

## TWO GONOPOD SPURS IN A SPECIMEN OF *LITHOBIUS TRICUSPIS* (CHILOPODA: LITHOBIIDAE)

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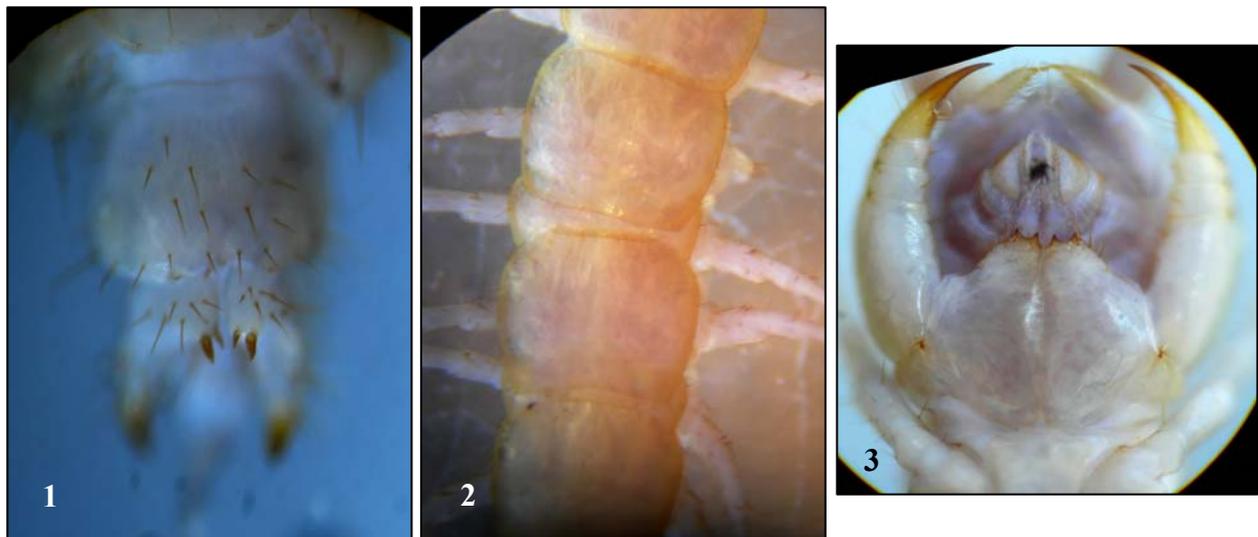
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In the previous volume of this Bulletin (Robinson & Barber, 2014) the occurrence of three gonopod spurs on each side on a female *Lithobius melanops* from North Yorkshire was reported. Initial examination had led to preliminary speculation that it might have been an example of the somewhat similar species *Lithobius tricuspis*. However the shape of the prosternal teeth, the absence of the spine 15VaC and other features led to the conclusion that it was, in fact, *L. melanops*, a species in which the presence of additional spurs in this way is not unknown.

The present specimen is indeed one of *Lithobius tricuspis*, a 10mm female but with only two gonopod spurs on each side (Fig. 1) leading to confusion when using the standard keys. It was collected by one of us (CO) on 26.x.2014 at Groes-faen Wood, South Wales, a site from which both *L. tricuspis* and two millipede species new to Britain have been recorded (Telfer, *et al*, in this Bulletin 28:15-30). There are clear posterior projections on tergites T9 and T11 (Fig. 2), a double claw on the last leg and 2+2 prosternal teeth (Fig. 3). However the latter are unlike those of *L. melanops*, *Lithobius macilentus* or *Lithobius borealis* the other British species with similar characteristics.



**FIGURES 1-3: *Lithobius tricuspis* female, Groes-faen Wood**

- 1) Posterior end, ventral view, showing 2+2 gonopod spurs; 2) Tergites 8-12, showing posterior projections on T9 and T11; 3) Head, ventral view, showing 2+2 prosternal teeth

Some photographs of the specimen were sent to Marzio Zapparoli of Viterbo who commented that one would expect to find 3+3 spurs in a 10mm immature *L. tricuspis* and suggested checking the number of antennal articles. These are much higher in *L. tricuspis* (38-50) than in the similar but doubtfully British *Lithobius agilis* which has only 29-35 (Iorio, 2010) and a examination of one of the now detached antennae gave a figure of 46 which agrees with a diagnosis of *L. tricuspis*, a

species which occurs in the woodland concerned. Iorio (2010) comments that “Dans les Alpes-Maritimes, on peut observer occasionnellement 2+2 éperons chez les populations de *L.(L.) tricuspis*.” It is interesting that on this specimen, the outermost of the two spurs on each side is much larger than the inner one, a situation reminiscent of the “normal” 3+3 spur condition where the inner one of the three is markedly smaller.

Brolemann (1935) and Iorio (2010) both indicate the presence of the spine 15VaC (15VaH) as characteristic of *L. tricuspis* and use it in their keys. However, Eason (1965) refers to the frequent deficiency of this spine and in his account of the collection of the first specimens from Devon remarks that, of the six specimens in his series, one female is without 15VaC and therefore agrees with the definition of *L. tricuspis* var. *minor* Brol. (= var. *tridens* Verh.), whilst three others have it on one side only. This suggests that it might be unwise to assume that the apparent absence of this spine would eliminate *L. tricuspis* during identification. The Linnean Society Synopsis (Barber, 2009) follows Eason in indicating that the spine may be present or absent. The present specimen appears to show this spine on the right hand side and what might possibly be a scar of it on the left; both 15<sup>th</sup> legs have become detached.

Reference to Eason (1965) will show a list of variation within the species as described at various times including the presence of 2+2 spurs, 15VaC absent and a single claw on the last leg as well as variability in the genital claw.

The present known British distribution of *L. tricuspis* centres on an area of South Devon from Dartmoor to the coast to the Exeter area with a single record from Bere Ferrers to the west (D. Bolton, 1999). There is also a record from the Isle of Wight from about 1980 (A. N. Keay). In addition we have an old cave record (1965) from Lamb Leer Cavern in the Mendips (coll A. E. McR Pearce – Cave Research Group files). It has been recorded at the South Wales site on a number of occasions since first being found in 2010 and this seems a well established colony. Potentially it could be found elsewhere in SW Britain.

## REFERENCES

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