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TRACHYSPHAERA LOBATA (RIBAUT), A MILLIPEDE NEW TO BRITAIN, FROM THE ISLE OF WIGHT

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Introduction

On 27 June 1984, whilst sieving soil at East Cliff, Bembridge, Isle of Wight, (40/648888) we discovered a small white pill millipede which occurred in considerable numbers in the samples. These were subsequently identified as Trachysphaera lobata (Ribaut, 1954). This is the first record of this species in Britain.

Description

In the field, small individuals appear brilliant white. Mature individuals are a dirty brownish white. Closer inspection shows that they are largely colourless (though there is some pigmentation on the head and antennae), with rows of a white chalky deposit along the transverse ridges which make up the rear third of each tergite. Eleven apparent tergites are present in the adult, including the collum, shield and telson. On all tergites except the collum the transverse ridges bear double rows of excrescences or tubercles which may be prominent in preserved specimens, but which are partly or almost embedded in the chalky deposit in live animals. Tergite two, the shield, has additional rows of tubercles at the front as well as the back. This tergite is characterised by large ear-shaped lateral depressions. The area of tergite in front of each ridge is covered with white chalky reticulations. The collum is smooth with four minute transverse ridges.

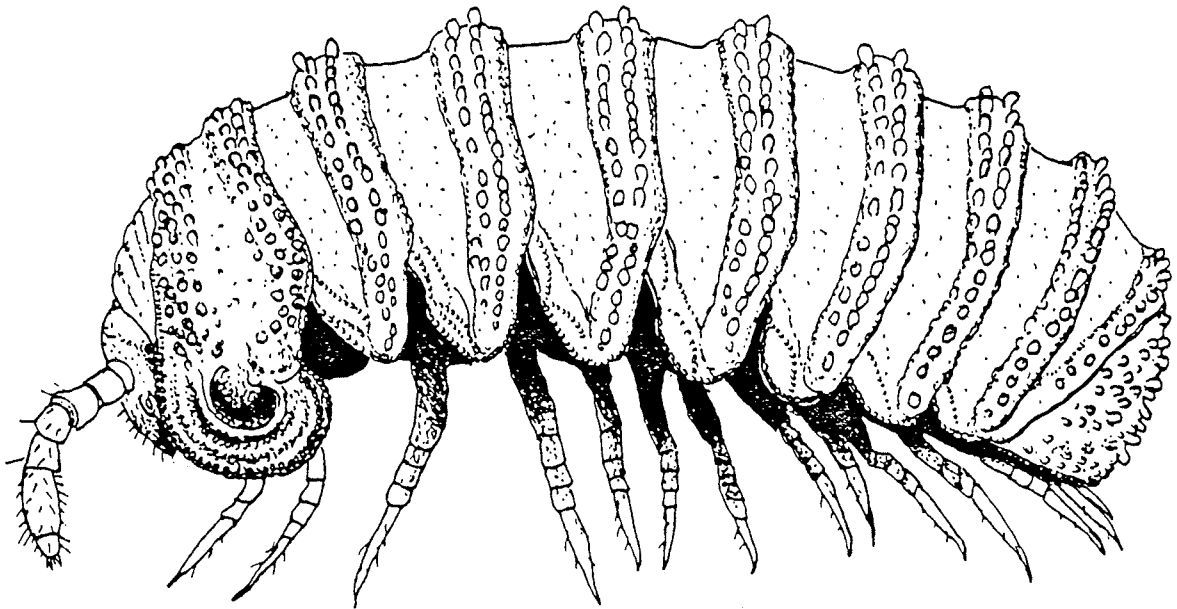


Fig. 1 Trachysphaera lobata (Ribaut) from Brading, Isle of Wight, 1984
(length 4 mm)

Tergite eleven, the telson, is rounded with a shallow sub-terminal groove. It is covered with tubercles distributed more or less randomly except along the hind edge where they are in rows. It bears no prominent medial projections.

Ocelli are present in all stages examined, usually five in number in a vertical row down each side of the head and with the uppermost pair often side by side.

There are seventeen pairs of legs in the female. To date no males have been found. The largest individual recorded measured 4.1mm long x 1.9mm broad.

The only other species recorded from Britain likely to cause confusion are Stygioglomeris crinita Brölemann and Adenomeris gibbosa Mauriès. S. crinita can be eliminated by its smooth tergites and lack of ocelli. A. gibbosa is more similar but has twelve tergites, also lacks ocelli, and has two prominent medial projections on the telson. It has only been recorded from Ireland (D. Doogue, unpub.).

Observations

T. lobata appears firmly established at Bembridge. The specimens were obtained from the soil of a small coastal woodland within a few metres of the high tide mark. The woodland is predominantly deciduous and is dominated by mature sycamore (Acer pseudoplatanus). The ground flora consists of blankets of ivy (Hedera helix) with nettle (Urtica dioica) and small patches of dog's mercury (Mercurialis perennis). The soil consists of sand with shingle and is acid (pH 5.5 - 6.0). At a depth of about 30 cm the sand gives way to clay. The woodland is bordered to the east by the sea and the west by a cliff of Bembridge Marl which attains a height of about 7m.

T. lobata has been found throughout the woodland, mainly in the soil, but one specimen was found in dead wood lying on the ground surface and another was sieved from litter. In the soil, densities of 28 per 0.005 cu. m. have been found. Specimens appear to be most common at a depth of about 15 cm. Ophiodesmus albonanus and the isopod Haplophthalmus danicus have also been obtained from the same soil by funnel extraction.

Since the initial discovery, one of us (A.N.K.) found a single specimen of T. lobata at the Duver, on the far side of Brading Harbour and the other side of the River Yar (40/637892), in September 1984. It was sieved from below leaf litter on sand in an area of scrub.

Discussion

T. lobata is known from as close as central France (Demange 1981). At Bembridge it gives every appearance of being native and the further record from the Duver indicates that if it is introduced it may have been established for a considerable period. There are no indications so far of a synanthropic association. Being so small it could easily have been overlooked and with diligent searching it may well be discovered in the south of England or Ireland.

So far no males have been found at either site and we conclude that in Britain reproduction is parthenogenetic although males are present in France. Ribaut's (1954) original description relies heavily on the structure of the male gonopods to separate T. lobata from T. pyrenaica (Ribaut). No males being available we had to rely for identification on features like the difference in shape of the ridges on the tergites, the number of rows of tubercles on tergites 7 - 10, and the form of the lateral depressions on the shield. Our specimens compare very favourably with figure given by Ribaut (1954). They key out in Demange (1981) as T. lobata but the colour plate attributed to that species cannot be relied upon.

Acknowledgements

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References

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