



MarLIN

Marine Information Network

Information on the species and habitats around the coasts and sea of the British Isles

Lagoon sandworm (*Armandia cirrhosa*)

MarLIN – Marine Life Information Network
Biology and Sensitivity Key Information Review

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2007-04-20

A report from:

The Marine Life Information Network, Marine Biological Association of the United Kingdom.

Please note. This MarESA report is a dated version of the online review. Please refer to the website for the most up-to-date version [<https://www.marlin.ac.uk/species/detail/1160>]. All terms and the MarESA methodology are outlined on the website (<https://www.marlin.ac.uk>)

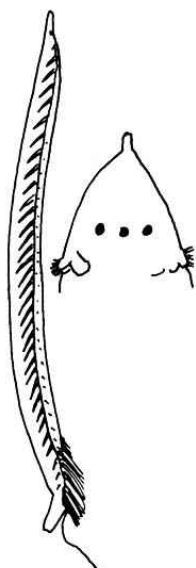
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Armandia cirrhosa

See online review for
distribution map

Line drawing of *Armandia cirrhosa*.

Photographer:

Copyright:

Distribution data supplied by the Ocean Biogeographic Information System (OBIS). To interrogate UK data visit the NBN Atlas.

Researched by	Nicola White	Refereed by	Dr Richard S.K. Barnes
Authority	Filippi, 1861		
Other common names	-	Synonyms	-

Summary

🔍 Description

A small, ribbon-like species, less than 8 mm long with three eyes on its head. It has 26 or 27 segments that bear chitinous bristles.

📍 Recorded distribution in Britain and Ireland

Eight Acre Pond in the Keyhaven-Lymington lagoons in Hampshire; Small Mouth Spit (Portland Harbour) and East Fleet Sandbank (Fleet Lagoon) in Dorset.

📍 Global distribution

South from the English Channel along the eastern Atlantic coasts, on Madeira and in the Mediterranean and Adriatic.

🏠 Habitat

Found in gravely, sandy and muddy substrata in water only slightly less saline than seawater.

↓ Depth range

-

🔍 Identifying features

- Ventral gutter extends along whole of body.
- 26 or 27 chaeta-bearing segments.
- 3 eyes on the head.
- Very small, less than 8 mm long.

🏛️ Additional information

Almost nothing is known of its biology.

✓ Listed by



🔗 Further information sources

Search on:



Biology review

Taxonomy

Phylum	Annelida	Segmented worms e.g. ragworms, tubeworms, fanworms and spoon worms
Class	Polychaeta	Bristleworms, e.g. ragworms, scaleworms, paddleworms, fanworms, tubeworms and spoon worms
Family	Opheliidae	
Genus	Armandia	
Authority	Filippi, 1861	
Recent Synonyms	-	

Biology

Typical abundance	Moderate density
Male size range	3-7mm
Male size at maturity	
Female size range	Very small(<1cm)
Female size at maturity	
Growth form	Vermiform segmented
Growth rate	Data deficient
Body flexibility	
Mobility	
Characteristic feeding method	No information, Sub-surface deposit feeder
Diet/food source	
Typically feeds on	Detritus
Sociability	
Environmental position	Infaunal
Dependency	Independent.
Supports	No information
Is the species harmful?	Data deficient

Biology information

Almost nothing is known of the biology of this species. Abundance varies markedly, from 463 individuals per metre square in Eight-Acre Pond to just 12 specimens recorded after extensive searching in the whole of the Fleet and Portland Harbour.

Habitat preferences

Physiographic preferences	Isolated saline water (Lagoon)
Biological zone preferences	Lower eulittoral
Substratum / habitat preferences	Muddy sand
Tidal strength preferences	

Wave exposure preferences	Very sheltered
Salinity preferences	Reduced (18-30 psu), Variable (18-40 psu)
Depth range	
Other preferences	No text entered
Migration Pattern	Non-migratory / resident

Habitat Information

The species was formerly very abundant in Eight-Acre Pond, Hampshire, but despite repeated surveys has not been recorded there since 1990. Two new sites were discovered in Dorset in 1994, bringing the total number of sites in the UK to 3.

Life history

Adult characteristics

Reproductive type	No information
Reproductive frequency	No information
Fecundity (number of eggs)	No information
Generation time	Insufficient information
Age at maturity	Insufficient information
Season	Insufficient information
Life span	Insufficient information

Larval characteristics

Larval/propagule type	-
Larval/juvenile development	Planktotrophic
Duration of larval stage	No information
Larval dispersal potential	No information
Larval settlement period	Insufficient information

Life history information

Some *Armandia* species are known to swarm up into the water to spawn (Rouse & Pleijel, 2001). *Armandia cirrhosa* has planktotrophic larvae (Rouse & Pleijel, 2001).

Sensitivity review

This MarLIN sensitivity assessment has been superseded by the MarESA approach to sensitivity assessment. MarLIN assessments used an approach that has now been modified to reflect the most recent conservation imperatives and terminology and are due to be updated by 2016/17.

A Physical Pressures

	Intolerance	Recoverability	Sensitivity	Confidence
Substratum Loss	High	Very low / none	Very High	Very low
<p><i>Armandia cirrhosa</i> is probably found within the top 1-2 cm of sediment so would be removed upon substratum loss. Recovery would be very low because only two extant populations of the species exist within the UK.</p>				
Smothering	Tolerant	Not relevant	Not sensitive	Very low
<p>The species would be able to move through new sediment and re-establish itself upon smothering.</p>				
Increase in suspended sediment	Tolerant	Not relevant	Not sensitive	Very low
<p>The species is probably tolerate to siltation as it occurs in lagoons where siltation naturally occurs.</p>				
Decrease in suspended sediment				
Dessication		Not relevant		Very low
<p>The low shore position of the species suggests that it is intolerant of desiccation. However, if it lives in a mud burrow it would be sheltered from the drying effects of wind and sun. Insufficient information is available to be able to make an accurate assessment.</p>				
Increase in emergence regime		Not relevant		Very low
<p>The low shore position of the species suggests that it is intolerant of emergence. However, if it lives in a mud burrow it would be sheltered from desiccation and temperature extremes. Insufficient information is available to be able to make an accurate assessment.</p>				
Decrease in emergence regime				
Increase in water flow rate	Intermediate		High	Very low
<p>Increased water flow may wash away the worm and associated fine sediment. Recovery would be very low because only two extant populations of the spices exist within the UK</p>				
Decrease in water flow rate				
Increase in temperature		Not relevant		Not relevant
<p>Insufficient information</p>				
Decrease in temperature				
Increase in turbidity	Tolerant	Not relevant	Not sensitive	Very low
<p>The species is probably tolerant of a change in turbidity as it is not affected by light availability.</p>				

Decrease in turbidity**Increase in wave exposure****High****Very High****Very low**

The species is within the top 1 cm of the sediment so would be removed upon increased wave exposure. The fine sediment with which the worm is usually associated would also be washed away. Tamaki (1987) observed that an unidentified species of *Armandia* in Japan was very susceptible to increased wave exposure because it is in the top 1 cm of the sediment.

Decrease in wave exposure**Noise**

Not relevant

Not relevant

Insufficient information

Visual Presence

Not relevant

Not relevant

Insufficient information

Abrasion & physical disturbance**Intermediate****Moderate****Moderate****Very low**

Armandia cirrhosa lives in the top 1-2 cm of the sediment which would be disturbed by physical disturbance caused by a passing scallop dredge or equivalent disturbance. Individuals in direct contact with the disturbance causing impact are likely to be damaged and/or killed, however, *Armandia cirrhosa* is very small so that a proportion of the population is likely to be missed or displaced. Therefore, an intolerance of intermediate has been recorded.

Displacement**Tolerant**

Not relevant

Not sensitive**Very low**

The species would probably be able to re-establish itself upon displacement.

🧪 Chemical Pressures

Intolerance

Recoverability

Sensitivity

Confidence

Synthetic compound contamination

Not relevant

Not relevant

Insufficient information

Heavy metal contamination

Not relevant

Not relevant

Insufficient information

Hydrocarbon contamination

Not relevant

Not relevant

Insufficient information

Radionuclide contamination

Not relevant

Not relevant

Insufficient information

Changes in nutrient levels

Not relevant

Not relevant

Insufficient information

Increase in salinity**High****None****Very High****Very low**

The species has only been recorded at sites with reduced salinity so can therefore probably not tolerate fully marine conditions.

Decrease in salinity**Changes in oxygenation**

Not relevant

Not relevant

Insufficient information

Biological Pressures

	Intolerance	Recoverability	Sensitivity	Confidence
Introduction of microbial pathogens/parasites		Not relevant		Not relevant
Insufficient information				
Introduction of non-native species		Not relevant		Not relevant
Insufficient information				
Extraction of this species		Not relevant		Not relevant
Insufficient information				
Extraction of other species		Not relevant		Not relevant
Insufficient information				

Additional information

Importance review

Policy/legislation

Wildlife & Countryside Act	Schedule 5, section 9
UK Biodiversity Action Plan Priority	<input checked="" type="checkbox"/>
Species of principal importance (England)	<input checked="" type="checkbox"/>
Features of Conservation Importance (England & Wales)	<input checked="" type="checkbox"/>

Status

National (GB) importance	Nationally rare	Global red list (IUCN) category	-
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Non-native

Native	-		
Origin	-	Date Arrived	-

Importance information

-none-

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