

***ACANTHODELPHAX SPINOSA* (HEMIPTERA: DELPHACIDAE) NEW TO BRITAIN**

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ABSTRACT

The delphacid bug *Acanthodelphax spinosa* (Fieber) is reported as new to Britain, on the basis of recent captures in East Kent and North Essex. Known vegetation characteristics of the capture sites are discussed, with various fescues (both *Festuca* and *Schedonorus* spp.) prominent at both sites. It is likely that the specimens were located relatively high up in the vegetation, with sweep netting proving a particularly successful technique, especially at the Kent site. Physical characters of the bug are compared with similar species, with brief notes to aid identification.

General

Le Quesne (1960) noted some 30 British species of planthopper within the genus *Delphacodes*. Subsequent taxonomic revisions have seen these British species split into some 19 different genera, with only two remaining within *Delphacodes*. One species, formerly named *D. denticauda* (Boheman), became the sole British representative of the genus *Acanthodelphax* Le Quesne 1964. A second species, *Acanthodelphax spinosa* (Fieber), is here added to the British fauna on the basis of two recent captures, in east Kent and central Essex.

During the summer of 2020, CK-L undertook survey work at a coastal location near Ramsgate in East Kent (TR36). The site supports a mix of ‘brownfield’ habitats, including hard standing, open mosaic vegetation, and both species-poor and relatively species-rich grassland. *Acanthodelphax spinosa* was recorded (both sexes) from several areas of unexceptional, tussocky, species-poor grassland. Three of the four samples containing the bug were by sweep netting, suggesting that the individuals were largely relatively high up in the vegetation. The fourth sample was taken via suction sampling. Records were made on two dates: 17 and 31 July 2020. During 2022, AK surveyed an extensive area of tall to short, moderately species-rich grassland north of Chelmsford, Essex (TL71). On 24 July a single male *A. spinosa* was collected, this being the sole specimen found despite the survey covering several related grasslands on numerous occasions throughout the summer. At the Essex site, both sweep netting and suction sampling was employed but it is not known which technique was successful in obtaining the specimen.

Individuals are invariably brachypterous, although macropterous forms do develop, possibly in response to a trigger for dispersal from established populations. In this respect, it is interesting that the Essex male was macropterous, whilst all Kent specimens collected by CK-L were brachypterous, which perhaps suggests that the population had been present in that locality for a while prior to 2020. Males have a rather two-toned, black and tan appearance. The vertex of the head is pale brown, with a darker brown frons edged with only slightly paler lateral keels. The central frons keel is indistinct as it approaches the vertex and is much the same colour as the frons overall. Brachypterous forms have tan-coloured wings over a black abdomen, whilst the wings of the Essex macropterous male were clear hyaline. Females are a uniform orange-brown colour. A notable feature of males, shared with *A. denticauda*,

is the small but prominent backwards-pointing spine on the lower margin of the pygofer. In lateral view, the remaining posterior margin of the pygofer is distinctly different to *A. denticauda* (Biedermann & Niedringhaus, 2009). The genital styles of male *A. spinosa* are blunter than those of its congener.

It is difficult to draw firm conclusions about the status of this species in Britain. At 1.7 to 2.3 mm in length (Biedermann & Niedringhaus, 2009) it is a diminutive member of our fauna and so easily overlooked. It is possible that it has been in Britain for some time but hastily mis-identified as another, similar species, such as *A. denticauda* (the females of which are close to *A. spinosa*) or *Kosswigianella exigua* (Boheman) in the case of males (see photographs in Kunz, Nickel & Niedringhaus, 2011). In this light, it may prove useful to re-examine material in collections. Equally, it may genuinely be a recent arrival to our shores. The spread of records and number of individuals encountered in the east Kent location show that it is well established at this site. Statistically, the chances of encountering the species at its Essex location if it was anything other than reasonably widespread seem slim, with several hectares of available habitat repeatedly sampled but only one individual captured.

Acanthodelphax spinosa is widespread in continental Europe, with records ranging from France to Latvia, eastwards to Ukraine and southwards to Italy and Greece. It does not seem to have particularly demanding habitat requirements, with Nickel (2003) listing observations in Germany from wet meadows, fens, dry grasslands, “ruderal sites” and waysides. He suggests that Fescue grasses, notably *Festuca rubra* and, less so, *F. ovina* are the food plants. At the Kent location, *F. rubra* was present at the site but the areas from which *A. spinosa* was recorded were notable in having numerous large tussocks of *Schedonorus arundinaceus*. As *A. spinosa* was recorded in numbers by sweep-netting fairly high in these tussocks it seems probable that this was the food plant being utilised. The Essex location includes a wide variety of grasses, including *F. rubra*, but the one-off capture was not detected until sample material was subsequently examined, and thus precludes further comment.

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