

THE NEOTROPICAL MILLIPEDS IN FLORIDA, INCLUDING
CALYPTODESMUS SCHUBARTI, N. SP.
(STYLODESMIDAE: POLYDESMIDA)

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The 4 species of Neotropical millipeds that have been collected in Florida represent 4 of a total of 32 genera that are known in the state. There may be others that have been overlooked, for millipeds have not been collected intensively there. The Neotropical species are all small-bodied forms 7 mm. or less in length that are collected either with a Berlese funnel or by careful examination of the lower surface of logs and boards. Most of the microdiplopods that appear in Berlese collections are larval forms, but even larvae can be of taxonomic value if they have specifically characteristic surface sculpture, as in the family Stylodesmidae.

The only colobognath milliped that has been collected in southern Florida is *Siphonotus purpureus* Pocock, an introduced Neotropical species that extends through most of the Lesser Antilles and Hispaniola to the northern coast of South America (Chamberlin and Hoffman, 1958). It is well established in southern Florida, often occurring in cultivated areas with two introduced polydesmids, *Oxidus gracilis* (Koch) and *Orthomorpha coarctata* (Saussure). These polydesmids are tropicopolitan and do not come within the scope of this paper.

The other three Neotropical millipeds in Florida are polydesmids that represent three genera of the large, widespread tropical family Stylodesmidae. *Lophodesmus caraibianus* (Chamberlin, 1918) has been collected from under a board in Miami by Mr. Robert E. Woodruff, entomologist of the Florida State Plant Board. This species has long been known from Nassau and Haiti (Loomis, 1936). *Psochodesmus crescentis* Cook, 1895, the most abundant micropolydesmid on the Florida peninsula, occurs from Putnam County to the end of the peninsula. It is well established in rural areas. *Calyptodesmus schubarti*, n. sp., has been collected once from under a board in Columbia County; this site approaches the northern limit of the range of the family Stylodesmidae. The last two species have not been collected outside Florida, but their affinities are so clearly with the Neotropical fauna they cannot be regarded as indigenous to Florida.

The only other members of the family Stylodesmidae that are known in the United States are two species of the genus *Ilyma* from the Louisiana-Texas coastal area (Loomis, 1959); they also are small-bodied forms and are included in the key below.

KEY TO THE FAMILY STYLODESMIDAE IN THE UNITED STATES

1. With repugnatorial pores on segments 5, 7, 10, 13, and 16 2
With repugnatorial pores placed otherwise 3
2. Segment 19 with the posterior processes extending much beyond the apex of segment 20 *Ilyma cajuni*
Segment 19 with the posterior processes shorter, extending only to the apex of segment 20 *Ilyma digitata*

3. With repugnatorial pores on segments 5, 7, 9, 10, 12, 13, 15, and 16 *Lophodesmus caraibianus*
 With repugnatorial pores on segments 5, 7, 9, 10, 12, 13, and 15 4
4. All nonporiferous segments with either 3 or 4 lateral lobes on the paranota *Psochodesmus crescentis*
 All nonporiferous segments except segment 2 with 2 lateral lobes on the paranota *Calyptodesmus schubarti*, n. sp.

GENUS *Calyptodesmus* SCHUBART

Calyptodesmus Schubart, 1944, Acta Zool. Lilloana, vol. 2, p. 367.
 Generotype: *C. sancta* Schubart 1944.
 Range: São Paulo and Florida.
 Species: Two.

DIAGNOSIS: Pores on segments 5, 7, 9, 10, 12, 13, and 15. Pore stalks project from below the middle lobes. Lateral margin of all nonporiferous paranota except segment 2 divided into 2 lobes. Margin of anal tergite divided into 7 lobes, of which the middle one is the broadest. Gonopods unknown.

Calyptodesmus schubarti, new species

(Figure 1)

DIAGNOSIS: Distinguished from *C. sancta* by the 3 solitary tubercles on the caudal margin of metatergites 2 through 17 between the 4 longitudinal crests of primary tubercles. The 4 vertical rows of granules on the vertex also may be a specific character.

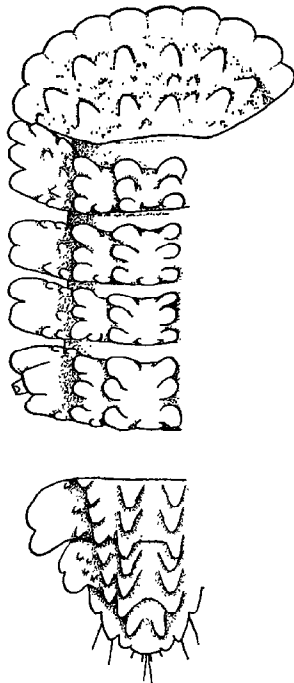


Figure 1. Dorsal surface of *Calyptodesmus schubarti*, n. sp., showing the entire collum and parts of segments 2 through 5 and 18 through 20.

TYPE LOCALITY: Lake City, Columbia County, Florida, 12 ♀, June 12, 1959, N. Causey.

RANGE: Columbia and Alachua Counties, Florida.

DEPOSITION OF TYPE MATERIAL: Female holotype, American Museum of Natural History; female paratypes, Florida State Plant Board, U. S. National Museum, and the author's collection.

DESCRIPTION OF FEMALE HOLOTYPE: Length 5 mm., greatest width 0.7 mm. Color light tan; under magnification irregular red spots can be seen on the paranota. Dorsum strongly arched. Paranota low and almost horizontal; on segments 2 through 5 they are bent slightly cephalad; on segments 18 and 19 they are bent slightly caudad; on the remaining segments they are directed laterad.

Vertex of head covered with granules, the largest of them arranged in 4 subvertical single series. Antennae short, thick, geniculate, the fifth segment longest and widest, and the fifth and sixth segments each with a setose sensory area on the distal margin.

Collum large and dome-shaped, completely hiding the head from above. Its anterior margin is horizontal and divided into 10 equal, deeply incised lobes; indistinct radii extend between the lobes. Dome of collum with 10 large, rounded tubercles arranged in 2 curved series of 6 and 4 and between and around them about 20 smaller tubercles. Metatergites 2 through 19 with 4 longitudinal crests composed of large, rounded, subequal tubercles, equally spaced horizontally, and in groups of 3 on each metatergite. Three secondary tubercles are on the caudal margin of metatergites 2 through 17 between the longitudinal crests. Several secondary tubercles, usually from 5 to 8, are arranged in 3 transverse series on each paranotum. Last segment with 2 large tubercles.

Lateral margin of segment 2 divided into 3 equal, deeply incised lobes. Lateral margin of all other nonporiferous segments divided into 2 lobes; on the anterior segments they are equal and deeply incised; on the posterior segments the anterior lobe is much the larger. Lateral margin of all poriferous segments divided into 3 subequal lobes; the pore stalks project from below the middle lobes and make them inconspicuous; on the more posterior segments the third lobe does not extend as far laterad as the first one. Margin of segment 20 divided into 7 not very unequal lobes; the incisions between the middle 3 lobes are shallow and easily overlooked.

This species closely resembles *Psochodesmus crescentis* in size, color, and shape, but its longitudinal crests are more distinct and the remainder of the dorsum is not as rough.

I am grateful to Mr. H. F. Loomis for specimens of *Lophodesmus caribbeanus* from Haiti.

LITERATURE CITED

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- Schubart, Otto.* 1944. Os diplopodos de Pirassununga. *Acta Zool. Lilloana*, 2: 321-440, 86 figs., 2 pls.

ADDENDUM

Since this paper went to press the following records of the family Styloidesmidae in Florida and nearby states have been added:

Calyptodesmus schubarti, Hogtown Creek Area, Gainesville, Alachua County, Florida, 1 ♀ larva, Oct. 10, 1959, Wm. J. Platt, III.

Psochodesmus crescentis, Lower Matacumbe Key, Monroe County, Florida, 1 ♀ larva, Dec. 16, 1959, R. E. Woodruff.

An undescribed species of the genus *Ilyma*, 1 ♀ and 2 larvae, George County, Mississippi, and Baldwin County, Alabama, N. Causey.

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