**Haplomesus longiramus** sp. nov. (Crustacea: Isopoda: Asellota), a new ischnomesid species from the Bay of Biscay, North East Atlantic Ocean

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**Abstract**

A new species of Ischnomesidae (Crustacea: Isopoda: Asellota), *Haplomesus longiramus* sp. nov. is described from the Bay of Biscay. This species is unusual due to the presence of long, thin anterolateral projections supporting the antennae and an elongate pereionite 4. These features are also seen in *Haplomesus biscayensis* Chardy, 1975, and the two species closely resemble each other. The presence of a laterally directed spine on pereionite 5 of the male of *Haplomesus longiramus* sp. nov. along with the elongate uropods of both male and female easily differentiates this species from *H. biscayensis*. Within its known distributional area, this new *Haplomesus* species inhabits bathyal muddy bottoms from 500–1009 m, with a maximum abundance of 29 individuals per 100 m² recorded at approximately 700 m.

**Keywords:** Isopoda, Asellota, Ischnomesidae, *Haplumesus*

**Introduction**

The genus *Haplomesus* is one of five genera within the family Ischnomesidae (Crustacea: Isopoda: Asellota) that comprises marine benthic isopods primarily from bathyal and abyssal depths. The genus, established by Richardson in 1908, is the second largest in the family, and contains 27 species to date. The genus is cosmopolitan: species are recorded from the Atlantic, North Pacific, Arctic and Antarctic oceans. This paper describes a new species in the genus, *Haplomesus longiramus* sp. nov., from the Bay of Biscay, closely allied to *Haplomesus biscayensis* Chardy, 1975, previously mentioned from the Le Danois bank (Cantabrian margin). Comments on the distribution and autoecology of *H.*
longiramus sp. nov. are presented and these increase previous knowledge of the lifestyle of ischnomesid species.

Methods

The specimens of Haplomesus longiramus sp. nov. were collected in the southern Bay of Biscay (Fig. 1) during several surveys from 1989 to 2003 as listed in Table 1. Specimens used in the illustrations were collected during the ESSAIS I and II surveys (French programme: ‘Structure des communautés suprabenthiques bathyales au large d’Arcachon’) and the ECOMARG survey (Spanish programme: ‘Estudio multidisciplinar del ecosistema de la plataforma marginal asturiana e impacto de sus pesquerías’). Sampling was carried out using two kinds of suprabenthic sleds equipped with superimposed nets (0.5 mm mesh size) and with an opening-closing system activated by contact with the sea floor (full description in Sorbe 1983 and Dauvin et al. 1995). These devices can quantitatively sample suprabenthic animals, in two near-bottom water layers for the ‘Arcachon’ sled (N1: 0–50 cm; N2: 50–100 cm), four near-bottom water layers for the ‘Roscoff’ sled (N1: 10–40 cm; N2: 45–75 cm; N3: 80–110 cm; N4: 115–145 cm). They were towed at 1–2 knots over the sea floor during each haul. The bottom area swept by the sled during a haul was calculated from TSK flowmeter measurements (a single measurement/ haul for the ‘Arcachon’ sled, mean of 4 measurements/ haul for the ‘Roscoff’ sled). Abundance of individuals was expressed as individuals /100 m² (cumulative values from all the nets of the sleds).

FIGURE 1. Location of sampling sites where Haplomesus longiramus sp. nov. was collected with suprabenthic sleds in the southeastern Bay of Biscay. 1, ESSAIS, ECOFER, SUPRABATH and ECOMARGE samples; 2, OXYBENT samples; 3, CAPBRETON sample; 4 and 5, ECOMARG samples (see also Table 1).

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<th>Date (d/m/y)</th>
<th>Position1</th>
<th>Depth2 (m)</th>
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<th>Abundance4 (ind./100 m³)</th>
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A: ‘Arcachon’ sled; R: ‘Roscoff’ sled
1: position of the research vessel at the end of the wire out
2: water depth below the research vessel at the beginning and at the end of the tow over the sea floor
3: number of individuals in the near-bottom water layers N1-N4 sampled by the sleds (see text for more information)
4: cumulative values from the whole near-bottom water layers sampled by the sleds
<: not sampled

Mouthparts and pleopods were dissected and drawn from male specimens. Due to the brittle nature of the individuals, few intact pereopods remained so we have not illustrated complete limbs in most cases. Pencil illustrations were prepared using a camera lucida on a Nikon microscope, and then inked by tracing onto translucent vellum. Dissected parts were placed on glass slides in glycerin for temporary inspection, and more permanent museum mounts were prepared using glycerin jelly.

Descriptions were generated using the taxonomic database system DELTA (Dallwitz 1980; Dallwitz et al. 2000) and diagnoses were constructed from the INTKEY output of the DELTA programme. Measurements were made from drawings, using a stage micrometer for calibration. In general, character measurements are presented as ratios to normalise for differences in body size. Anterior body length is defined as the total length of the head and the first 4 pereonites.

Taxonomy

Ischnomesidae Hansen, 1916

Ischnomesini Hansen, 1916: 54; Wolff, 1956: 86.
**Diagnosis.** Head deeply embedded in and fused with pereonite 1, without intersegmental articulation, without eyes or rostrum, dorsal surface sloping into frons and clypeus. Pereon thin, elongate, pereonites 4 and 5 elongate, subcylindrical, produced backwards and forwards, respectively, pereonite 5 longest; female spermathecal duct pores near dorsal midline of pereonite 5, not covered by posterior margin of pereonite 4; pereonites 5–7 narrowing posteriorly. Pleotelson shorter than pereonites 5–7; anus subterminal (at obtuse angle to ventral surface), external to pleopodal chamber and separated from it by broad cuticular bar, anal region projecting from anterior pleotelson. Antennula with 2 to 6 articles; article 1 short and rounded; article 2 tubular, much longer than wide; article 3 flagellar. Antenna much longer than anterior portion of body, article 3 without scale. Mandibles with distinct incisor and molar processes, dorsal condyle elongate and smoothly curled on posterior margin of mandibular body. Maxilliped basis broader than palp, endite shorter than palp, palp positioned in distal third of basis, articles 4–5 narrower than articles 1–3. Pereopod I prehensile between carpus and propodus; carpus with robust setae on ventral margin. Pereopods II–VII long, thin, paucisetose; dorsal (anterior) dactylar claw longer than posterior (ventral) claw, robust; posterior dactylar claw flattened, slightly curled. Pleopod III exopod shorter than endopod, thin, pointed, with 1 distal plumose seta; endopod quadrate, with 3 distal plumose setae. Uropod paucisetose, uniramous, inserting terminally lateral to anus. Sexual dimorphism common in non-sexual features: pereonites longer and thinner in males, spination of pereon and pleotelson more developed in males; antenna male flagellum more robust, with more setae and articles than in female; uropods longer in male than in female.

**Haplomesus** Richardson, 1908


Type species: *Haplomesus quadrispinosus* (Sars, 1879).


**Diagnosis.** Pereonites 5–7, pleonite 1 and pleotelson lacking intersomite articulations. Pereonites 5–7 narrowing posteriorly. Antennulae with 5 or 6 articles, distal flagellar articles at least twice as long as wide. Pereopod I carpus without ventral expansion of palm. Maxilliped palp narrower than basal endite, articles 2 and 3 expanded. Uropods uniramous, single segmented, distally tapering. Mandible palp absent.

**Haplomesus longiramus** sp. nov. (Figs 2–6)

**Etymology.** Named for the elongate uropods, which are not observed elsewhere in the genus.

**Material Examined.** *Holotype* (Muséum National d’Histoire Naturelle, Paris; MNHN-Is5976); adult male 4.2 mm. ESSAIS I cruise, 21 April 1989, RV ‘Côte d’Aquitaine’; Roscoff suprabenthic sled; sample reference: TS06-R-N1. Southern margin of the Cap Ferret canyon, 44°33.40’N–2°10.70’W to 44°32.90’N–2°10.40’W, 608–611 m. Sandy mud bottom (PRECOMAT III cruise, BSM85 sample, 15 July 1985; median grain size: 18 µm; fine sand: 15.4%; silt and clay: 84.6%; particulate organic carbon: >0.75%). Inferred water temperature, salinity and oxygen concentration at approximately 600 m depth: 10.5°C, 35.57 and 3.9 ml l⁻¹, respectively (ECOFER III cruise, 15 October 1990; CTD data from the water column of the Cap-Ferret canyon above a 3000 m depth bottom).

*Paratypes* (specimens deposited at Muséum National d’Histoire Naturelle, Paris) Female paratype #1, 4.2 mm, MNHN-Is5977, ESSAIS II cruise, RV ‘Côte d’Aquitaine’, 18 May 1989; sample reference: TS09-R-N1, Roscoff suprabenthic sled, 44°33.22’N–2°12.48’W to 44°33.11’N–2°12.59’W, 740–754 m . Female paratype # 2, 4.1 mm, MNHN-Is5978, ECOMARG 03 cruise, RV ‘Vizconde de Eza’, 20 October 2003; sample reference: TS08-A-N2, Arcachon suprabenthic sled, 44°00.39’N–5°09.43’W to 44°01.64’N–5°09.97’W, 854–817 m. Adult male paratype # 1, anterior fragment pereonites 1–4, 1.75 mm, used for description of mouthparts, MNHN-Is5979 and 2 slides MNHN-Is5980, ECOMARG 03 cruise, RV ‘Vizconde de Eza’, 17 October 2003; sample reference: TS03-A-N1, Arcachon suprabenthic sled, 44°05.82’N–4°51.96’W to 44°05.88’N–4°50.93’W. Adult male paratype fragment # 2, used for description of pleopods, fragment damaged during dissection, 1 slide MNHN-Is5981, ECOFER I cruise, RV ‘Le Noroit’, 1 July 1989; Sample reference: TS01-R-N1, Roscoff suprabenthic sled, 44°35.57’N–2°11.21’W to 44°35.64’N–2°10.66’W, 523–522 m.

**Diagnosis.** Head with long, thin anterolateral projections supporting antennae, width distinctly less than length; pereonite 4 elongate, length in male 2 width, in female 1.5 width; male with short, laterally directed anterolateral spine on pereonite 5. Pleotelson dorsal surface axial ridge weakly vaulted, separated from lateral fields only by shallow
elongate concavities. Maxilliped epipod with spines. Pereopod I basis with robust setae on distoventral surface. Male pleopod I lateral margins straight. Male pleopod II stylet thick and blunt, extending beyond distal margin of protopod. Pleopod II operculum with narrow proximal neck, laterally convex, broadening posteriorly to rounded angles, posterior margin weakly concave. Uropods elongate, length 8.9 basal width in males, 7.6 basal width in females, approximately 1.5 pleotelson posterolateral spine length.

**Description of male.** Body length 4.2 mm. Body elongate, covered with coarse granulations. Pereonites 5–7 and pleotelson fused. Pereonites 5–7 narrowing posteriorly; pereonite 5 length less than 1.5 pereonite 4 length; pereonite 7 length not reduced, similar to pereonite 6. Head dorsal surface without bulges or protuberances; length 0.66 width; overlapping lobes at insertion of mandibles on ventrolateral margin absent. Pereonite 1 width 0.13 total body length. Pereonites 1–4 with 1 pair of anterolateral simple spines. Pereonite 5 with 1 pair of posterolateral spines. Pereonites 1–3 spines elongate, length near width of pereonite 1 (see lateral view, Fig. 2D). Pereonites 4–5 spines short, length near pereonite 1 length. Pereonite 5 spines directed laterally. Pereonite 4 length 2.0 width. Pereonite 5 length 2.38 width, 0.31 total body length. Pleotelson length 1.33 width; posterolateral margin with ring of cuticle produced from margin at uropod insertion.

**Antennula and antenna.** Antennula with 6 articles altogether; article 1 squat and globular, without setae or spines; article 2 length greater than 3.0 article 1 length, 0.99 head width, inserting on article 1 dorsally, straight, not curved at proximal insertion, with 4 elongate stiff ventromedial setae. Antennula distal articles altogether small, shorter than article 2; article 3 longer than article 4, elongate and tubular, much longer than wide; terminal article longer than penultimate article; aesthetascs absent. Antenna length 2.0 anterior body length; article 1 shorter than is usually observed; article 2 with 1 lateral and 1 ventromedial pedestal spine; article 3 cuticle smooth, with distomedial robust seta, length 6.5 width, 0.2 anterior body length; article 5 length 0.44 anterior body length; article 6 length 0.65 anterior body length; flagellum decreasing in width distally, tubular, longer than wide; flagellum length 0.65 total antennal length, with 20 articles.

**Mouthparts.** Mandible palp absent. Maxillula with 12 robust setae on lateral lobe; medial lobe with 1 robust medially-projecting dentate seta. Maxilla with 2 long (approximately as long as lateral lobes) medially-projecting pectinate setae on medial lobe. Maxilliped endite with 3 receptaculi. Maxilliped palp shorter than basis, at widest point narrower than endite, articles 1–3 wider than articles 4–5, article 2 wider than 3, articles with pedestal setae not observed elsewhere in the family; epipod with setae and spines.

**Pereopods.** Pereopod bases proximal shoulder with simple spines only. Pereopod I weakly carposubchelate, basis with distoventral robust setae; merus dorsal margin without distinctly robust setae; carpus ventral margin without palm or distinctly wider part, with 1 shorter robust seta proximal to elongate seta, with 2 robust setae on ventral margin distal to elongate seta; propodus ventral margin with 1 robust seta. Pereopods II–VII bases and
ischia smooth, without spines, simple setae present.

Pleopods and uropods. Pleopod I length more than twice proximal width, distal tip with lateral horns, with simple setae on distal and lateral margins. Pleopod II protopod apex rounded. Pleopod III exopod length less than half endopod length, exopod with plumose setae, fringe of fine setae and several elongate simple setae. Uropods uniramous, single article, conical, tapering distally, extremely elongate, extending beyond posterior margin of pleotelson; length 0.88 pleotelson length.

Description of female. Body length 4.1–4.2 mm. Head length 0.6–0.9 width. Pereonite 1 width 0.17–0.18 total body length. Pereonites 1–3 with 1 pair of anterolateral simple spines. Pereonite 1 spines short, length near pereonite 1 length. Pereonites 2–3 spines tiny, length distinctly less than pereonite 1 length. Pereonite 4 length 1.5 width. Pereonite 5 length 1.9–2.1 width, 0.3 total body length. Pleotelson length 1.2–1.3 width.

Antennula. Antennula article 2 length 0.7–0.8 head width, with 5 stiff, ventromedial setae; article 3 length 4 width, 0.13–0.16 anterior body length.

Pereopods. Pereopod I carpus with 4 robust setae proximal to elongate seta, with no robust setae distally.

Pleopods and uropods. Pleopod II operculum without plumose setae. Uropods length 0.61 pleotelson length.

Remarks. Haplomesus longiramus sp. nov. closely resembles H. biscayensis Chardy, 1975. Both species possess thin, elongate, anterolateral projections which support the antennae (Fig. 2A, 3A). Unfortunately, the type specimen of H. biscayensis cannot be located (probably lost; D. Defaye, MNHN, pers. comm.) and observations are based on the original Chardy’s description and illustration. Although species of the genus Stylomesus also possess anterolateral projections on the head, the latter are robust, rounded projections and the width and length are subequal. An elongate pereonite 4 is also observed in both H. longiramus sp. nov. and H. biscayensis. Although some species of Ischnomesus, e.g. I. multispinis Menzies, 1962, have an elongate pereonite 4, in most species of Ischnomesidae pereonite 4 is approximately as long as wide. In some species of Haplomesus, e.g. H. thomsoni (Beddard, 1886) and H. quadrispinosus (Sars, 1879), the somite is wider than long. However, in the case of H. longiramus sp. nov., pereonite 4 length in males and females is 2 and 1.5 width, respectively; in H. biscayensis, pereonite 4 length of the male holotype is 2.2 width. Males of both H. longiramus sp. nov. and H. biscayensis have an elongate stylet on pleopod II with a thick blunt tip. In the remaining species in the genus, the tip is tapering and pointed. Finally, both species possess spines on the maxilliped epipod, which has not been observed elsewhere in the genus. The two species, however, show several differences. The males of H. longiramus sp. nov. possess posterolateral spines on pereonite 5, and both males and females possess elongate uropods, much longer than the pleotelson posterolateral spines (Fig. 2A, 3A, 4A). By contrast, the uropods of H. biscayensis are shorter in length than the pleotelson posterolateral spines and the males do not possess spines on pereonite 5. The female of H. biscayensis, unfortunately, is
FIGURE 2. *Haplomesus longiramus* sp. nov. (male holotype MNHN-I5976). A, dorsal view; B, antenna and antennule; C, ventral view and pleopod 1 detail; D, lateral view; E, head ventral; F, pereopod 1; G, pereonite 1 and 2, lateral view detail (scale bar A, C, D, 1 mm; F, 0.5 mm).
FIGURE 3. Haplomesus longiramus sp. nov. (female paratype #1 MNHN-Is5977) A, dorsal view; B, lateral view; C, pereonites 1–4, lateral view detail; D, head ventral; E, pleotelson ventral and uropods detail (scale bar 1 mm).
FIGURE 4. *Haplomesus longiramus* sp. nov. (female paratype #2 MNHN-Is5978) A, dorsal view; B, ventral view; C, pereopod IV, dactyl detail; D, pereopod V; E, lateral view; F, antenna and antennule lateral view; G, pereopod I (scale bar A, B, E, 1 mm; C, D, F, G 0.5 mm).
FIGURE 5. *Haplomesus longiramus* sp. nov. (male paratype #1 MNHN-Is5979 and Is5980) A, maxilliped; B, maxilliped palp; C, maxilla; D, paragnaths; E, maxillula; F, left mandible; G, right mandible (scale bars A, D, F, G, 0.2 mm; C, E, 0.1 mm).
FIGURE 6. *Haplomesus longiramus* sp. nov. (male paratype #2 MNHN-Is5981) A, pleopod I ventral; B, pleopod I dorsal; C, pleopod I dorsal detail; D, pleopod II and stylet detail; E, pleopod III; F, pleopod IV (scale bars 0.2 mm).
unknown. The male stylet on pleopod II extends to the distal margin of the protopod for *H. biscayensis*, while in *H. longiramus* sp. nov., it extends beyond the protopod. Finally, the maxilliped palp of *H. longiramus* sp. nov. has pedestal setae (Fig. 5A), not observed elsewhere in the genus. The pleopod II operculum of *H. longiramus* is unusual as it is concave distally, a characteristic observed in several species of *Ischnomesus*. As the female of *H. biscayensis* is unknown, it remains unclear if the shape of the operculum is a diagnostic character for the genus.

**Distribution**

*Haplomesus longiramus* sp. nov. is the second species of this genus to be found in the Bay of Biscay. *H. biscayensis* was described by Chardy (1975) from the eastern flank of the Le Danois bank (BIOGAS IV, 1877–2039 m). As shown in Table 1 and Fig. 1, *H. longiramus* sp. nov. was repeatedly sampled in the upper bathyal of the southern Bay of Biscay with suprabenthic sleds: on the southern margin of Cap Ferret canyon (522–791 m), within the Capbreton canyon (‘caladero’ Kostarrenkala, 727 m) as well as on its northern margin (OXYBENT station B, 500–567 m), on the top plateau and southern flank of the Le Danois bank (569–854 m) (Elizalde *et al.* 1993a, b; Elizalde 1994; Dauvin *et al.* 1995; Sorbe & Weber 1995; Corbari & Sorbe 2001; unpublished data; mentioned as *Haplomesus* sp). Furthermore, *H. longiramus* sp. nov. was also sampled at deeper depths within the Capbreton canyon (Marquiegui & Sorbe 1999; mentioned as *Haplomesus* sp. A): with a Flora box-corer at 990 m depth and with an epibenthic dredge at 1009 m depth (CAPBRETON 90 cruise, sampling site B located on the northern flank of the thalweg). *H. longiramus* sp. nov., however, was not detected in a recent study of the northern bathyal suprabenthic communities from the Meriadzek Terrace (Berthois Spur) and the northeastern Porcupine Seabight (in both areas samples were taken from a bathymetric transect between 200 and 1250 m, using ‘Arcachon’ sled model; see Vanquickeleberghe 2005). The known geographical distribution of *H. longiramus* sp. nov., therefore, is restricted to the southern Bay of Biscay in a depth range of 500–1009 m. The lower limit of its bathymetric range is provisional whereas its upper limit is confirmed by its repeated absence in samples from shallower bathyal depths. Within its known distributional area, the maximum abundance value of this species (29 individuals /100 m$^2$) was recorded at 693–694 m on the southern margin of the Cap-Ferret canyon in June 1993 (Table 1).

Inferred from a vertical CTD profile in the water column of the Cap Ferret canyon above a 3000 m depth bottom (ECOFER III cruise, 15 October 1990, 44°46.82’N–2°37.59’W; Jouanneau, personal communication), the known benthic habitat of *H. longiramus* sp. nov. is characterized by the following hydrographical conditions: 9.7–10.7°C, 35.54–35.76, 4.1–3.6 ml l$^{-1}$ for temperature, salinity and oxygen concentration, respectively. The bathymetric distribution of *H. longiramus* sp. nov. below
500 m depth indicates that this species is at least partially under the influence of the Mediterranean Overflow Water (MOW) (see Durrieu de Madron \textit{et al.} 1999). The MOW flows eastward between 700 and 1300 m water depth in the South East Bay of Biscay and characterized by a salinity maximum and an oxygen minimum at ca 1000 m water depth. Although the actual impact of the MOW on the biology of \textit{H. longiramus sp. nov.} remains unknown, it is probable that the distributional area of this ischnomesid species is superimposed to the along-slope flow of this water body. Therefore, new deep bottom samplings all around the Iberic Peninsula would certainly extend the presently limited geographical distribution of this species. Several undescribed species that bear anterolateral projections on the head, as recorded for \textit{H. longiramus sp. nov.} and \textit{H. biscayensis}, have been collected in the North Atlantic by Woods Hole Oceanographic Institution (Wilson pers. comm.). No specimens belonging to this species group have been collected elsewhere, and the group seems limited geographically to the North Atlantic.

**Autoecology**

According to data presented in Table 1, \textit{H. longiramus sp. nov.} was mainly sampled by the N1 and N2 lowermost nets of the sleds (97.5 % of the whole specimens collected by the N1 nets with no specimens collected by the N3 and N4 nets of the Roscoff sled). Most specimens collected by the N1 and N2 nets of the ‘Roscoff’ sled as well as by the N2 net of the ‘Arcachon’ sled probably reflect some contamination of samples by superficial sediments and have to be considered as resuspended organisms. These results suggest that this species lives in close contact with superficial sediments, and support the assignment of an epifaunal/infaunal lifestyle to members of the Ischnomesidae (Hessler & Strömberg 1989; Thistle & Wilson 1996; Cunha & Wilson 2006). Few observations are actually available on the benthic behaviour of ischnomesid species. Thistle and Wilson (1987, 1996) suggested that members of this family are predominantly infaunal and possibly tube builders. Hessler and Strömberg (1989) observed in aquaria that \textit{Ischnomesus bispinosus} (Sars, 1868) is an excellent walker on soft-bottoms but can also burrow superficially, remaining for a long time on the sediment surface in a half-buried configuration. Observations by remotely operated vehicles in Monterey Bay and the Gulf of California show that ischnomesids are active walkers on soft sediment (K. Osborn pers. comm.). Such a superficial bottom behaviour is also suspected in the case of \textit{Haplomesus longiramus sp. nov.} due to similar general morphology of both species and to the catch of \textit{Haplomesus} specimens by box-corer sampling. However, no trace of tube construction was detected in the material examined during this study.

According to sedimentary data available for the sampling sites of the southern Bay of Biscay (see Elizalde \textit{et al.} 1993b; Elizalde 1994; Sorbe & Weber 1995; Frutos & Parra pers. comm.), \textit{H. longiramus sp. nov.} inhabits muddy sand bottoms (up to 65.6% of fine sands in the substratum of station TS03-ECOMARG 03) as well as sandy mud bottoms.
(up to 96.4% of silt and clay in the substratum of station TS10-ESSAIS II). The substratum has a median grain size ranging between 10.8 and 166.1 µm and a particulate organic carbon ranging between 0.30 and 1.24% (superficial sediments). Such muddy habitat conditions seem to be preferred by most ischnomesid species. Wolff (1962) mentioned that several deep-sea species were also collected from sites with sand and clay, clay or muddy clay during the Galathea expedition. It is known that the proportion of deposit feeders is greatest on muddy bottoms (Rhoads & Young 1970; Rhoads, 1974). Therefore, due to its morphology and habitat, we suggest that *H. longiramus* sp. nov. is a deposit feeder, probably collecting particles sedimented on the bottom with its carposubchelate first pereopods. Few direct observations are actually available on the feeding behaviour of Ischnomesidae. Hessler & Stromberg (1989) attempted unsuccessfully to feed specimens of *Ischnomesus bispinosus* with mussel meat in aquaria (they were attracted but did not eat). Similarly, K. Osborn (pers. comm.) observed during ROV divers in Monterey Bay and the Gulf of California that unidentified ischnomesids were also attracted to food falls of fish and squid. Nevertheless, Sokolova (1958) examined the gut content of a few ischnomesid individuals (not identified) and classified them as true deposit feeders. Furthermore, she mentioned that detritus sorting was more selective than in the case of other asellote species belonging to Munnopsidae. Mahaut (1991) also classified 16 bathyal ischnomesid species from the Meriadzek Terrace (Northeast Bay of Biscay) as deposit feeders (including *Haplomesus angustus*, *H. insignis*, *H. quadrispinosus*, *H. tenuispinis* and 4 unidentified species of this genus). *H. longiramus* sp. nov. lives on low carbon content sediments, a typical feature of the deep-sea environment where deposit feeders flourish (low abundances but high species richness) with turnover rates that seem to be within the range of those in shallow water (Gage & Tyler 1991).

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