

Elminius modestus

System: Marine_terrestrial

| Kingdom | Phylum | Class | Order | Family |
|----------|------------|-------------|----------|-----------|
| Animalia | Arthropoda | Maxillopoda | Sessilia | Balanidae |

Common name Australian barnacle (English), New Zealand barnacle (English), Firepladet rur (Danish), Nieuw-Zeelandse zeepok (Dutch), Australseepocke (German), Sterretje (Dutch), Australische Seepocke (German), Kruisridderpok (Dutch)

Synonym *Austrominius modestus*

Similar species

Summary *Elminius modestus* has spread successfully throughout the Western Europe coastal areas, since its introduction to the southeast coast of the UK most probably on the hull of ships from New Zealand and /or Australia between 1940 and 1943. There are several factors that aid *Elminius* success as an invader. *Elminius* larval stages are eurythermal and euryhaline, enabling them to survive in a wide range of habitat types. *E. modestus* is a highly fecund species and has a short generation time. It is highly tolerant of changes in temperature and salinity. *E. modestus* compete with native barnacle species for space. It has been observed that the successful range expansion of the barnacle could be facilitated by a changing climate with warmer seas and temperatures.



[view this species on IUCN Red List](#)

General Impacts

Elminius modestus competes for space with the native barnacle *Balanus balanoides* along the coasts of Western Europe where it has spread widely (Crisp & Chipperfield 1948; Crisp 1958; Nehring, 2005; Barnes & Barnes 1960).

Witte *et al* (2010) report that *Austrominius modestus* (= *Elminius modestus*) which was first reported on the Island of Sylt (North Sea) in 1955 and remained rare, has overtaken native barnacles *Semibalanus balanoides* and *Balanus crenatus* in abundance when surveyed in the summer of 2007. The authors suggest that this exponential increase in population numbers could be due to mild winters and warm summers over a period.

Pathway

Crisp (1958) noted two types of dispersal natural or 'marginal' dispersal at an average of 20-30 kms per year and long distance or 'remote' dispersal on the hull of a boat or ship.

Principal source:

Compiler: IUCN SSC Invasive Species Specialist Group (ISSG) with support from the Overseas Territories Environmental Programme (OTEP) project XOT603, a joint project with the Cayman Islands Government - Department of Environment

Review:

Publication date: 2010-06-08

ALIEN RANGE

[1] FRANCE
[1] GIBRALTAR
[1] ITALY
[1] NETHERLANDS
[1] SOUTH AFRICA
[1] UNITED KINGDOM

[1] GERMANY
[1] IRELAND
[1] JAPAN
[1] PORTUGAL
[1] SPAIN

BIBLIOGRAPHY

22 references found for *Elminius modestus*

Management information

[IUCN/SSC Invasive Species Specialist Group \(ISSG\), 2010. A Compilation of Information Sources for Conservation Managers.](#)

Summary: This compilation of information sources can be sorted on keywords for example: Baits & Lures, Non Target Species, Eradication, Monitoring, Risk Assessment, Weeds, Herbicides etc. This compilation is at present in Excel format, this will be web-enabled as a searchable database shortly. This version of the database has been developed by the IUCN SSC ISSG as part of an Overseas Territories Environmental Programme funded project XOT603 in partnership with the Cayman Islands Government - Department of Environment. The compilation is a work under progress, the ISSG will manage, maintain and enhance the database with current and newly published information, reports, journal articles etc.

General information

Allen, Brendan M.; Power, Anne Marie; O Riordan, Ruth M.; Myers, Alan A.; McGrath, David, 2006. Increases in the abundance of the invasive barnacle *Elminius modestus* Darwin in Ireland. *Biology & Environment*. 106B(2). AUG 2006. 155-161.

Barnes, H. and Barnes, M. 1960. Recent spread and present distribution of the barnacle *Elminius modestus* Darwin in North-West Europe. *Proceedings of the Zoological Society of London*, 135: 137-145. doi: 10.1111/j.1469-7998.1960.tb05836.x

Barnes, H.B.; Barnes, M., 1968. *Elminius modestus* Darwin, a recent extension of the distribution and its present status on the southern part of the French Atlantic coast *Cah. Biol. Mar.* 9(3): 261-268

Bishop, M. W. H. and Crisp, D. J. 1958. The distribution of the barnacle *Elminius modestus* Darwin in France. *Proceedings of the Zoological Society of London*, 131: 109-134. doi: 10.1111/j.1096-3642.1958.tb00636.x

Crisp, D. J., 1958. The Spread of *Elminius modestus* Darwin In North-West Europe. *Journal of the Marine Biological Association of the United Kingdom*, 37, pp 483-520 doi:10.1017/S0025315400023833

Crisp, D. J. & A. J. Sutherland, 1959. The further spread of *Elminius modestus* in the Britishe Isles to 1959. *J. mar. biol. Ass. U.K.* (1959) 38, 429-437

Crisp, D. J. & P. N. J. Chipperfield, 1948. Occurrence of *Elminius modestus* (Darwin) in British Waters. *Nature* 161, 64-64 (10 January 1948)

[Delivering Invasive Alien Species Inventories for Europe \(DAISIE\), 2010. Elminius modestus](#)

Summary: Available from: <http://www.europe-aliens.org/speciesFactsheet.do?speciesId=50172#> [Accessed 26 July 2010]

Harms, J., 1999. The neozoan *Elminius modestus* Darwin (Crustacea, Cirripedia): Possible explanations for its successful invasion in European water. *Helgolander Meeresunters.* 52, 337-345 (1999)

[Integrated Taxonomic Information System \(ITIS\), 2010. Elminius modestus Darwin, 1854](#)

Summary: Available from: http://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=206264 [Accessed 26 July 2010]

[Joint Nature Conservation Committee \(JNCC\), 2010. Elminius modestus](#)

Summary: Available from: <http://www.jncc.gov.uk/page-1704> [Accessed 26 July 2010]

King, Pauline A.; Keogh, Elaine; McGrath, David, 1997. The current status of the exotic barnacle *Elminius modestus* Darwin in Galway Bay, Ireland. *Irish Naturalists Journal*. 25(10). 1997. 365-369.

Lawson, Jennifer; John Davenport; Alan Whitaker, 2004. Barnacle distribution in Lough Hyne Marine Nature Reserve: a new baseline and an account of invasion by the introduced Australasian species *Elminius modestus* Darwin. *Estuarine, Coastal and Shelf Science* 60 (2004) 729e735

Nehring, S., 2005. International shipping a risk for aquatic biodiversity in Germany. In: Nentwig, W. (Ed.), *Biological Invasions From Ecology to Control*. *Neobiota* 6, pp. 125-144.

Otani, M., Oumi, T., Uwai, S., Hanyuda, T., Prabowo, R. E., Yamaguchi, T. and Kawai, H., 2007. Occurrence and diversity of barnacles on international ships visiting Osaka Bay, Japan, and the risk of their introduction, *Biofouling*, 23: 4, 277-286

Ruth M. O Riordan and Neil F. Ramsay, 1999. The current distribution and abundance of the Australasian barnacle *Elminius modestus* in Portugal. *Journal of the Marine Biological Association of the UK*, 79, pp 937-939 doi:10.1017/S0025315498001118

Sandison, E. Eyvor, 1950. Appearance of *Elminius modestus* Darwin in South Africa. *Nature* No 4185 January 14 1950

[The North European and Baltic Network on Invasive Alien Species \(NOBANIS\), 2010. Elminius modestus Darwin, 1854 Australasian barnacle](#)

Summary: Available from: <http://www.nobanis.org/MarineIdkey/Barnacles/ElminiusModestus.htm> [Accessed 26 July 2010]

Watson, Douglas I.; O Riordan, Ruth M.; Barnes, David K. A.; Cross, Tom, 2005. Temporal and spatial variability in the recruitment of barnacles and the local dominance of *Elminius modestus* Darwin in SW Ireland. *Estuarine Coastal & Shelf Science*. 63(1-2). APR 05. 119-131.

Witte, Sophia; Christian Buschbaum; Justus E. E. van Beusekom; Karsten Reise, 2010. Does climatic warming explain why an introduced barnacle finally takes over after a lag of more than 50 years?. *Biol Invasions* (2010) 12:3579-3589

Global Invasive Species Database (GISD) 2024. Species profile *Elminius modestus*. Available from:

<https://www.iucngisd.org/gisd/species.php?sc=1631> [Accessed 20 April 2024]



GLOBAL INVASIVE SPECIES DATABASE

FULL ACCOUNT FOR: *Elminius modestus*

[World Register of Marine Species \(WoRMS\) 2010. *Elminius modestus* Darwin, 1854.](#)

Summary: Available from: <http://www.marinespecies.org/aphia.php?p=taxdetails&id=106209> [Accessed 26 July 2010]