



American piddock (*Petricola pholadiformis*)



Photo Rainer Borchering, © Naturschutzgesellschaft Schutzstation Wattenmeer

Common name(s) in English	American piddock. False angel wing.
... and in other languages	Danish: Amerikansk boremusling. Dutch: Amerikaanse boormossel. German: Amerikanische Bohrmuschel. Engelsflügel. Norwegian: Amerikansk boreskjell. Swedish: Amerikansk bormussla.
Scientific name	<i>Petricola pholadiformis</i> . See also <i>Petricolaria pholadiformis</i> .
Organism group	Molluscs. Bivalves.
Size and appearance	The shell of the American piddock varies in colour from chalky white to yellowish brown on the outside, while the inside is white. Its length ranges from about 2.5 cm to a maximum of 8 cm. The thin, brittle shell is distinctly ribbed on the outside and smooth on the inside. Both valves have clearly visible teeth. The shell is somewhat oval in shape.
May be confused with	<i>P. pholadiformis</i> is very similar to the white piddock (<i>Barnea candida</i>), a native species in several countries, including Denmark, Sweden, Germany, the Netherlands and Britain. The white piddock has distinct, spined ridges on its shell. The American piddock may also be confused with the oval piddock (<i>Zirphaea crispata</i>), which has a conspicuous groove in each valve of its shell and a large gape where its foot protrudes. Both these species have a long, tooth-like projection to which the foot muscles are attached.
Geographical origin	East coast of North America.
First observed in Swedish waters	?
Occurrence in Swedish seas and coastal areas	Kattegat and Skagerrak.


Occurrence in other sea areas	The species was introduced to Britain unintentionally with imported American oysters, probably as early as the 1890s. It was reported from Denmark in 1905 and became common in the Kattegat, from where it spread to Belgium and the Netherlands. It also occurs in Norwegian waters. In addition, <i>Petricola pholadiformis</i> is found in the Mediterranean.
Probable means of introduction	Through aquaculture, associated with imported American oysters (<i>Crassostrea virginica</i>). Within Europe it has probably spread to new areas as a result of its larvae drifting with currents.
Habitat(s) in which species occurs	As indicated by its name in several languages, and by its ribbed shell, <i>Petricola pholadiformis</i> bores into marine or other substrata of hard clay, mud, peat, wood or limestone and lives in the holes it creates. The species is unable to live on open surfaces and requires a hard material to bore into. It breathes and filters food through two siphons. The older the animal becomes, the deeper it bores into the substratum. <i>P. pholadiformis</i> is generally found in shallow waters, and probably not at greater depths than about 8 m, although the maximum water depth for this species is not known. It spreads by means of its larvae, which drift with currents.
Ecological effects	<i>Petricola pholadiformis</i> may displace native species of boring bivalves. This has happened in Belgium and the Netherlands, where it has almost completely replaced the indigenous white piddock (<i>Barnea candida</i>). In Britain however, where the American piddock is also common, it has not outcompeted native species.
Other effects	–
Additional information	In Germany, where the American piddock is an introduced species, it has nevertheless now been red-listed, i.e. included on a list of (potentially) endangered species of the Wattenmeer.
<p><i>FIND OUT MORE</i></p> <ul style="list-style-type: none"> • North European and Baltic Network on Invasive Alien Species: <i>Petricolaria pholadiformis</i> http://www.nobanis.org/speciesInfo.asp?taxaID=6998 • North European and Baltic Network on Invasive Alien Species: <i>Petricola pholadiformis</i> http://www.nobanis.org/speciesInfo.asp?taxaID=248 • Baltic Sea Alien Species Database: <i>Petricola pholadiformis</i> http://www.ku.lt/nemo/directory_details.php?sp_name=Petricola+pholadiformis • Biopix: Amerikansk boremusling (<i>Petricola pholadiformis</i>) http://www.biopix.dk/Species.asp?Language=da&Searchtext=Petricola%20pholadiformis&Category=Bloeddyr •  8,7 MB: Bundesanstalt für Gewässerkunde: Neozoa (Makrozoobenthos) an der deutschen Nordseeküste: Eine Übersicht. http://www.stefannehring.de/downloads/083_Nehring+Leuchs-1999_BfG-Bericht-1200_neozoa-nordsee.pdf • Naturgesellschaft Schutzstation Wattenmeer: <i>Petricola pholadiformis</i> http://www.schutzstation-wattenmeer.de/wissen/am_bohrmuschel.html • Royal Netherlands Institute for Sea Research: Amerikaanse boormossel http://www.nioz.nl/vleet/content/ned/index.php?use_template=vleet_template.html&item=vleet&pageid=NED0523.HTM#0588 •  3,4 MB: Nationaal Natuurhistorisch Museum: Non-indigenous marine and estuarine species in The Netherlands: <i>Petricola pholadiformis</i> http://www.marbee.fmns.rug.nl/pdf/marbee/2005-Wolf-ZoolMed.pdf • Marine and estuarine macroinvertebrates, macroalgae and fish introduced to the Netherlands: <i>Petricola pholadiformis</i> http://home.hetnet.nl/~faassema/introduced%20Mollusca.html • Joint Nature Conservation Committee: <i>Petricola pholadiformis</i> http://www.jncc.gov.uk/page-1717 	

- European Nature Information System Database (EUNIS): *Petricola pholadiformis*
<http://eunis.eea.eu.int/species-factsheet.jsp?idSpecies=60730&idSpeciesLink=60730>
- Marine Life Information Network for Britain & Ireland: American piddock
<http://www.marlin.ac.uk/species/Petricolapholadiformis.htm>
- Mediterranean Science Commission (CIESM): Exotic Atlas: *Petricola pholadiformis*
<http://www.ciesm.org/atlas/Petricolapholadiformis.html>
- Elkhorn Slough Research: Least Wanted Aquatic Invaders: False Angelwing
<http://www.elkhornslough.org/research/aquaticinvaders/aquatic17.htm>


PHOTO CREDIT

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http://www.schutzstation-wattenmeer.de/wissen/am_bohrmuschel.html
<http://www.schutzstation-wattenmeer.de>

White piddock

- Royal Netherlands Institute for Sea Research: Witte boormossel (*Barnea candida*)
http://www.nioz.nl/vleet/content/ned/index.php?use_template=vleet_template.html&item=vleet&pageid=NED0515.HTM#0579
-  5 kB: Tjärnö Marinbiologiska Laboratorium: Artfaktablad om *Barnea candida*
<http://www.tmbi.gu.se/pdf/Artfaktablad/Artf Barnea candida.pdf>

Oval piddock

- Royal Netherlands Institute for Sea Research: Ruwe boormossel (*Zirfaea crispata*)
http://www.nioz.nl/vleet/content/ned/index.php?use_template=vleet_template.html&item=vleet&pageid=NED0526.HTM#0591
-  5 kB: Tjärnö Marinbiologiska Laboratorium: Artfaktablad om *Zirfaea crispata*
<http://www.tmbi.gu.se/pdf/Artfaktablad/Artf Zirfaea crispata.pdf>
- Biopix: Stor boremusling (*Zirphaea crispata*)
<http://www.biopix.dk/Species.asp?Language=da&Searchtext=Zirphaea%20crispata&Category=Bloeddyr>

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