

Sand gaper (*Mya arenaria*)



Photo © Erkki Leppäkoski, Åbo Akademi University

Common name(s) in English	Sand gaper. Soft-shell(ed) clam. Long-necked clam. Steamer clam.
... and in other languages	Danish: Almindelig sandmusling. Dutch: Strandgaper. Estonian: Liiva-uurikkarp. German: Sandklaffmuschel. Strandauster. Icelandic: Sandskel. Latvian: Liela smilsgliemene. Lithuanian: Smelinuke. Norwegian: Vanlig sandskjell. Swedish: (Vanlig) sandmussla.
Scientific name	<i>Mya arenaria</i>
Organism group	Molluscs. Bivalves.
Size and appearance	The sand gaper is usually no longer than 2–5 cm, but can reach a length of 12–15 cm. Its shell is white or a pale yellowish colour. The shells of living specimens have a pale green or brownish yellow external covering (periostracum), but on shells washed ashore this layer has usually been eroded. The oldest part of the shell is the beak, its most protuberant part. The shell of a sand gaper consists of a right and a left valve, joined at the top by an elastic ligament, which is attached in the left valve to a relatively large shelf-like projection (chondrophore). (Source: <i>Aquascope</i>)
May be confused with	<i>Mya truncata</i> (blunt gaper), which differs from <i>M. arenaria</i> in that its shell is squared off at the hind end. May also be confused with the common otter shell (<i>Lutraria lutraria</i>), which often has a darker periostracum and lacks the large chondrophore of <i>M. arenaria</i> .
Geographical origin	East coast of North America.
First observed in Swedish waters	The first observations in the Baltic may have been made as early as the mid-13th century. It is unclear when the sand gaper was first discovered in Swedish waters, but by the beginning of the 20th century it was to be found along the west and south coasts.
Occurrence in Swedish seas and coastal areas	The sand gaper occurs in shallow water along the east coast of Sweden as far north as the Bothnian Sea, and in the Belt Sea, Kattegat and Skagerrak.

Occurrence in other sea areas	The species occurs throughout the Baltic Sea, with the exception of the Bothnian Bay and the eastern Gulf of Finland. It is also found along North Sea coasts, from Norway and the Faroes in the north to France in the south. In addition it occurs, for example, in the Mediterranean and the Black Sea.
Probable means of introduction	Fossils have shown that this species was present in Europe during the Pleistocene, before the ice age. It then became extinct here, but survived on the Atlantic coast of America. It is likely that Vikings, either unintentionally or for use as food or bait on their return from their westward travels, brought sand gapers with them to the Baltic prior to AD 1000. According to some sources, the species could have returned to Europe in the late Middle Ages, perhaps in the 16th century. It may have found its way here as a "stowaway", either as larvae in water, in sediment around ballast rocks, or attached to ships' hulls.
Habitat(s) in which species occurs	<p>The sand gaper usually burrows into soft bottom sediments, but can also live in the spaces within mussel beds. It occurs at water depths ranging from a few centimetres to tens of metres.</p> <p>Once a sand gaper has dug its burrow, it remains virtually immobile in the same place for the rest of its life. The larger and older the animal is, the deeper in the sediment it lives. It has long siphons, and in very shallow water its siphon holes can be left exposed at low tide. On a shallow sandy bottom, the openings left by the siphons can be seen as double holes in the sand, fringed with light-sensitive tentacles. At the age of one year, a sand gaper will be found 5–10 cm below the surface of the sediment, and by the age of 10 years it will have dug down to about 40 cm. Young sand gapers risk ending up as fish food, but large, deeply buried individuals are virtually beyond the reach of enemies and do not freeze to death even in severe winters with heavy ice. A sand gaper can live for 10–12 years. (<i>Sources: Aquascope, Baltic Sea Portal.</i>)</p>
Ecological effects	In very great abundance, the species can become dominant in a sandy bottom and compete for food and space with other bivalves. Large numbers of sand gaper burrows in an area can change the character of the habitat.
Other effects	There are reports that tourism on the coasts of the Black Sea suffered in the 1970s, when there were large populations of the species and tons of rotting sand gapers accumulated on beaches.
Additional information	<p>The "Mya Sea" is a name sometimes given to one of the stages in the development of the Baltic Sea, roughly 1,000 years ago. The different periods in the sea's development are often named after the gastropods and bivalves dominant at the time, which are now found as fossils in deep layers of Baltic sediment.</p> <p>In the United States and Canada, the soft-shell clam is appreciated and used for food and is caught in large quantities, whereas "surprisingly, throughout shellfish-loving Europe, it is not a sought-after species". In North America, the clams are harvested using clam hoes or hacks to dig them from the sediment.</p>
<p><i>FIND OUT MORE</i></p> <ul style="list-style-type: none"> • FIMR, Baltic Sea Portal: Alien species in the Baltic Sea http://www.fimr.fi/en/itamerikanta/tieto/eliot/tulokaslajit.html 	



- North European and Baltic Network on Invasive Alien Species: *Mya arenaria*
<http://www.nobanis.org/speciesInfo.asp?taxaID=247>
- Baltic Sea Alien Species Database: *Mya arenaria*
http://www.ku.lt/nemo/directory_details.php?sp_name=Mya+arenaria
- University of Gdansk, Hel Marine Station: Małgiew piaskołaz
<http://hel.hel.univ.gda.pl/jurek/org/mie/mal/mal.htm>
- Joint Nature Conservation Committee: *Mya arenaria*
<http://www.jncc.gov.uk/page-1720>
-  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
- European Nature Information System Database (EUNIS): *Mya arenaria*
<http://eunis.eea.eu.int/species-factsheet.jsp?idSpecies=60430&idSpeciesLink=60430>
-  3,4 MB: Nationaal Natuurhistorisch Museum: Non-indigenous marine and estuarine species in The Netherlands: *Mya arenaria*
<http://www.marbee.fmns.rug.nl/pdf/marbee/2005-Wolf-ZoolMed.pdf>
- Marine and estuarine invertebrates native to The Netherlands: *Mya arenaria*
<http://home.hetnet.nl/~faassema/Myaarenaria.html>
- Royal Netherlands Institute for Sea Research: Sandgaper
http://www.nioz.nl/vleet/content/ned/index.php?use_template=vleet_template.html&item=vleet&pageid=NED0520.HTM#0585
- Marine Life Information Network for Britain & Ireland: *Mya arenaria*
<http://www.marlin.ac.uk/species/Myaarenaria.htm>
http://www.marlin.ac.uk/species/Adult_senexp_Myaarenaria.htm
- Mediterranean Science Commission (CIESM): Exotic Atlas: *Mya arenaria*
<http://www.ciesm.org/atlas/Myaarenaria.html>
- Guide to the Exotic species of the San Francisco Bay: *Mya arenaria*
http://www.exoticguide.org/species_pages/m_arenaria.html
- Marine Institute of Memorial University of Newfoundland: Soft-shelled clam
<http://www.mi.mun.ca/mi-net/fishdeve/clam.htm>

PHOTO CREDIT

- © Erkki Leppäkoski, Åbo Akademi University, Environmental and Marine Biology
<http://www.abo.fi/fak/mnf/biol/eco/>
http://www.abo.fi/meddelanden/forskning/2001_05_frammande_arter.sht

- This factsheet on *Mya arenaria* was created on 12 April 2006
- First update: 6 August 2006
- Translated by Martin Naylor on 9 October 2006
- Second update ("Find out more" only): 16 December 2006