An isopod (*Idotea pelagica*)

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

Dr Harvey Tyler-Walters

2005-05-23

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/2104]. All terms and the MarESA methodology are outlined on the website (https://www.marlin.ac.uk)

This review can be cited as:

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**Description**

A dorso-ventrally flattened crustacean with an elongated rounded oblong shaped body. Body mostly dark purple to brown with white diamond-shaped patches or stripes down the midline and white markings along the edges of the body. Females tend to be darker than males. Males range in length from 4-11 mm and females from 7-10 mm. The distinctive head bears two dorso-lateral eyes, a pair of short antennules, and a pair of antennae. Most of body is taken up by a thorax composed on seven sections (somites). The body ends in a short abdomen (two somites) and a distinct tail-piece (the pleotelson). The antennule extend to the third segment of the antenna. The antenna is robust with a short flagellum that is densely covered with hairs in males. The pleotelson in adults is characteristic, with straight or slightly convex sides, a rounded end and only an indistinct middle tooth or process.

**Recorded distribution in Britain and Ireland**
Probably distributed all around the coasts of Britain and Ireland but poorly represented in surveys.

**Global distribution**
Recorded form Norway to the French coast but not entering low salinity waters of the inner Baltic.
Habitat
Found on wave exposed rocky shores amongst barnacles, mussels and stunted fucoids.

Depth range
-

Identifying features
- Dorso-ventrally flattened and oblong, oval body.
- Abdomen (pleon) consists of two complete somites and one partial suture.
- Antennule just or equal in length to the third section of the antenna.
- Antennal flagellum shorter than its peduncle, less than one sixth of the body length, and densely covered in hairs in males.
- Pleotelson sides straight or slightly convex, rounded with only an indistinct, blunt tooth.
- Tops of the legs bear broad coxal plates that widen posteriorly.
- Legs are very robust and bear a relatively larger claw than other Idotea.

Additional information
No text entered

Listed by

Further information sources
Search on:

G G G NBN WoRMS
## Biology review

### Taxonomy

<table>
<thead>
<tr>
<th>Phylum</th>
<th>Arthropoda</th>
<th>Arthropods, joint-legged animals, e.g. insects, crustaceans &amp; spiders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class</td>
<td>Malacostraca</td>
<td>Crabs, lobsters, sand hoppers and sea slaters</td>
</tr>
<tr>
<td>Order</td>
<td>Isopoda</td>
<td>Sea slaters and gribbles</td>
</tr>
<tr>
<td>Family</td>
<td>Idoteidae</td>
<td></td>
</tr>
<tr>
<td>Genus</td>
<td>Idotea</td>
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<tr>
<td>Authority</td>
<td>Leach, 1816</td>
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</table>

### Biology

- **Typical abundance**
  - Male size range: 4-11mm
  - Female size range: Small (1-2cm)

- **Growth form**
  - Growth rate: Low (10-45 degrees)

- **Body flexibility**: Low (10-45 degrees)
- **Mobility**
  - Characteristic feeding method: Grazer (fronds/blades)
  - Diet/food source: Fucoids, associated epiphytes.

- **Sociability**
  - Environmental position: Epifaunal
  - Dependency: No text entered.
  - Supports: No information
  - Is the species harmful?: No

### Biology information

- None

### Habitat preferences

- **Physiographic preferences**
  - Biological zone preferences
  - Substratum / habitat preferences
  - Tidal strength preferences
  - Wave exposure preferences
  - Salinity preferences
  - Depth range
Habitat Information

There are a total of 8 members of *Idotea* in British waters which can be distinguished using the keys provided in Naylor (1972) and Hayward & Ryland (1995b). The various species are not typically sympatric, but are ecologically segregated. For example, *Idotea pelagica* is found in the lower intertidal and shallow subtidal on exposed rocky reefs and is replaced in less exposed areas by *I. granulosa* which in turn is replaced by *I. chelipes* on sheltered, estuarine shores (Naylor, 1955).

**Life history**

**Adult characteristics**

- **Reproductive type**: Gonochoristic (dioecious)
- **Reproductive frequency**: See additional information
- **Fecundity (number of eggs)**: 11-100
- **Generation time**: 1-2 years
- **Age at maturity**: 
- **Season**: 
- **Life span**: 1-2 years

**Larval characteristics**

- **Larval/propagule type**: -
- **Larval/juvenile development**: Brooding
- **Duration of larval stage**: -
- **Larval dispersal potential**: -
- **Larval settlement period**: See additional information

**Life history information**

1. **Reproductive season**
   The reproductive season of *Idotea pelagica* is closely linked to temperature (Leifsson, 1999). Reproductive effort is at its greatest during periods when the sea water temperature is between 5 and 12°C; C (Sheader, 1977; Healy & O'Neill, 1984; Leifsson, 1999). While ovigerous females are found all year round in southern Irish coasts, the highest proportion of ovigerous females are found between December and August (Healy & O'Neill, 1984), while on the Northeast coast of England ovigerous females were found only between April and August (Sheader, 1977). Icelandic populations have their reproductive period further reduced to May to July (Leifsson, 1999). In the more southern extent of its range, the reproductive season of *Idotea pelagica* would be expected to shift further towards winter.

2. **Fecundity**
   Females brood up to 80 eggs for 6-8 weeks (Leifsson, 1999), as with most isopods there is no larval stage and the juveniles appear as the adults, but with 6 pairs of pereopods not 7. Once the eggs hatch, females may then moult and produce a second brood (Healy & O'Neill, 1984).
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.

Physical Pressures

<table>
<thead>
<tr>
<th></th>
<th>Intolerance</th>
<th>Recoverability</th>
<th>Sensitivity</th>
<th>Confidence</th>
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<tbody>
<tr>
<td>Substratum Loss</td>
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<td>Visual Presence</td>
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<td>Abrasion &amp; physical disturbance</td>
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<tr>
<td>Displacement</td>
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Chemical Pressures

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<th>Sensitivity</th>
<th>Confidence</th>
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<tbody>
<tr>
<td>Synthetic compound contamination</td>
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</table>
Heavy metal contamination

Hydrocarbon contamination

Radionuclide contamination

Changes in nutrient levels

Increase in salinity

Decrease in salinity

Changes in oxygenation

**Biological Pressures**

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<th>Intolerance</th>
<th>Recoverability</th>
<th>Sensitivity</th>
<th>Confidence</th>
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Introduction of microbial pathogens/parasites

Introduction of non-native species

Extraction of this species

Extraction of other species

Additional information
Importance review

Policy/legislation
- no data -

Status
National (GB) -
Global red list (IUCN) category -

Non-native
Native -
Origin -
Date Arrived -

Importance information
-none-
Bibliography

Kroer, N. 1986. Distribution and habitat segregation of four species of Idotea (Isopoda) in a Danish fjord. Ophelia, 25(3), 199-207

Datasets