

***Chaetophiloscia elongata* (Dollfus, 1884) (Isopoda: Oniscidea: Philosciidae): a woodlouse new to Britain**

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Introduction

The genus *Chaetophiloscia* contains three species present in north-west Europe, although formerly apparently absent from the British Isles. *Chaetophiloscia sicula* Verhoeff was found at the Eden Project (Cornwall) from 2005 onwards, whilst *C. cellaria* (Dollfus) is known from a number of sites on Guernsey since its discovery there in 2018. The current paper discusses the discovery of the third of these species, *C. elongata* (Dollfus), in Kent in 2024.

Discovery

Between March and September 2024, several visits were made to the southern edge of the Isle of Sheppey, East Kent, to undertake invertebrate surveys under contract. Whilst sorting through material collected prior to the final visit, multiple specimens of a distinctive small woodlouse were discovered. These were superficially similar to immature specimens of *Philoscia muscorum* (Scopoli, 1763), having a relatively dark head and dorsal stripe, as well as three flagella segments and a ‘stepped’ outline between pereion and pleon (Figure 1). However, the telson was notably rounded, which (in Hopkin, 1991) pointed to either *Halophiloscia couchii* (Kinahan, 1858) or *Stenophiloscia glarearum* Verhoeff, 1908, although it did not seem to fit for either of those species. The shape was notably more elongate than for an adult *P. muscorum*, although not so dissimilar in proportions to immatures of that species.



Figure 1: Dorsal views of *Philoscia muscorum* (left) and *Chaetophiloscia elongata* (right) from Sheppey.

Identification

Investigating other options through the species accounts on the BMIG website, it was noted that *Chaetophiloscia cellaria* (Dollfus, 1884) was very similar in terms of the telson shape. The account of the first Channel Islands record of that species (Gregory & Marquis, 2019) suggested that *C. elongata* might be a more likely identification for the Sheppey specimens, given that the ommatidia in the eyes seemed to number about 25 (vs 15 for *C. cellaria*). Moreover, the last pereonite for *C. cellaria* has distinctly orange corners, not seen for the Sheppey animals. A further species, *C. sicula* Verhoeff, 1909, seemed to be ruled out by having much less pigmentation.

Images were posted on the BMIG Facebook group on 20th August 2024 and there was broad agreement with the suggested identification as *C. elongata*. Subsequent comparison with the key by Noël & Séchet (2021) also revealed a further identification feature; the dark pigmented lateral bars on the epimera are fringed by a much broader pale edge than for *C. cellaria* or *C. sicula* (Figure 2). Additionally, the male pleopods appear to match *C. elongata*, with endopodite 1 stout and tapered to a pointed tip and exopodite 1 with a clear indentation on the margin (Figure 3, c.f. Vandel (1962)).

Distribution and habitat

Having established the identification of this new British species, further investigations were possible during the further visits during 10th-12th September and 1st-2nd October 2024. The initial specimens had all been taken from the same small area of tidal litter at the interface between the saltmarsh and seawall at the outlet of Bells Creek (TQ990673). We were keen to establish how widely the species was distributed and hence searched for it in similar habitat at the very top edge of saltmarsh at multiple locations around the Swale and Medway estuaries, with the following results:

- It was present along the sea wall from Bells Creek to Mocketts Hill (TR008664), but ceased immediately after the eastern end of the sea wall where the saltmarsh was then backed by a more natural slope; the western edge of this part of the distribution was not clear, owing to lack of access, but searching around the next saltmarsh embayment to the west (Dutchman's Island / Windmill Creek) did not produce any specimens.
- Searching at Shellness at the easternmost point of Sheppey did not produce the species (although was similar in terms of seawall / saltmarsh structure).
- It was present at the saltmarsh / seawall on the east (Sheppey) side of Clay Reach, to the north of Elmley Hills (TQ928680).
- It was present on the mainland side of the Ferry Reach / Horse Reach channel, either side of the Kingsferry Bridge between at least TQ909696 and TQ915689. For any other observers wishing to encounter this species, this would be the most convenient area.
- An extensive, dedicated search of 29 different locations around the Medway Estuary in October 2024 failed to reveal it at any of these sites.

Figure 4 shows all detections and non-detections of *C. elongata* described in this paper. All detections of *C. elongata* were within the boundaries of The Swale SSSI, or (at Horse Reach) the Medway Estuary & Marshes SSSI.

Specimens were located both by sieving and through suction-sampling. Most of the records (and seemingly the highest abundance) were from the litter associated with the seawall / saltmarsh boundary (Figure 5), but specimens were also located on the top and landward edge of the seawall. However, none were found on saltmarsh more than a metre or so from the base of the seawall. The only other isopods occurring alongside *C. elongata* identified from these locations were *P. muscorum* and *Armadillidium vulgare* (Latreille, 1804).



Figure 2: Lateral view of *Chaetophiloscia elongata* from Sheppey.

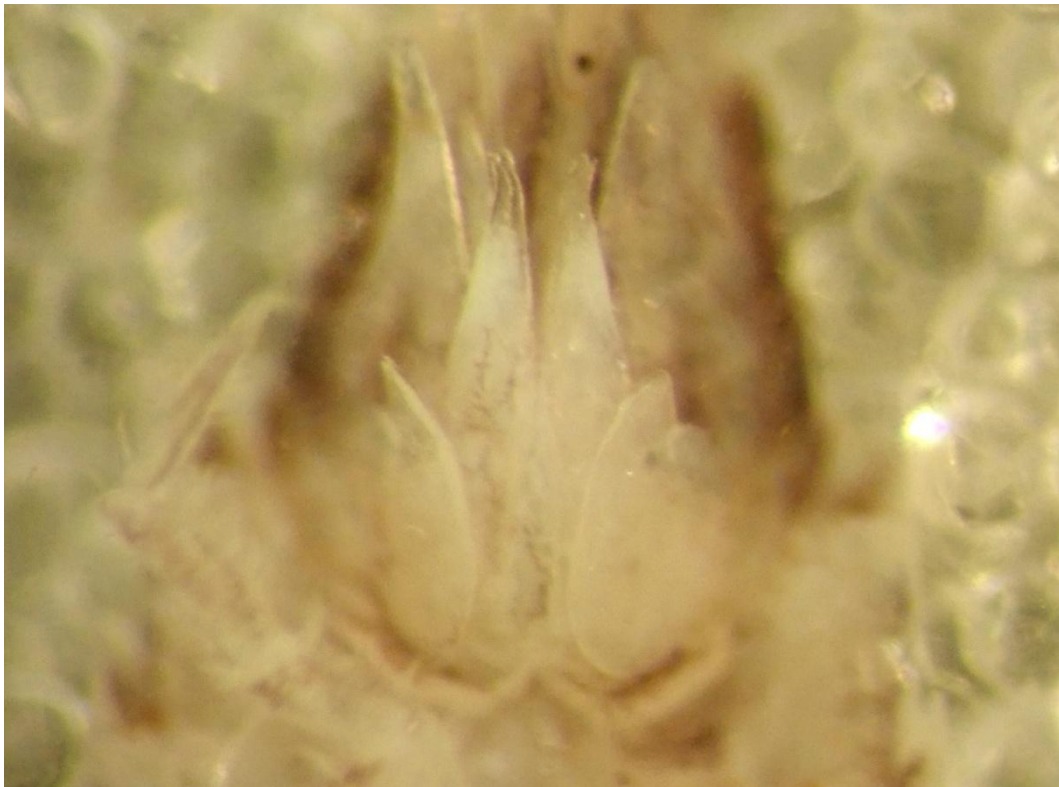


Figure 3: First pleopods of *Chaetophiloscia elongata* male from Sheppey (specimen from 14th May 2024)

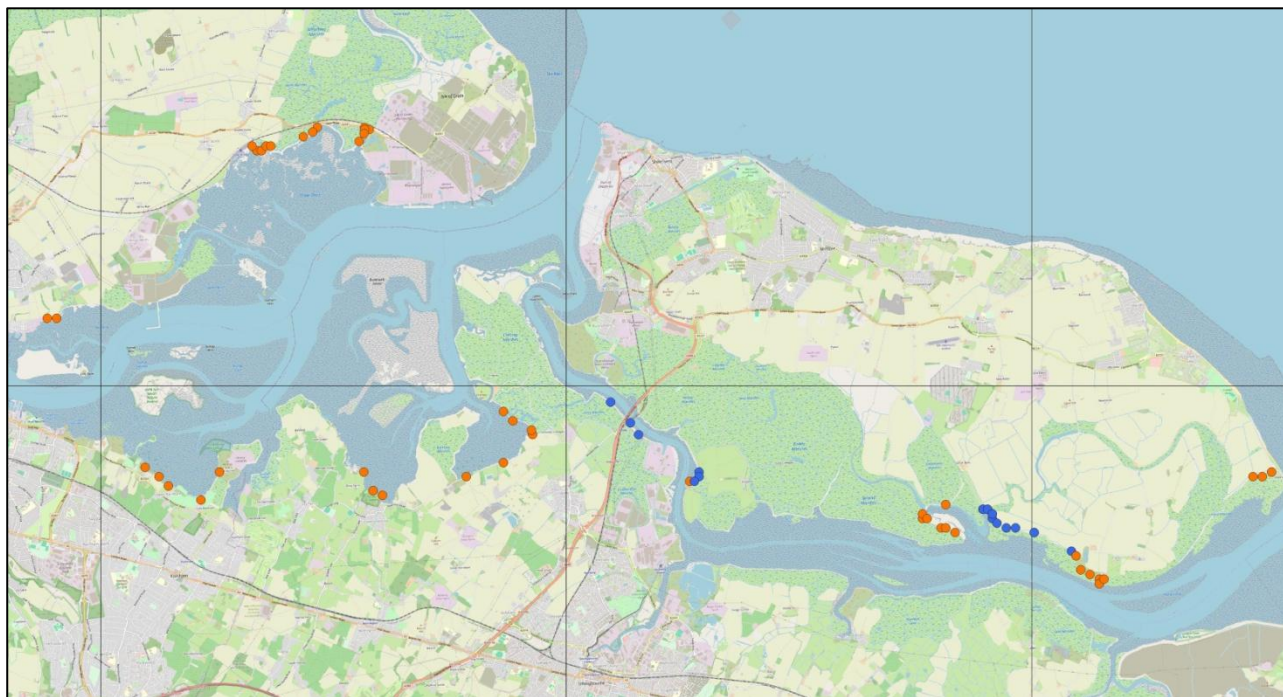


Figure 4: Records of *Chaetophiloscia elongata* in 2024 around the Swale and Medway system, showing detections in blue and non-detections in orange.



Figure 5: Saltmarsh / seawall boundary at Bells Creek where *Chaetophiloscia elongata* was abundant.

Origins

Concerning the origin of *C. elongata* in this area, our initial suspicion was that it may have been introduced during repair works at the Bells Creek pumping station in 2018. However, our subsequent detections eastwards all the way to Mocketts Hill - which would imply a dispersal of 3.5 km in just six years - seemed to make this hypothesis less likely. Furthermore, the detections between Horse Reach and Clay Reach appear to suggest a second disconnected population. There does seem (so far) to be an association with man-made seawalls, which could potentially point to an association with materials used in their construction, which could arguably have been imported from the continent. Alternatively, there might simply be higher densities of the species in the micro-habitats created by the seawall. An alternative route of importation could be through unwitting delivery by boats – the area will have seen marine traffic to / from the continent for centuries. Indeed, Ridham Sea Terminals, on the edge of Clay Reach, continues to handle cargo including aggregates and timber. Finally, it is possible that *C. elongata* is a long-overlooked native species; it is probably impossible to prove or disprove this definitively, although the non-detections throughout similar habitat around the Medway Estuary would seem to count against this. Clearly, however, the species should also be sought in similar habitat elsewhere, especially along the southern shore of the Swale. Elsewhere, *C. elongata* is known from north-western France to Spain and then across to the eastern Mediterranean (www.gbif.org).

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References

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