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A second East-Nearctic species of *Rhysodesmus* Cook (Polydesmidae: Xystodesmidae)

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ABSTRACT

Rhysodesmus agrestis, the second representative of the genus in eastern North America, is described from specimens collected in a grassy field near Knoxville, Knox County, Tennessee. It is related to the Virginia species, *R. restans* Hoffman, with which it shares a long, sinuate pre-femoral process.

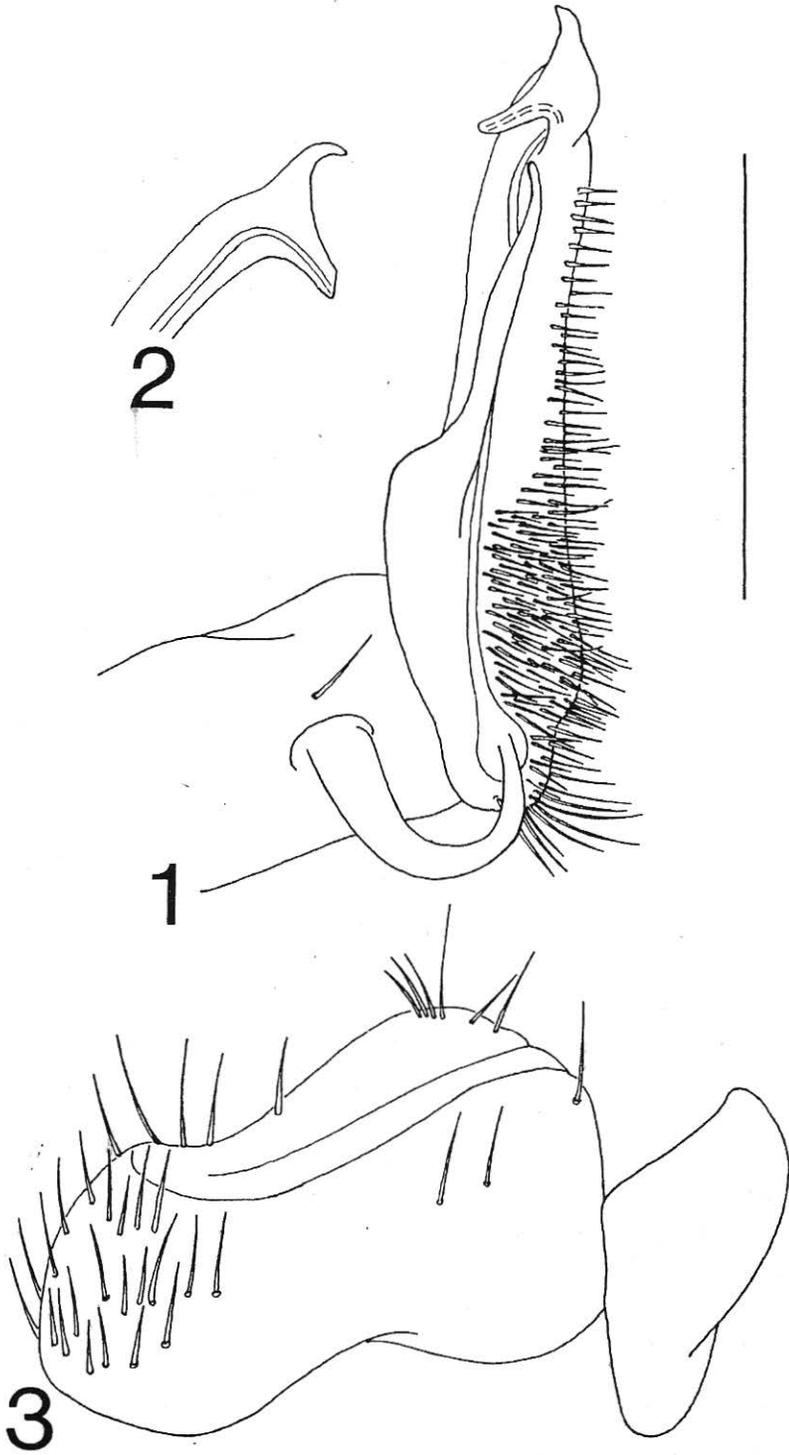
INTRODUCTION

The genus *Rhysodesmus* is the dominant element in the Middle American xystodesmid milliped fauna, which extends from south and west Texas to El Salvador. Nearly 70 species have been described from that region, and many more undoubtedly await detection. In one of the most striking milliped discoveries of the past half century, Hoffman (1998) described *Rhysodesmus restans* from a hillside near Mendota, Washington County, Virginia, over 1,200 miles (1,920 km) from the closest known species, *R. texicolens* (Chamberlin), in the lower Rio Grande Valley, Texas. I describe here a second species of *Rhysodesmus* from the eastern United States, from a grassy field near Knoxville, Knox County, Tennessee. Acronyms of paratype repositories are as follows:

FMNH - Field Museum of Natural History, Chicago, Illinois.

FSCA - Florida State Collection of Arthropods, Gainesville.

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NMNH - National Museum of Natural History, Smithsonian Institution,
Washington, DC.

VMNH - Virginia Museum of Natural History, Martinsville.

***Rhysodesmus agrestis*, new species**

Figs. 1-3

Types: Male holotype and nine male and nine female paratypes (NCSM) collected by C. L. Bilbrey, 25 April 1995, from a pitfall trap in an endophyte infected fescue field, Plant Sciences Unit, Knoxville Experiment Station, along US highway 129 ca. 3.5 mi (5.6 km) S of Tennessee River in Knoxville, Knox County, Tennessee. Nine male paratypes taken by same collector at same locality on 10 August 1995. Male and female paratypes dispersed to FMNH, FSCA, NMNH, and VMNH.

Diagnosis: A small species of *Rhysodesmus* characterized by the following traits of the male gonopods: prefemoral process long, bisinuate, extending to base of acropodite; telopodite in medial view with narrow dimension showing, prefemoral process overlying stem, partly obliterating prostatic groove; subapical process of acropodite relatively long, curving broadly distad; distal zone relatively narrow apically, not truncate.

Description. Holotype length 16.7 mm, maximum width 3.1 mm, W/L ratio 18.6%. Color in life unknown.

Width across genal apices 1.4 mm, interantennal isthmus 0.9 mm. Antennae reaching back to caudal margin of 2nd tergite, relative lengths of antennomeres 2>3>4>6>5>1>7, 2-6 clavate, 1st subglobose, 7th short and truncate, with four apical sensory cones. Facial setae as follows: epicranial, interantennal, subantennal, frontal and genal absent, clypeal about 6-6, labral about 8-8.

Dorsum smooth, polished. Collum moderately broad, ends terminating above those of succeeding tergite. Paranota strongly declined, continuing slope of dorsum, caudolateral corners rounded through segment 4, blunt on remaining tergites. Peritremata thin and narrow, slightly elevated above paranotal surface; ozopores located caudal to midlength, opening ventrolaterad.

Pregonopodal sterna without lobes or projections, 6th sternum with slight impression on ventral surface to accommodate gonopodal telopodites.

Figs. 1-3, *Rhysodesmus agrestis*, new species. 1, left gonopod of holotype, medial view. 2, distal extremity of telopodite of the same, sublateral view. 3, left cyphopod of female paratype, caudal view. Scale line = 0.6 mm for fig. 1, 0.8 mm for fig. 2, 0.5 mm for fig. 3.

Postgonopodal sterna flat and unmodified, glabrous, without lobes or setae. Coxae without projections; prefemoral spines beginning on legs on segment 11, short and blunt, becoming slightly longer and curved dorsad on segment 17.

Gonopodal aperture rounded, 1.7 mm wide and 0.6 mm long at midpoint, sides flush with metazonal surface, caudal margin slightly elevated. Gonopods *in situ* with telopodites extending anteriorly from aperture and over 6th sternum in parallel arrangement. Gonopod structure as follows (Figs. 1-2): prefemur relatively long, with long, acicular, bisinuate prefemoral process. Telopodite in medial view with prefemoral process overlying stem, partly obscuring prostatic groove. Acropodite relatively short, subapical process relatively long, curving broadly distad; distal zone moderately long and broad, narrowest apically, not truncate.

Cyphopods located caudolaterad to 2nd legs of females; receptacle glabrous, located laterad to valves, detached from latter on anterior side; valves moderately large, subequal, moderately hirsute on medial surface; operculum absent (Fig. 3).

Remarks: *Rhysodesmus restans* was collected in a thin cover of second or third growth forest, which suggested a successional stage from a former pasture (Hoffman 1998). The occurrence of *R. agrestis* in a grassy field suggests that more species of this genus may occur in the eastern states in such habitats, which are generally avoided by field collectors. As there is a dearth of cover and obvious places to search for millipeds, pitfall trapping may be the best sampling technique for pastures.

LITERATURE CITED

- Hoffman, R. L. 1978. An Appalachian species of *Rhysodesmus* (Polydesmida: Xystodesmidae: Rhysodesmini). *Myriapodologica*, 5: 77-83.

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