

Acartia tonsa



Photo © Erik Selander, Department of Marine Ecology, Gothenburg University

Common name(s) in English	–
... and in other languages	Finnish: Hankajalkaisäyriäinen.
Scientific name	<i>Acartia tonsa</i>
Organism group	Crustaceans. Copepods, Calanoida.
Size and appearance	The abdomen of the female is very short, roughly a quarter of the length of the cephalothorax. It is covered with thin bundles of hairs (around the anal segment). The male, too, has bundles of short hairs (around the genital organs). The females grow to 1.2–1.5 mm (body length), the males to 1.0–1.1 mm.
May be confused with	Native <i>Acartia</i> species, including <i>Acartia vifilosa</i> and <i>Acartia longiremis</i> . To the untrained eye, <i>A. tonsa</i> may also be confused with other copepod species, chiefly Calanoida.
Geographical origin	Pacific Ocean, North America.
First observed in Swedish waters	Probably 1934.
Occurrence in Swedish seas and coastal areas	Skagerrak/Kattegat, Belt Sea and parts of the Baltic Sea proper (possibly also in the Gulf of Bothnia; see below concerning habitat requirements).
Occurrence in other sea areas	The species was discovered in the North Sea in 1916. It occurs in estuaries in Britain and has been reported from various areas along the mainland coasts of Europe, e.g. Normandy. Some reports claim that the species was introduced into the Baltic with ballast water in the 1930s, others that it may have been introduced as early as the beginning of the 20th century. It was first discovered in German waters and in Denmark, then in Latvia in 1926, in Lithuania in the 1930s, and in the Gulf of Finland in 1935. In the Baltic Sea area, <i>Acartia tonsa</i> occurs primarily in more southerly waters (Kattegat and Belt Sea, Oder/Odra Lagoon, Gulf of Riga, Mecklenburg Bight, Arkona Basin), but also in more northern parts of the Baltic proper. In addition, the species may possibly be present in the Gulf of Bothnia. Elsewhere, it has been recorded in the Black and Caspian Seas, and in the United States (Chesapeake Bay, but reportedly also along the Atlantic and Pacific coasts of both North and South America). It has also been reported from the Indian Ocean.
Probable means	Shipping, in ballast water.

of introduction	
Habitat(s) in which species occurs	Is found throughout the water column, but chiefly occurs in surface layers, as a water temperature of at least +10°C is required for successful reproduction. The species does best at salinities between 15 and 22 psu, but in laboratory experiments has survived everything from 0 to 77 psu. In the Caspian Sea, however, maximum growth occurs at 7–8 psu. In other types of seas worldwide, the species is associated with a belt of subtropical, tropical and other warm waters.
Ecological effects	Poorly known. Where food is in short supply, <i>Acartia tonsa</i> may possibly compete with other species, e.g. other copepods, for the food available.
Other effects	According to reports from the Caspian Sea (which has long experience of the species), no adverse effects on economic interests, including fisheries, have been seen.
<p><i>FIND OUT MORE</i></p> <ul style="list-style-type: none"> • Marine Biological Database (BIOMAD), Stockholms universitet: Zooplankton monitoring http://130.237.170.4/dbbm/var/zp_smrc.htm • North European and Baltic Network on Invasive Alien Species: <i>Acartia tonsa</i> http://www.nobanis.org/speciesInfo.asp?taxaID=1624 • Baltic Sea Alien Species Database: <i>Acartia tonsa</i> http://www.ku.lt/nemo/directory_details.php?sp_name=Acartia+tonsa • Eesti Mereinstituut: <i>Acartia tonsa</i> http://www.sea.ee/Sektorid/merebioloogia/MASE/Plankton.htm • European Nature Information System Database (EUNIS): <i>Acartia tonsa</i> http://eunis.eea.eu.int/species-factsheet.jsp?idSpecies=24262&idSpeciesLink=24262 • Joint Nature Conservation Committee: <i>Acartia tonsa</i> http://www.jncc.gov.uk/page-1706 • Caspian Environment Programme: <i>Acartia tonsa</i> http://www.caspianenvironment.org/biodb/eng/zooplankton/Acartia%20tonsa/main.htm • Institute of the Biology of the Southern Seas: NAS of Ukraine: Occurrence of <i>Acartia tonsa</i> Dana in the Black Sea. http://www.ibss.iuf.net/people/gubanova/atonsa.html • University of Maryland Center for Environmental Science: Long-term changes in <i>Acartia tonsa</i> abundance in the upper Chesapeake Bay http://www.hpl.umces.edu/~dkimmel/research.htm <p style="text-align: center;"><i>PHOTO CREDITS</i></p> <p>© Erik Selander, Department of Marine Ecology, Gothenburg University http://www.tmbi.gu.se/staff/ErikSelander.html</p>	
<ul style="list-style-type: none"> • This factsheet on <i>Acartia tonsa</i> was created on 20 September 2005 • First update: 29 June 2006 • Second update: 1 November 2006 • Translated by Martin Naylor on 1 December 2006 • Third update ("Find out more" only): 16 December 2006 	