

# ***Microsternus ulkei* (Crotch) (Coleoptera: Erotylidae), A Western Extension of its Range and First Record from Illinois**

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## **ABSTRACT**

*Microsternus ulkei* (Crotch) is reported from Wabash County, Illinois, representing the first record from Illinois and a western extension of its range. *Microsternus ulkei* is now known from Pennsylvania, Maryland and North Carolina in the east to Kentucky and Illinois in the west. Known fungal hosts of *M. ulkei* and other aspects of its biology are discussed.

## **RESULTS AND DISCUSSION**

*Microsternus ulkei* (Crotch) is the only New World member of a genus which includes 15 species of Asiatic distribution (Chûjô & Chûjô 1988). The very short and wide mesosternum, which gives the genus its name, is unique among North American Erotylidae. Dorsally, the color pattern is equally distinctive, with a black or piceous head and pronotum, and red elytra; each elytron bearing four piceous spots (Fig. 1). Once recognized as an erotylid, this beetle is unmistakable.

Despite these distinctive characteristics, *M. ulkei* is rare in collections. In preparing his monograph on the North American Erotylidae, Boyle (1956) examined only 105 specimens and we (Goodrich & Skelley 1991) examined only 91 prior to preparation of Part I of our "Erotylidae of Illinois." Most of the above described specimens were old museum specimens with meagre collection data. To illustrate: of the 105 specimens seen by Boyle in the 1950's, 69 were labeled only "Ky"; of the 91 specimens we saw in preparing our paper, only 17 had been collected since 1940, and the majority were from 19th Century collections.

Boyle (1956) identified specimens of *M. ulkei* from Kentucky, Ohio, Pennsylvania, Maryland and North Carolina. Blatchley (1910) had earlier reported this species from Posey and Crawford counties in Indiana. In addition to these state records, we (Goodrich & Skelley 1991) identified specimens from West Virginia and two specimens from Monroe County, Indiana, about 97 Km east of the Illinois border. Because of the specimens collected near Illinois (Posey County borders southeastern Illinois) we (Goodrich & Skelley 1991) suggested that *M. ulkei* was likely to occur in Illinois.

Subsequent to our 1991 publication, a specimen from Parke County, Indiana, was identified. Parke County is located in western Indiana, near the Illinois border. However, until this year, despite extensive collecting in fungi and under bark, plus year-long operation of Malaise and flight traps in eastern and southern Illinois, no specimens of *M. ulkei* had been taken in Illinois.

On April 4, 1993, a light-weight Malaise trap with "wet" head, similar to the type described by Townes (1972), was placed in a wooded valley five Km southeast of Allendale in Wabash County, Illinois (NE quadrant of section 19). The trap site slopes down to the Wabash River floodplain and is in a second growth deciduous forest. Trap samples were collected weekly and the Erotylidae sorted out from the large mass of other insects collected. Among the Erotylidae trapped during 1993 were three specimens of *Microsternus ulkei*, collected during the following time periods: 19-25 April 1993 (1); 25 April-2 May 1993 (1); 2-9 May 1993 (1). These records are the first from Illinois and are the farthest west in North America. Although the Malaise trap was serviced continuously on a weekly basis until mid-December 1993, no additional specimens were collected. Woodland collecting under bark and in fungal habitats in the area near the trap also failed to produce additional specimens.

Information on the biology of *M. ulkei* is meagre. Boyle (1956) found no biological data on the collection labels of the 105 specimens he examined. Dury (1878) provided a brief description of the structure and development of the immature stages and described the host as *Polypora* (not a very specific identification in 1878, as it could apply to a wide range of polypores). Blatchley (1910) included a record for *M. ulkei* from *Polyporus cuticularis* (now known as *Inonotus cuticularis*). In addition, we (Skelley, Goodrich & Leschen 1991) have records of two specimens from *Polyporus gilvus* (now known as *Phellinus gilvus*) and four specimens taken "near *Stereum ostrea*." Michael C. Thomas (personal communication) reports collecting *M. ulkei* under bark of an old beech stump. In east central Illinois, I have frequently searched under the bark of dead beeches and other dead trees bearing the sporocarps of *Inonotus* and *Phellinus* without finding these beetles or their larvae.

In addition to the collection dates reported above for Illinois, I have records of adult specimens taken in the northeastern United States between 6 April and 4 September. The larva is illustrated in Lawrence (1991). I would very much like to see any other specimens of this species, particularly if they are associated with host fungi or are collected in Illinois.

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Fig. 1. Dorsal habitus of *Microsternus ulkei* (Crotch). (Line = 2.0 mm)

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