

HAPLOPODOILUS SPATHIFER (BRÖLEMANN, 1897) IN SOUTHEAST ENGLAND: A MILLIPEDE NEW TO THE BRITISH ISLES.

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INTRODUCTION

In 1976 an unfamiliar iulid millipede was found in Kew Gardens, London (outdoors) by Dr A. J. Rundle and was eventually identified as *Haplopodoiulus spathifer* (Brölemann 1897) by Dr H. Enghoff in 1986. *H. spathifer* had not hitherto been recorded in the British Isles but is known from the central and west Pyrenees where it is endemic. Then in March 1987 it was found again by AJR at Bedgebury in Kent. In June 1988 GBC found an adult male at Kew Gardens, also confirmed as *H. spathifer* by Mr. J. G. Blower, and again in June 1990 found an adult male at Wakehurst Place, Sussex, an outstation of Kew Gardens. On another brief visit to Wakehurst Place in March 1995 GBC found seven specimens under stones and dead wood in the wooded garden, these being the only millipedes found on that occasion.

Details of these records are as follows:

London: Kew Gardens, TQ 18-77- (VC 17)

30 March 1976 1o, 1o, under pieces of limestone resting on asphalt by the side of the footpath at the Ruined Arch, Kew Gardens TQ 186763, A. J. Rundle.

19 June 1988. 1o amongst long grass near the perimeter wall at TQ 189772, G.B. Corbet.

Kent: Bedgebury, TQ 722336 (VC 16)

28 March 1987 several, in fairly deep leaf litter beneath a specimen of Japanese Yew (*Taxus cuspidata*) at the National Pinetum, Bedgebury TQ 722336, A. J. Rundle.

East Sussex: Wakehurst Place, TQ 337311 (VC 14)

30 June 1990. 1 o under dead wood, G.B. Corbet.

24 March 1995. 3 o, 3 o, 1 immature under stones and dead wood in woodland garden, G.B. Corbet.

RECOGNITION OF *H. SPATHIFER*

Externally *H. spathifer* closely resembles *Allajulus* (= *Cylindroiulus*) *nitidus* in many respects but is considerably larger and darker. In the key in Blower (1985: 126) it would key out as *A. nitidus* which it resembles in the following respects: telson with slender pointed tail straight or nearly so, neither sharply upturned nor with a ventral concavity (Fig 1), ozopores on the suture between the pro- and metazonites; anal valves and upper surface of telson with numerous long setae; metazonites with very

short, fine, inconspicuous setae; adult males with first legs short and hooked. Externally *H. spathifer* and *A. nitidus* can be distinguished as follows:

- Size larger: adult females c. 23-30 x 1.9-2.4mm., adult males c. 20-28 x 1.5-1.9mm. (Demange gives up to 40mm. for continental specimens,); well pigmented both dorsally and ventrally, but with extensive lighter mottling; longitudinal striae widely spaced (as in *Cylindroiulus latestriatus* and *C. britannicus*), c.9 striae per 0.5mm; first legs of adult males with distal parts parallel (in ventral view), sharply angled in profile (Fig 2).
H. spathifer

- Size smaller: adult females c. 13-25 x 1.1-1.8mm, adult males c. 11-22 x 0.9-1.4mm; lightly pigmented all over or with sharp contrast between dark dorsum and pale venter; longitudinal striae closely spaced (similar to *C. punctatus*), c.12 striae per 0.5mm; first legs of adult males with distal parts strongly convergent (in ventral view), smoothly curved in profile.
A. nitidus

The shape of the telson cannot be used to separate the species reliably. Males of *H. spathifer* tend to have the hyaline tip very slightly upturned; the "tail" of *A. nitidus* is not always noticeably downturned but tends to have a characteristic teat-like appearance with a slight constriction proximal to the hyaline tip. The gonopods are shown (Fig. 3).

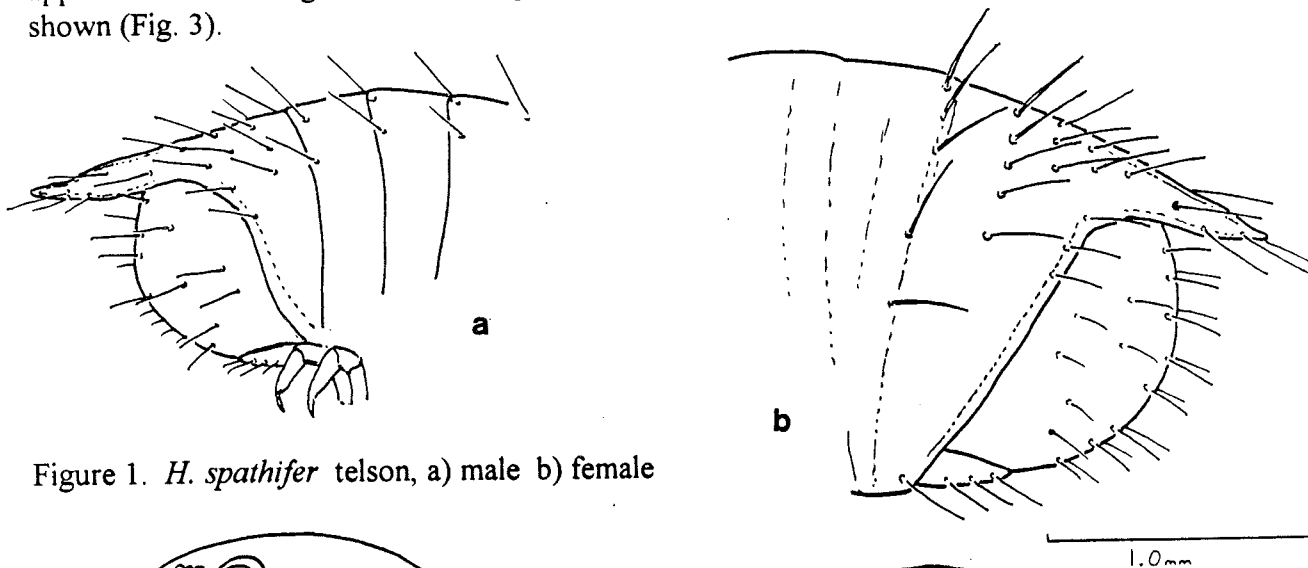


Figure 1. *H. spathifer* telson, a) male b) female

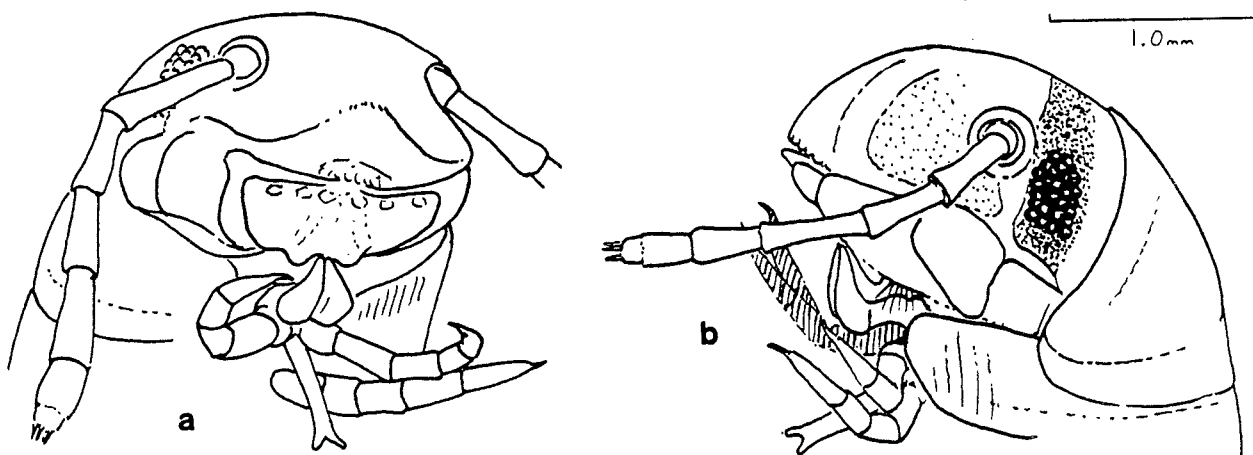


Figure 2. *H. spathifer* head of male showing a) first pair of legs from below plus penis b) the same from the side.

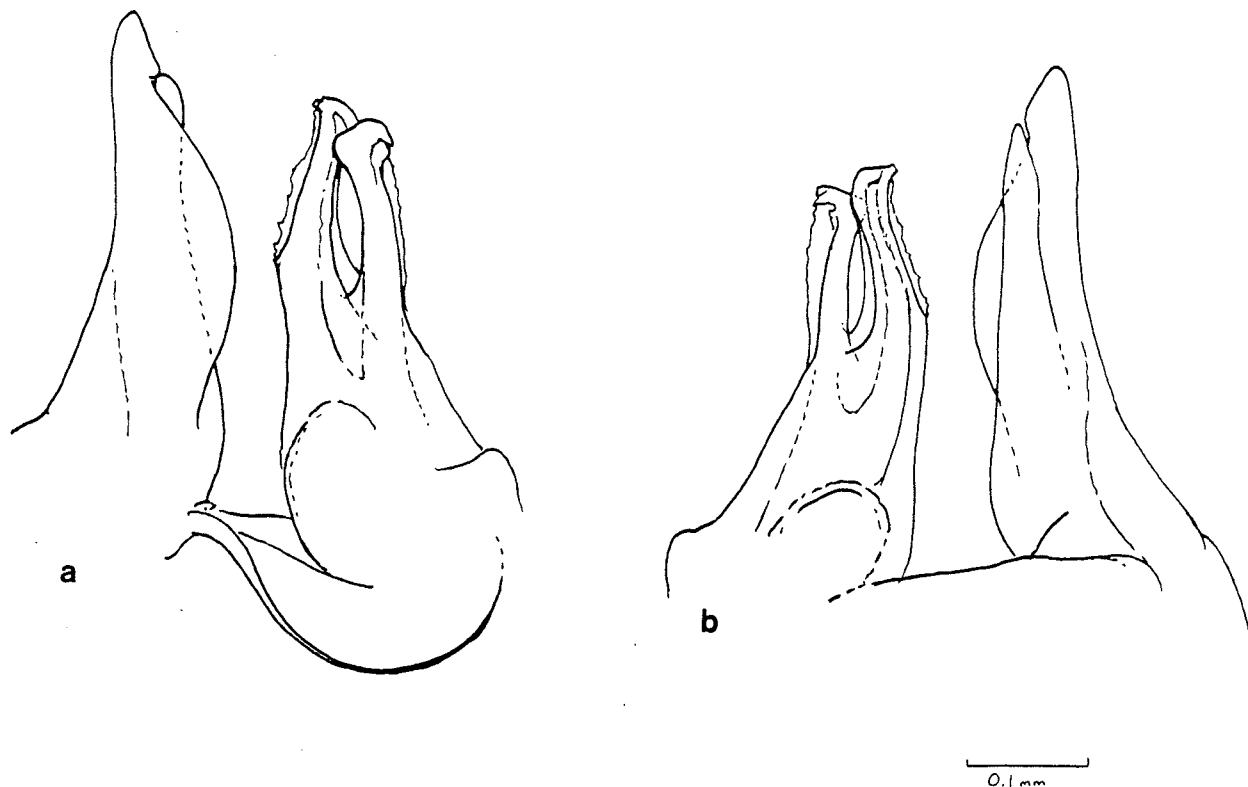


Figure 3. *H. spathifer* a) Internal profile of left gonopod. b) External profile of left gonopod.

CONCLUSIONS

H. spathifer appears to be well established at three sites in southern England, all of which have a connection through the main site at Kew Gardens, its probable point of introduction. It is the commonest outdoor millipede at Kew Gardens and does not occur in any of the hothouses. It prefers fairly deep, deciduous, leaf litter which retains moisture in the summer. Despite its abundance in the gardens it is yet to be collected outside despite a lot of searching. (Rundle, pers. comm.). It is well able to overwinter in England. It will probably spread further via the horticultural trade and it should be looked for in parks, ornamental gardens and garden centres.

Specimens from Wakehurst Place have been deposited at the Natural History Museum, London and at the Royal Museum of Scotland, Edinburgh. (NMSZ 1996.007).

ACKNOWLEDGEMENTS

We would like to thank both Gordon Blower and Adrian Rundle for thinking back a long way and putting together the sequence of discovery from their notes.

REFERENCES

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