

***Acaeroplastes melanurus* (Budde-Lund, 1885) (Isopoda: Oniscidea: Porcellionidae) new to Britain from the Isles of Scilly**

Mark G. Telfer

Heatherstone, Whitwell Road, Ventnor, Isle of Wight, PO38 1LJ

E-mail: mark.g.telfer@btinternet.com

Discovery

On 21st October 2019, while searching primarily for beetles on Tresco, Isles of Scilly, Darren Mann brought my attention to some woodlice which he regarded as unfamiliar. I immediately agreed and was able to collect a few specimens (Figure 1) before we had to leave to catch a boat. The specimens were collected at the south-easternmost point of Tresco, on the south side of Skirt Island (SV901139, VC 1), from an area of sandy dune grassland with granite boulders.



Figure 1: *Acaeroplastes melanurus* photographed in the field.

Identification

It was not until January 2020 that I attempted to identify the Tresco specimens to species. It was clearly a species belonging to the family Porcellionidae. Using Vandel (1962), *Acaeroplastes melanurus* (Budde-Lund) soon became the prime candidate. I sent photographs of the Tresco specimens to Roy Anderson in Belfast, who broadly concurred and gave me three male specimens of *A. melanurus* from the population at Howth Head, Co. Dublin, Ireland. A number of small differences were evident between Tresco and Howth Head specimens which caused both Roy and I to doubt whether this fell within the range of variation of *A. melanurus*. However, more recently, photographs of the Tresco specimens (Figures 2, 3) have been examined by Franck Noël, who has considerable experience of studying this species in western France and has been able to confidently identify the Tresco specimens as *Acaeroplastes melanurus* (Steve Gregory, *in litt.*, July 2024).



Figure 2: Two *Acaeroplastes melanurus* specimens from Tresco.



Figure 3: Auto-montage images of a male *Acaeroplastes melanurus* from Tresco.

A second British locality

Though *Acaeroplastes melanurus* has been known from Howth Head in Ireland since 1909 (Anderson, 2007), there had been no subsequent records from elsewhere in Ireland, nor any from Britain, until the discovery on Tresco. Then on 9th April 2023, Lloyd Davies discovered a population of unfamiliar woodlice on the shingle ridge of West Bexington, Dorset (VC 9) and posted photographs to the Isopods and Myriapods of Britain and Ireland facebook group. There they were identified as *A. melanurus* by Steve Gregory. Lloyd Davies recorded *A. melanurus* again at this site on 7th October 2023.

Geographical range

Acaeroplastes melanurus appears to have a native range as a largely coastal species in the western Mediterranean, being known from Spain, France, Italy, Croatia and Algeria, as well as from several islands including Sicily, Malta, Corsica and the Balearic Islands. Vandel (1962) notes that the range extends from the Mediterranean coast of France inland into the Aude and Haute-Garonne departments. Records of *A. melanurus* were also known to Vandel (1962) from three islands off the Atlantic coast of north-west France: Île d'Aix, Île d'Yeu and Île de Noirmoutier. He interpreted these as native populations, relicts of a formerly wider distribution during a period of warmer, drier climatic conditions in the post-glacial period (Noël *et al.*, 2009). With regard to the outlying population at Howth Head, the suggestion is that it may also be an outlying relict population and it should not be assumed that it is a non-native occurrence. However, that *A. melanurus* has an ability to be spread by trade and to establish beyond its native range is indicated by its occurrence on the Azores.

New records in western France: expanding or overlooked?

Since 2001, there have been many new records of *Acaeroplastes melanurus* in western France, mostly as a result of targeted surveys for woodlice, along the coast and extending up to 120 km inland (Noël *et al.*, 2009). The authors questioned whether *A. melanurus* had recently colonised this part of France or had been overlooked, concluding that further research would be required. The known range now extends to the north-western extremities of France, on the Brittany coast (MNHN, 2024).

That *Acaeroplastes melanurus* has sometimes proved hard to find even at known sites, does lend some credence to the hypothesis that it could be overlooked. The Howth Head population went unseen for 68 years despite targeted searches during this period (Anderson, 2007), and even the West Bexington population could not be found in April 2024, just a year after its discovery.

Native or non-native in Britain?

The Tresco population of *Acaeroplastes melanurus* was discovered less than a kilometre from the Tresco Abbey Gardens, which have been the source of a number of invertebrate introductions to Britain including the landhopper *Arcitalitrus dorrieni* (Hunt), described new to science from the Abbey Gardens in 1925 (and named after the Dorrien-Smith family who are the leaseholders of Tresco) (Gregory, 2016), and a species of *Chaetophiloscia* found as females only in 1985 (Jones & Pratley, 1987). Although the West Bexington locality is more remote from human influence, it is still only 3 – 4 km from the Abbotsbury Subtropical Gardens, which might be a source of introduction.

It seems likely that *Acaeroplastes melanurus* is a non-native species in Britain, though the alternative hypothesis, that it is an overlooked native in Britain, is plausible and should not be dismissed. The Tresco and West Bexington populations may be part of a native range which extends up the Atlantic coast of France and north-westwards as far as Howth Head.

Acknowledgements

I am very grateful to Darren Mann for the initial discovery. I would also like to thank the following: Roy Anderson for donating specimens and helping with the identification process; James Hogan and colleagues at the Oxford University Museum of Natural History for use of the digital auto-montage equipment; Thomas Hughes for comments on an earlier draft; and Steve Gregory for liaising with Franck Noël and for much additional information.

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