

# MYRIAPODOLOGICA



Virginia Museum of Natural History

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Vol. 7, No. 2

ISSN 0163-5395

December 30, 2000

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Neotype Designation for the Centipede  
*Mycotheres leucopoda* Rafinesque  
(Scolopendromorpha: Cryptopidae)

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ABSTRACT

A neotype specimen from Estill County, Kentucky, is designated for the centipede *Mycotheres leucopoda* Rafinesque. It differs from Atlantic Coastal specimens in having shorter sutures on the cephalic plate, longer sutures on tergite 2, and larger, caudal paramedian sutures on tergite 1, with a correspondingly shorter middorsal suture.

One hundred and eighty years have elapsed since C. S. Rafinesque (1820) described the first millipeds and centipedes from the United States. These accounts quickly fell into obscurity and were only resurrected 133 years later by Hoffman & Crabill (1953), who published modern interpretations of Rafinesque's taxa. All of his specimens are lost, so neotype designations are necessary to stabilize these names.

Three of Rafinesque's four new genera of chilopods were monotypic. *Mycotheres*, the exception, was proposed with three species; two of them placed in monotypic subgenera, leaving only *M. leucopoda* Rafinesque in the nominate subgenus. Hoffman & Crabill (1953)<sup>1</sup> placed *Mycotheres* in synonymy under *Cryptops* Leach and deduced that *M. leucopoda* is a senior synonym for *C. hyalinus* Say, which is common in the eastern United States. Subsequently, the combination *Cryptops leucopodus* has been cited in recent works by Hoffman (1995) and Shelley (2001).

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<sup>1</sup> Actually it was Crabill alone who prepared the centipede part of this jointly authored paper.

According to Rafinesque, the type of *M. leucopoda* was found in the “knobs” of Kentucky. He does not give a specific locality, but the site is probably near Lexington because Rafinesque was then a Professor of Botany and Natural History at Transylvania University in Lexington. In the account of the millipede, *Abacion tessellatum*, Rafinesque states that it was found in the “knobby hills of Estill County in Kentucky.” I do not know the extent of Estill County in 1820, but today it is some 40 miles southeast of Lexington and clearly an area that Rafinesque could have investigated while at Transylvania University. As the words “knobs/ knobby” appear in both accounts, it is reasonable to conclude that both *M. leucopoda* and *A. tessellatum* were collected in the same general area and that specimens of *M. leucopoda* from Estill County would constitute topotypes.

With this reasoning in mind, I recently conducted a field trip to Estill County and found 15 specimens of *M. leucopoda* (= *C. hyalinus*) under bark of a decaying pine log along Kentucky highway 851 in the community of South Irvine (ca. 1 mile south of Irvine) on 10 August 2000. The specimens are deposited in the collection of the North Carolina State Museum of Natural Sciences; I designate one with all its legs as the neotype of *M. leucopoda*, and the other 14 as paraneotypes. The configurations of the sutures on the cephalic plate and first two tergites of the neotype are

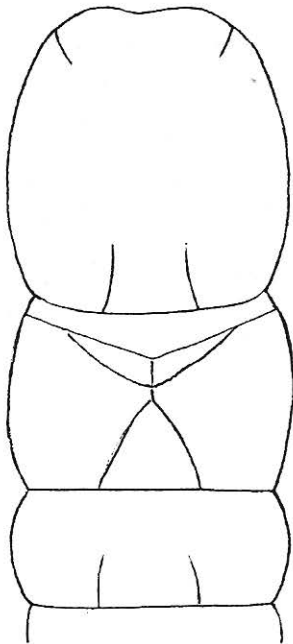


Figure 1. Sutural patterns on anterior terga of the neotype of *Mycotheres leucopodus*.

shown in the accompanying figure, which shows several differences from published figures of specimens from the Atlantic Coastal region (Crabill 1969, Shelley & Edwards 1987, Shelley 2001). The sutures on the cephalic plate are proportionately shorter, while those on tergite 2 are longer; on tergite 1, the caudal paramedian sutures are longer, and the middorsal suture is correspondingly shorter. This specimen therefore appears to be intermediate between the eastern population and that to the west in which the middorsal suture disappears and the caudal and angular paramedian sutures meet in the midline (Shelley 2001). *Cryptops leucopodus* may consist of two geographic races, but I leave this decision to future workers who can evaluate sutural patterns and possibly use scanning electron microscopy to examine the legs and other parts of the body as done by Pichler (1987) for Austrian species.

## ACKNOWLEDGEMENT

I thank R. G. Kuhler for preparing the illustration.

## LITERATURE CITED

- Crabill, R. E., Jr. 1969. A new Floridian *Cryptops* with a key to the state's species (Chilopoda: Scolopendromorpha: Cryptopidae). Proc. Biol. Soc. Washington, 82: 201-204.
- Hoffman, R. L. 1995. The centipeds (Chilopoda) of Virginia, a first list. Banisteria, 5: 20-32.
- Hoffman, R. L., and R. E. Crabill, Jr. 1953. C. S. Rafinesque as the real father of American Myriapodology: An analysis of his hitherto unrecognized species. Florida Entom., 36: 73-82.
- Pichler, H. 1987. Neue Nachweise von *Cryptops*-Arten in Nordtirol und anderen Bundesländern Österreichs (Chilopoda, Scolopendromorpha, Cryptopidae). Bericht. natur.-med. Verein Innsbruck, 74:125-139.
- Rafinesque, C. S. 1820. Annals of nature or annual synopsis of new genera and species of animals, plants, etc. discovered in North America. First Annual Number for 1820: 1-16.
- Shelley, R. M. 2001. A synopsis of the North American centipedes of the order Scolopendromorpha (Chilopoda). Mem. Virginia Mus. Nat. Hist., 4 (in press).
- Shelley, R. M., and G. B. Edwards. 1987. The scolopendromorph centipedes of Florida, with an introduction to the common myriapodous arthropods. Florida Department of Agriculture and Consumer Services, Division of Plant Industry, Entomology Circular No. 300: 1-4.

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