1846 Tunicate colonies of *Didemnum* sp. overgrowing dark red algae and green encrusting sponge attached to a boulder. Note contrasting smooth and appendaged surfaces of the tunicate. Sandwich tide pool (41 deg 46.42 min N lat, 70 deg 29.30 min W lon). Water depth, intertidal range to 11 feet (3.4 m). Collected at low tide. December 4, 2003. Collectors: Mary Carman and Page Valentine. Photo credit: Dann Blackwood, U.S. Geological Survey. Location no. 1.



Image DB\_STP\_DSCN1847

Image DB\_STP\_DSCN1847 Tunicate colonies of *Didemnum* sp. overgrowing dark green and dark red algae attached to a boulder. Sandwich tide pool (41 deg 46.42 min N lat, 70 deg 29.30 min W lon). Water depth, intertidal range to 11 feet (3.4 m). Collected at low tide. December 4, 2003. Collectors: Mary Carman and Page Valentine. Photo credit: Dann Blackwood, U. S. Geological Survey. Location no. 1.

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Image DB\_STP\_DSCN1848

Image DB\_STP\_DSCN1848 Tunicate colonies of *Didemnum* sp. growing out from the side of a boulder and displaying "ropey or bearded" morphology; and advancing over the adjacent seabed and displaying typical "pancake batter" morphology. Sandwich tide pool (41 deg 46.42 min N lat, 70 deg 29.30 min W lon). Water depth, intertidal range to 11 feet (3.4 m). Collected at low tide. December 4, 2003. Collectors: Mary Carman and Page Valentine. Photo credit: Dann Blackwood, U.S. Geological Survey. Location no. 1.

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Image DB\_STP\_DSCN1852

Image DB\_STP\_DSCN1852 Tunicate colonies of *Didemnum* sp. growing on the sides of a boulder and beginning to display "ropey or bearded" morphology; and advancing over the adjacent seabed and displaying typical "pancake batter" morphology. Sandwich tide pool (41 deg 46.42 min N lat, 70 deg 29.30 min W lon). Water depth, intertidal range to 11 feet (3.4 m). Collected at low tide. December 4, 2003. Collectors: Mary Carman and Page Valentine. Photo credit: Dann Blackwood, U.S. Geological Survey. Location no. 1.

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Image DB\_STP\_DSCN1854

**Image DB\_STP\_DSCN1854** Tunicate colonies of *Didemnum* sp. encrusting the side of a boulder and overgrowing dark red algae. Note the contrasting "ropey" morphology on the boulder and the smooth morphology on the seabed below. Sandwich tide pool (41 deg 46.42 min N lat, 70 deg 29.30 min W lon). Water depth, intertidal range to 11 feet (3.4 m). Collected at low tide. December 4, 2003. Collectors: Mary Carman and Page Valentine. Photo credit: Dann Blackwood, U.S. Geological Survey. Location no. 1.



Image DB\_STP\_DSCN1856

**Image DB\_STP\_DSCN1856** Tunicate colonies of *Didemnum* sp. encrusting the sides of two boulders and overgrowing dark green and dark red algae. Sandwich tide pool (41 deg 46.42 min N lat, 70 deg 29.30 min W lon). Water depth, intertidal range to 11 feet (3.4 m). Collected at low tide. December 4, 2003. Collectors: Mary Carman and Page Valentine. Photo credit: Dann Blackwood, U.S. Geological Survey. Location no. 1.

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Image DB STP DSCN1857

Image DB\_STP\_DSCN1857 Tunicate colonies of *Didemnum* sp. encrusting the sides of two boulders and overgrowing dark green and dark red algae. Close up of Image DB\_STP\_DSCN1856. Sandwich tide pool (41 deg 46.42 min N lat, 70 deg 29.30 min W lon). Water depth, intertidal range to 11 feet (3.4 m). Collected at low tide. December 4, 2003. Collectors: Mary Carman and Page Valentine. Photo credit: Dann Blackwood, U.S. Geological Survey. Location no. 1. Click here to download image.



Image DB\_STP\_DSCN1858

Image DB\_STP\_DSCN1858 Tunicate colonies of *Didemnum* sp. encrusting the sides of two boulders and overgrowing dark green and dark red algae. Close up of Image DB\_STP\_DSCN1856. Sandwich tide pool (41 deg 46.42 min N lat, 70 deg 29.30 min W lon). Water depth, intertidal range to 11 feet (3.4 m). Collected at low tide. December 4, 2003. Collectors: Mary Carman and Page Valentine. Photo credit: Dann Blackwood, U.S. Geological Survey. Location no. 1. Click here to download image.



Image DB\_STP\_DSCN1859

**Image DB\_STP\_DSCN1859** Tunicate colonies of *Didemnum* sp. overgrowing dark green algae and displaying a "ropey" surface. Sandwich tide pool (41 deg 46.42 min N lat, 70 deg 29.30 min W lon). Water depth, intertidal range to 11 feet (3.4 m). Collected at low tide. December 4, 2003. Collectors: Mary Carman and Page Valentine. Photo credit: Dann Blackwood, U. S. Geological Survey. Location no. 1.



Image DB\_STP\_DSCN1860

**Image DB\_STP\_DSCN1860** Tunicate colonies of *Didemnum* sp. overgrowing dark green algae and developing a "ropey" surface. Sandwich tide pool (41 deg 46.42 min N lat, 70 deg 29.30 min W lon). Water depth, intertidal range to 11 feet (3.4 m). Collected at low tide. December 4, 2003. Collectors: Mary Carman and Page Valentine. Photo credit: Dann Blackwood, U. S. Geological Survey. Location no. 1.

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Image DB STP DSCN1862

**Image DB\_STP\_DSCN1862**. Tunicate colonies of *Didemnum* sp. encrusting the sides of boulders and overgrowing dark red and dark green algae. Sandwich tide pool (41 deg 46.42 min N lat, 70 deg 29.30 min W lon). Water depth, intertidal range to 11 feet (3.4 m). Collected at low tide. December 4, 2003. Collectors: Mary Carman and Page Valentine. Photo credit: Dann Blackwood, U.S. Geological Survey. Location no. 1. **Click here to download image.** 



Image DB\_STP\_DSCN1864

Image DB\_STP\_DSCN1864 Tunicate colonies of *Didemnum* sp. encrusting the sides of a boulder, overgrowing dark red algae, and beginning to advance over the adjacent seabed. Sandwich tide pool (41 deg 46.42 min N lat, 70 deg 29.30 min W lon). Water depth, intertidal range to 11 feet (3.4 m). Collected at low tide. December 4, 2003. Collectors: Mary Carman and Page Valentine. Photo credit: Dann Blackwood, U. S. Geological Survey. Location no. 1.

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Image DB\_STP\_DSCN1866

Image DB\_STP\_DSCN1866. Tunicate colonies of *Didemnum* sp. advancing over a boulder surface and overgrowing barnacles and a green encrusting sponge (cf. *Halichondria sp.*). Sandwich tide pool (41 deg 46.42 min N lat, 70 deg 29.30 min W lon). Water depth, intertidal range to 11 feet (3.4 m). Collected at low tide. December 4, 2003. Collectors: Mary Carman and Page Valentine. Photo credit: Dann Blackwood, U. S. Geological Survey. Location no. 1.



Image DB\_STP\_DSCN1871

**Image DB\_STP\_DSCN1871**. Tunicate colonies of *Didemnum* sp. on the side of a boulder and overgrowing a green encrusting sponge (cf. *Halichondria sp.*). Sandwich tide pool (41 deg 46.42 min N lat, 70 deg 29.30 min W lon). Water depth, intertidal range to 11 feet (3.4 m). Collected at low tide. December 4, 2003. Collectors: Mary Carman and Page Valentine. Photo credit: Dann Blackwood, U.S. Geological Survey. Location no. 1.

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Image DB STP DSCN1872

**Image DB\_STP\_DSCN1872**. Tunicate colonies of *Didemnum* sp. encrusting the side of a boulder and showing the transition from the "ropey" morphology on the boulder side to the smooth morphology on the seabed below. Sandwich tide pool (41 deg 46.42 min N lat, 70 deg 29.30 min W lon). Water depth, intertidal range to 11 feet (3.4 m). Collected at low tide. December 4, 2003. Collectors: Mary Carman and Page Valentine. Photo credit: Dann Blackwood, U.S. Geological Survey. Location no. 1.

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Image DB\_STP\_DSCN1880

Image DB\_STP\_DSCN1880. Tunicate colonies of *Didemnum* sp. overgrowing the fronds of dark green algae. Sandwich tide pool (41 deg 46.42 min N lat, 70 deg 29.30 min W lon). Water depth, intertidal range to 11 feet (3.4 m). Collected at low tide. December 4, 2003. Collectors: Mary Carman and Page Valentine. Photo credit: Dann Blackwood, U.S. Geological Survey. Location no. 1.

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Image DB\_STP\_DSCN1885

**Image DB\_STP\_DSCN1885**. Tunicate colonies of *Didemnum* sp. encrusting the side of a boulder and overgrowing dark red algae. Note the red colony of the tunicate *Botrylloides violaceus*. Sandwich tide pool (41 deg 46.42 min N lat, 70 deg 29.30 min W lon). Water depth, intertidal range to 11 feet (3.4 m). Collected at low tide. December 4, 2003. Collectors: Mary Carman and Page Valentine. Photo credit: Dann Blackwood, U. S. Geological Survey. Location no. 1.



Image DB\_STP\_DSCN1894

**Image DB\_STP\_DSCN1894**. Tunicate colonies of *Didemnum* sp. growing on the sides of a boulder and beginning to display "ropey or bearded" morphology; and advancing over the adjacent seabed and displaying typical "pancake batter" morphology. Sandwich tide pool (41 deg 46.42 min N lat, 70 deg 29.30 min W lon). Water depth, intertidal range to 11 feet (3.4 m). Collected at low tide. December 4, 2003. Collectors: Mary Carman and Page Valentine. Photo credit: Dann Blackwood, U.S. Geological Survey. Location no. 1. Click here to download image.



Image DB\_STP\_DSCN1901

**Image DB\_STP\_DSCN1901**. Tunicate colonies of *Didemnum* sp. growing on the side of a boulder and overgrowing red and green (cf. Halichondria sp.) encrusting sponges. The leading edge of the tunicate colony is beginning to peel away from the upper edge of the boulder. Note the small colonies of D. sp. beginning to grow on the upper surface of the boulder. Sandwich tide pool (41 deg 46.42 min N lat, 70 deg 29.30 min W lon). Water depth, intertidal range to 11 feet (3.4 m). Collected at low tide. December 4, 2003. Collectors: Mary Carman and Page Valentine. Photo credit: Dann Blackwood, U. S. Geological Survey. Location no. 1.

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Image DB STP DSC0090

# **February 3, 2004**

Image DB\_STP\_DSC0090. View of the Sandwich tide pool on the south side of the east entrance of the Cape Cod canal at low tide, looking east (41 deg 46.42 min N lat, 70 deg 29.30 min W lon). Water depth, intertidal, 11 foot (3.4 m) range. Water temperature 1 deg C. Observed at low tide. February 3, 2004. Photo credit: Dann Blackwood (USGS). Location no. 1.

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Image DB\_STP\_DSCN2010

**Image DB\_STP\_DSCN2010.** Tunicate colonies of *Didemnum* sp. encrusting a boulder and being preved upon by the common periwinkle, Littorina littorea. Note that the snails are numbered for comparison with the following images. Elliptical and subcircular holes in D. sp. are interpreted to represent areas that have been grazed by the periwinkles. Sandwich tide pool (41 deg 46.42 min N lat, 70 deg 29.30 min W lon). Water depth, intertidal range to 11 feet (3.4 m). Water temperature 1 deg C. Observed at low tide. February 3, 2004. Observers: Page Valentine (USGS) and Mary Carman (WHOI). Photo credit: Dann Blackwood (USGS). Location no. 1.

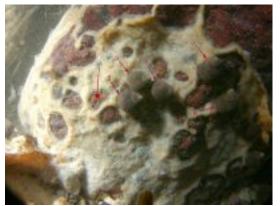


Image DB\_STP\_DSCN2011

**Image DB\_STP\_DSCN2011.** Tunicate colonies of *Didemnum* sp. encrusting a boulder and being preyed upon by the common periwinkle, *Littorina littorea*. Snail no. 1 has been removed to show area grazed through the *D.* sp. colony. Elliptical and subcircular holes in *D.* sp. are interpreted to represent areas that have been grazed by the periwinkles. Sandwich tide pool (41 deg 46.42 min N lat, 70 deg 29.30 min W lon). Water depth, intertidal range to 11 feet (3.4 m). Water temperature 1 deg C. Observed at low tide. February 3, 2004. Observers: Page Valentine (USGS) and Mary Carman (WHOI). Photo credit: Dann Blackwood (USGS). Location no. 1.

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Image DB\_STP\_DSCN2012

**Image DB\_STP\_DSCN2012.** Tunicate colonies of *Didemnum* sp. encrusting a boulder and being preyed upon by the common periwinkle, *Littorina littorea*. Snails no. 1, 2 and 3 have been removed to show areas grazed through the *D.* sp. colony. Elliptical and subcircular holes in *D.* sp. are interpreted to represent areas that have been grazed by the periwinkles. Sandwich tide pool (41 deg 46.42 min N lat, 70 deg 29.30 min W lon). Water depth, intertidal range to 11 feet (3.4 m). Water temperature 1 deg C. Observed at low tide. February 3, 2004. Observers: Page Valentine (USGS) and Mary Carman (WHOI). Photo credit: Dann Blackwood (USGS). <u>Location no. 1.</u>

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Image DB\_STP\_DSCN2015

Image DB\_STP\_DSCN2015. Tunicate colonies of *Didemnum* sp. encrusting a boulder and being preyed upon by the common periwinkle, *Littorina littorea*. Snails no. 1-6 have been removed to show grazed areas in the *D.* sp. colony. Snails 1-3 have grazed through the tunicate, snail no. 4 has grazed the surface of the colony, and snails 5 and 6 were grazing the edges of a large hole in the colony when they were removed. Elliptical and subcircular holes in *D.* sp. are interpreted to represent areas that have been grazed by the periwinkles. Sandwich tide pool (41 deg 46.42 min N lat, 70 deg 29.30 min W lon). Water depth, intertidal range to 11 feet (3.4 m). Water temperature 1 deg C. Observed at low tide. February 3, 2004. Observers: Page Valentine (USGS) and Mary Carman (WHOI). Photo credit: Dann Blackwood (USGS). Location no. 1.

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Image DB\_STP\_DSC0089

Image DB\_STP\_DSC0089. Dead tunicate colonies of *Didemnum* sp. peeling away from the top of a boulder exposed at low tide. Sandwich tide pool (41 deg 46.42 min N lat, 70 deg 29.30 min W lon). Water depth, intertidal range to 11 feet (3.4 m). Water temperature 1 deg C. Observed at low tide. February 3, 2004. Observers: Page Valentine (USGS) and Mary Carman (WHOI). Photo credit: Dann Blackwood (USGS). Location no. 1.



Image DB\_STP\_DSCN1994

Image DB\_STP\_DSCN1994. Dying tunicate colony of *Didemnum* sp. beginning to peel away from a boulder. Colony surface shows a yellow discoloration; small dark spots are clusters of fecal pellets showing through the tunic. Sandwich tide pool (41 deg 46.42 min N lat, 70 deg 29.30 min W lon). Water depth, intertidal range to 11 feet (3.4 m). Water temperature 1 deg C. Observed at low tide. February 3, 2004. Observers: Page Valentine (USGS) and Mary Carman (WHOI). Photo credit: Dann Blackwood (USGS). Location no. 1. Click here to download image.



Image DB STP DSCN1998

**Image DB\_STP\_DSCN1998**. Dying tunicate colony of *Didemnum* sp. peeling away from the side of a boulder. Colony surface shows onset of yellow discoloration; small dark spots are clusters of fecal pellets showing through the tunic. Sandwich tide pool (41 deg 46.42 min N lat, 70 deg 29.30 min W lon). Water depth, intertidal range to 11 feet (3.4 m). Water temperature 1 deg C. Observed at low tide. February 3, 2004. Observers: Page Valentine (USGS) and Mary Carman (WHOI). Photo credit: Dann Blackwood (USGS). Location no. 1. **Click here to download image.** 



Image DB\_STP\_DSCN1999

Image DB\_STP\_DSCN1999. Dying tunicate colony of *Didemnum* sp. peeling away from the side of a boulder. Close-up of Image DB\_STP\_DSCN1998 showing ragged edge of colony with elliptical holes interpreted to represent areas that have been grazed by the common periwinkle *Littorina littorea*. Sandwich tide pool (41 deg 46.42 min N lat, 70 deg 29.30 min W lon). Water depth, intertidal range to 11 feet (3.4 m). Water temperature 1 deg C. Observed at low tide. February 3, 2004. Observers: Page Valentine (USGS) and Mary Carman (WHOI). Photo credit: Dann Blackwood (USGS).Location no. 1.

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Image DB\_STP\_DSCN2003

**Image DB\_STP\_DSCN2003**. Dying tunicate colony of *Didemnum* sp. peeling away from a boulder, exposing the underside of the colony, which is being preyed upon by the common periwinkle, *Littorina littorea*. Sandwich tide pool (41 deg 46.42 min N lat, 70 deg 29.30 min W lon). Water depth, intertidal range to 11 feet (3.4 m). Water temperature 1 deg C. Observed at low tide. February 3, 2004. Observers: Page Valentine (USGS) and Mary Carman (WHOI). Photo credit: Dann Blackwood (USGS). Location no. 1.



Image DB\_STP\_DSCN2001

**Image DB\_STP\_DSCN2001**. Dying tunicate colony of *Didemnum* sp. encrusting the side of a boulder. Colony surface shows a yellow discoloration; small dark spots are clusters of fecal pellets showing through the tunic. This colony shows little predation by the common periwinkle, *Littorina littorea*. Sandwich tide pool (41 deg 46.42 min N lat, 70 deg 29.30 min W lon). Water depth, intertidal range to 11 feet (3.4 m). Water temperature 1 deg C. Observed at low tide. February 3, 2004. Observers: Page Valentine (USGS) and Mary Carman (WHOI). Photo credit: Dann Blackwood (USGS). Location no. 1. **Click here to download image.** 



Image DB\_STP\_DSCN2019

**Image DB\_STP\_DSCN2019**. Image DB\_STP\_DSCN2019. Dying tunicate colony of *Didemnum* sp. encrusting the side of a boulder. Colony surface shows a yellow discoloration; small dark spots are clusters of fecal pellets showing through the tunic. *D.* sp. is being preyed upon by the common periwinkle, *Littorina littorea*. Elliptical and subcircular holes in the tunicate colony are interpreted to represent areas that have been grazed by the periwinkles. Sandwich tide pool (41 deg 46.42 min N lat, 70 deg 29.30 min W lon). Water depth, intertidal range to 11 feet (3.4 m). Water temperature 1 deg C. Observed at low tide. February 3, 2004. Observers: Page Valentine (USGS) and Mary Carman (WHOI). Photo credit: Dann Blackwood (USGS). Location no. 1.

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Image DB\_STP\_DSCN1995

**Image DB\_STP\_DSCN1995**. Dying tunicate colony of *Didemnum* sp. encrusting the side of a boulder. Colony surface shows a yellow discoloration; small dark spots are clusters of fecal pellets showing through the tunic. *D.* sp. is being preyed upon by the common periwinkle, *Littorina littorea*. Elliptical and subcircular holes in the tunicate colony are interpreted to represent areas that have been grazed by the periwinkles. Sandwich tide pool (41 deg 46.42 min N lat, 70 deg 29.30 min W lon). Water depth, intertidal range to 11 feet (3.4 m). Water temperature 1 deg C. Observed at low tide. February 3, 2004. Observers: Page Valentine (USGS) and Mary Carman (WHOI). Photo credit: Dann Blackwood (USGS). Location no. 1.

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Image DB\_STP\_DSCN2006

**Image DB\_STP\_DSCN2006**. Dying tunicate colony of *Didemnum* sp. encrusting the sides of boulders. Small dark spots on the surface of the colonies are clusters of fecal pellets showing through the tunic. *D.* sp. is being preyed upon by the common periwinkle, *Littorina littorea*. Elliptical and subcircular holes in the tunicate colony are interpreted to represent areas that have been grazed by the periwinkles. Sandwich tide pool (41 deg 46.42 min N lat, 70 deg 29.30 min W lon). Water depth, intertidal range to 11 feet (3.4 m). Water temperature 1 deg C. Observed at low tide. February 3, 2004. Observers: Page Valentine (USGS) and Mary Carman (WHOI). Photo credit: Dann Blackwood (USGS). Location no. 1.

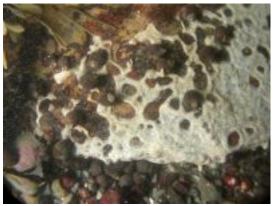


Image DB\_STP\_DSCN2020

Image DB\_STP\_DSCN2020. Tunicate colony of *Didemnum* sp. encrusting a boulder and being preyed upon by the common periwinkle, *Littorina littorea*. Dark spots on the surface of the colony are clusters of fecal pellets showing through the tunic. At least 20 snails are present in the image Elliptical and subcircular holes in *D.* sp. are interpreted to represent areas that have been grazed by the periwinkles. Sandwich tide pool (41 deg 46.42 min N lat, 70 deg 29.30 min W lon). Water depth, intertidal range to 11 feet (3.4 m). Water temperature 1 deg C. Observed at low tide. February 3, 2004. Observers: Page Valentine (USGS) and Mary Carman (WHOI). Photo credit: Dann Blackwood (USGS). Location no. 1.

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htm/page3.htm

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