A THIRD BRITISH SITE FOR *METATRICHONISCOIDES LEYDIGII* (WEBER, 1880) (ISOPODA, ONISCIDEA: TRICHONISCIDAE)

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In April 2012 The British Myriapod & Isopod Group visited Wentworth Castle Gardens, Stainborough (Richards, 2015). A comprehensive list of species was acquired, making this one of the most diverse sites in South Yorkshire for centipedes (Chilopoda), millipedes (Diplopoda) and woodlice (Isopoda: Oniscidea). Locally scarce species at the site included the millipedes *Brachychaeteuma bradeae*, *Cylindroiulus vulnerarius* and *Choneiulus palmatus* and the woodlice *Armadillidium nasatum* and *Porcellio spinicornis*.

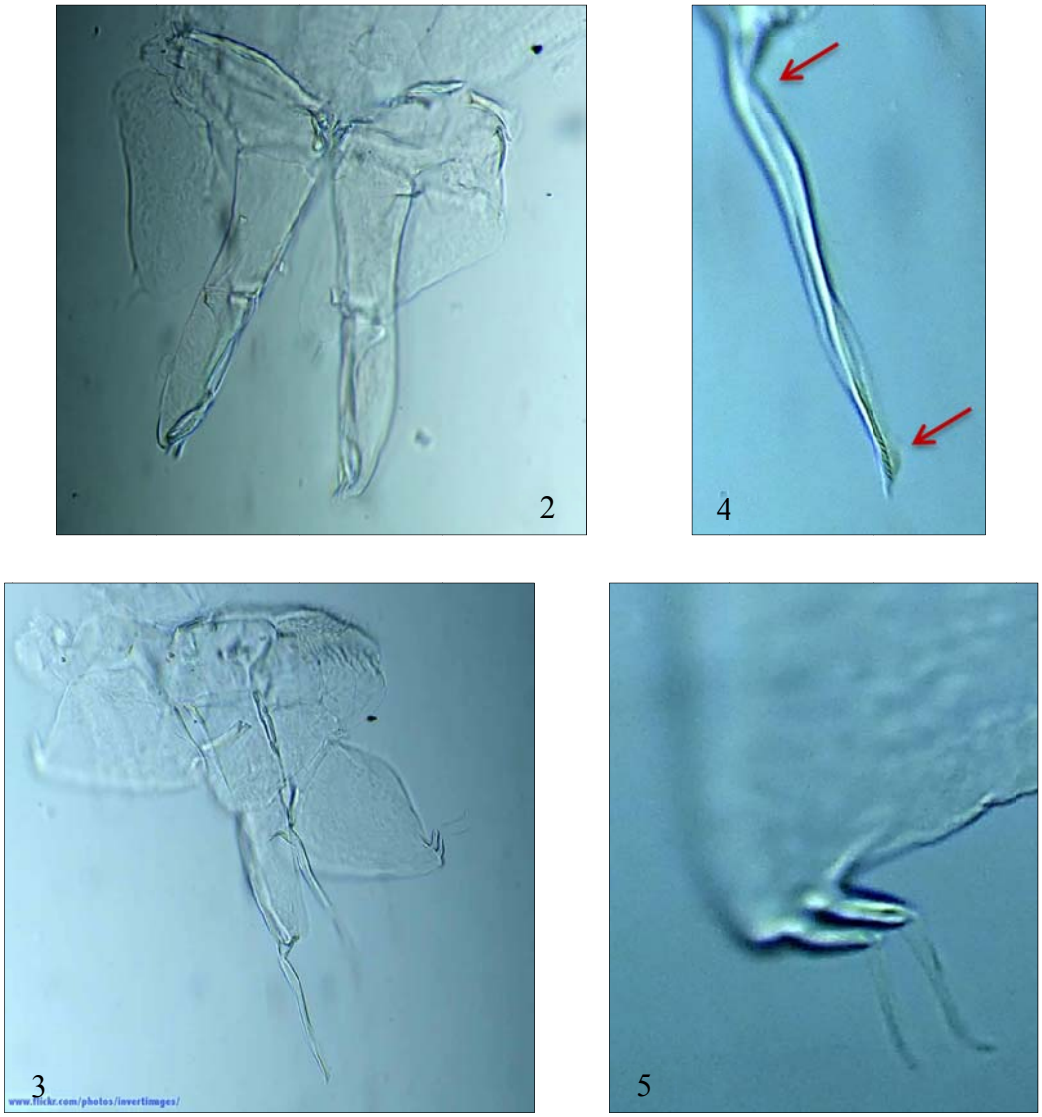
Due to a potential change of usage for the walled garden area, involving considerable potential disruption, the author and Jim Flanagan visited the site on 10th March 2016 to identify the key areas for the rarer species, in the event that preservation of these sites might be an option. Daws (1995) refers to the notion that some small woodlice are 'brought nearer to the surface by frosts', so as there had been a strong overnight frost, we were making a particular effort to seek out any *Trichoniscoides* woodlice that may have previously been overlooked in the nursery area of the walled garden.

FIGURE 1: *Metatrichoniscoides leydigii,* live male, Wentworth Castle Gardens

A good proportion of the species previously recorded in 2012 were observed, with the addition of *Leptoiulus belgicus*, which was also formerly known from the site (Richards 2010). In a final search on leaving the site, a large, embedded garden slab, located at NGR SE3194-0351-, was lifted in anticipation

of finding small Macrosternodesmid or Brachychaeteumid millipedes. However, the only thing beneath was a nest of lethargic, unidentified, black formicine ants. Within one of the nest galleries, a very small, white woodlouse was observed and extracted. It was assumed to be *Trichoniscus pygmaeus,* but on closer examination appeared to only have eyes on one side of the head. The specimen was taken alive and when photographed revealed that the 'eye' was a small piece of soil (Fig. 1). This close examination also showed the specimen to be male.

The animal barely moved when disturbed and was easily picked up on a section of its substrate. It was minute, around 2mm in length and white/unpigmented with shadows of the gut contents within. The body surface was rougher than the expected *Trichoniscus pygmaeus* and its antennae were short and robust. The series of tubercles on the head can produce shadows and structures, which could be construed as being eyes, but varied lighting angles under the microscope confirmed the absence of any ocelli. The small size, discontinuous body outline, form of the antennae and lack of eyes immediately identified the specimen as a *Metatrichoniscoides* species.



FIGURES 2-5: ***Metatrichoniscoides leydigii,*** **male, from Wentworth Castle Gardens**
2) Endopods of the second pleopod; 3) Endopod and exopod of first pleopod: 4) Distal article of first endopod showing basal 'kink' (arrowed) and bristles at tip (arrowed); 5) First exopod with two angled processes of equal length

Thankfully, being male, it was also possible to recognise the species as *M. leydigii*. Dissection clearly showed the robust and blunt ended nature of the endopod of the second pleopods (Fig. 2). Also the first pleopod's exopod was triangular with two angled processes of equal length (Figs. 3 & 5). Quite distinctive was the almost rectangular proximal/basal part of the first pleopod's endopod and the simple nature of the distal article which was basically a tubular process, with an angled 'kink' at its base (Figs. 3 & 4). Towards the tip, this process was also fringed with a row of fine bristles (Fig. 4), which are not illustrated in Oliver & Meechan (1993, fig.8c, p33.)

Metatrichoniscoides leydigii was originally first found in Britain in 1989 in a similar habitat in Oxford (Hopkin, 1990). The compost-rich gravel and rubble at the garden centre (Gregory, 2009) closely reflects the disturbed, plant nursery site within the Wentworth Castle walled garden. Adjacent to the specimen location were bags of compost, plant cloches, planted poly-tunnels and other evidence of horticulture, where materials have been imported to the site from numerous plant nursery locations. The more recent discovery of *M. leydigii* in a semi-natural, coastal site in Kent (Gregory, 2012) has opened the possibility that this species may be a post-glacial colonist, sharing its origins with the native populations in the near continent. However the habitat and location of the South Yorkshire site does not really reflect the Kent site characteristics and it is therefore considered that this specimen has been introduced along with garden materials.

Although this synanthropic association offers little in the way of conservation status for the site, the fact that the first site in Oxford has now been destroyed (Gregory, 2009) does mean that Wentworth Castle Gardens is significant in being only the second remaining in Britain for this species. The proposed future for this site does not sound conducive to the persistence of a population of *M. leydigii*, but its presence at the edge of the site may mean that it could survive. Unfortunately the tiny nature of this species does not make it easy to monitor, so determining whether it persists will be difficult. However, due to the disturbed and cultivated nature of this and the first British site for *Metatrichoniscoides leydigii*, there is every possibility that with some vigilance it could turn up in similar sites elsewhere in Britain.

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