

An example of *Proteroiulus fuscus* (Am Stein, 1857) (Myriapoda, Julida, Blaniulidae) from the southern summit of the Malvern Hills.

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Introduction

The millipede *Proteroiulus fuscus* (Am Stein, 1857) is a well-known widespread blaniulid typically but not exclusively arboreal under bark of weakened or moribund trees (Lee, 2006; Richards, 1995). I have mechanised records from the tree genera *Acer*, *Aesculus*, *Juglans*, *Malus*, *Pinus*, *Prunus*, *Quercus*, *Salix* and *Sorbus* in England, Wales and Scotland. I have never found it other than on a tree but according to Blower (1958) and Lee (2006) it may sometimes occur in woodland soil. A record from comparative exposure in dry minerogenic soils of an atypical habitat on the summit of Midsummer Hill on the southern Malvern Hill range is discussed.

Discussion

During a biological survey of the Malvern Hills conducted for the Malvern Hills Trust an adult female blaniulid millipede (01, 02 and 03) was found in dry summit grassland on Midsummer Hill, Eastnor on 26 April 2017 (VC36 52°03'N 2°35'W SO7537) at 265 m altitude. It appeared to be *Proteroiulus fuscus*. This is not the highest regional record known to me; specimens in open woodland in West Malvern's Happy Valley exceed 290 m in altitude. *Proteroiulus fuscus* may sometimes occur in numbers; at Longdon Marsh, Worcestershire on 6 October 2000 110 individuals were concentrated amongst developing sporophores of *Fistulina hepatica* (Schaeff.) With., 1792 extruding from the bark of a veteran oak tree *Quercus robur* L. (Whitehead, 2000).



01. Adult female *Proteroiulus fuscus* lateral aspect, Midsummer Hill, Malvern Hill range, 26 April 2017.

Although I suspected that the Midsummer Hill specimen represented *P. fuscus* the ozadenes were somewhat obscure and I felt that a second opinion should be sought. Professor Henrik Enghoff, a world authority on the group based at the University of Copenhagen, kindly undertook a dissection and thereby confirmed its identity. The invertebrate cohorts of *P. fuscus* on Midsummer Hill bore no resemblance to its more usual arboreal ones and it is not clear whether the specimen, evidently in good shape, was thriving or simply accepting a terrestrial option, was an ecological variant or was lost. The upper now highly fragmented limit of the hill treeline at the spot is some 75 m distant.



02. Adult female *Proteroiulus fuscus*, Midsummer Hill, Malvern Hill range, 26 April 2017, lateral aspect showing the distinctive sublinear arrangement of ocelli.



03. Adult female *Proteroiulus fuscus*, Midsummer Hill, Malvern Hill range, 26 April 2017, lateral aspect showing the metazonite setae and the blunt obtusely-rounded telson.

Acknowledgements

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References

Blower, J. G., 1958. British millipedes (Diplopoda) with keys to the species. *Linnaean Society of London Synopses of the British fauna* 11. 74 pp.
 Lee, P., 2006. *Atlas of the millipedes (Diplopoda) of Britain and Ireland*. 216 pp. Pensoft, Sofia.
 Richards, P., 1995. Millipedes, centipedes and woodlice of the Sheffield area. *Sorby Record Special Series* 10. 90 pp. Sorby Natural History Society.
 Whitehead, P.F., 2000. *Longdon Marsh, Worcestershire: an intensive survey of its invertebrates with notes on the developmental history of the site*. Report commissioned by Worcestershire Wildlife Trust, 14 pp.

Images

- 01. Adult female *Proteroiulus fuscus* lateral aspect, Midsummer Hill, Malvern Hill range, 26 April 2017.
- 02. Adult female *Proteroiulus fuscus*, Midsummer Hill, Malvern Hill range, 26 April 2017, lateral aspect showing the distinctive sublinear arrangement of ocelli.
- 03. Adult female *Proteroiulus fuscus*, Midsummer Hill, Malvern Hill range, 26 April 2017, lateral aspect showing the metazonite setae and the blunt obtusely-rounded telson.