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The Scolopendromorph Centipedes of Florida, with an Introduction to the Common Myriapodous Arthropods[1]

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Centipedes (Class Chilopoda) are a major component of the terrestrial arthropod fauna of Florida, occurring in native and urban environments throughout the state. Although centipedes are predators, little is known of their impact on other ground-dwelling animals. They are often confused with millipeds (Diplopoda), the other major class of myriapods. The following table delineates major differences:

Centipedes (Chilopoda)	Millipeds (Diplopoda)
One pair (2) legs per pedal segment.	Two pairs (4) legs on most pedal segments.
Carnivorous; forcipules (prehensors, poison claws) present, used to seize and kill prey	Phytosaprophagous or omnivorous, forcipules absent.
Dorsoventrally flattened	Cylindrical or somewhat dorsoventrally flattened
Legs attach laterally.	Legs attach mid-ventrally.
Trachea open laterally.	Trachea open ventrally.
Reproductive tracts located caudally, opisthogoneate.	Reproductive tracts located anteriorly, progoneate.
Exoskeleton relatively soft, flexible.	Exoskeleton relatively hard, inflexible.

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All four chilopod orders occur in Florida. The Scutigeromorpha are represented by the introduced European species, ***Scutigera coleoptrata*** (L.), while the Scolopendromorpha, Lithobiomorpha, and Geophilomorpha are native and well represented. The orders are combined into two subclasses: Epimorpha - hatchlings having the full adult complement of legs, 21 or more pairs; and Anamorpha - hatchlings having four or seven pairs of legs with additional legs acquired at succeeding molts up to the adult complement of 15 pairs. The four orders are characterized as follows:

Subclass Anamorpha

Order Scutigeromorpha: short, robust forms; adults with 15 pairs of extremely long and slender legs, antennae long and whip-like, with numerous (over 100) articles; with a compound eye and no ocellus on each side of cephalic plate; only 7 tergites (some fused); gray; only order that can autotomize most appendages.

Order Lithobiomorpha: short, robust forms; adults with 15 pairs of legs of normal length; antennae with more than 14 articles; lacking compound eye but with variable number of ocelli on each side of cephalic plate; 15 tergites, unequal in length (tergites 2, 4, 6, 9, 11, 13 much shorter than remaining tergites); dark brown to black.

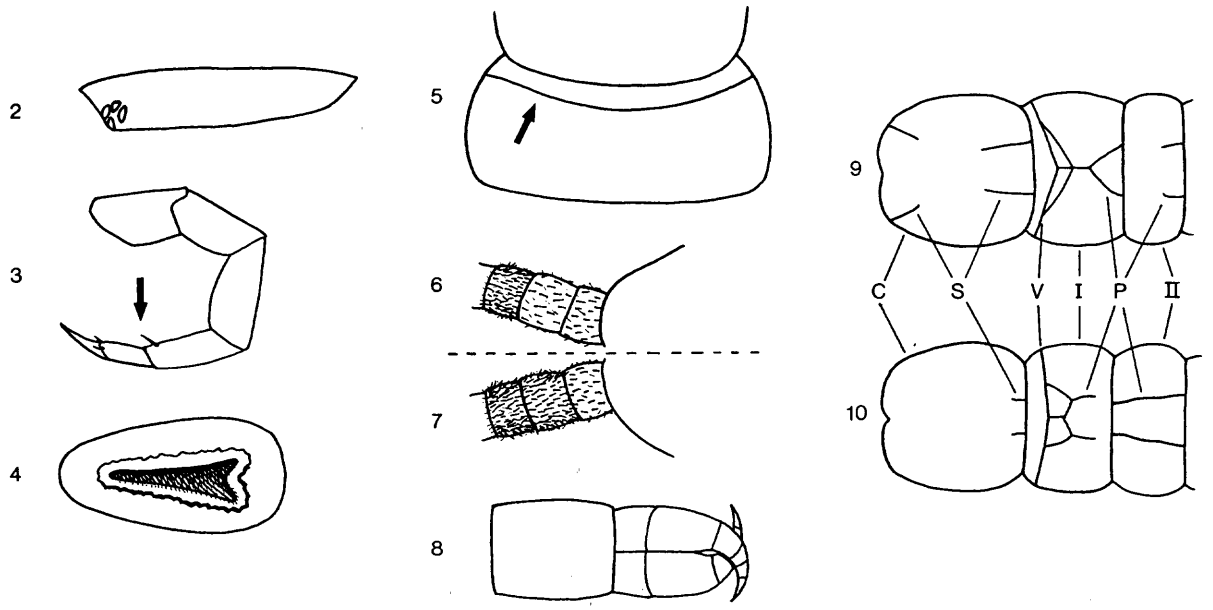
Subclass Epimorpha

Order Scolopendromorpha: moderately long, variably broad forms with 21 or 23 pairs of legs on juveniles and adults; antennae with more than 14 articles; with or without 4 pairs of ocelli on cephalic plate; tergites subequal in length; yellow, orange, brown, blue-gray, or green.

Order Geophilomorpha: long, narrow forms with at least 31 pairs of legs on juveniles and adults; antennae with 14 articles; ocelli absent; tergites relatively short, subequal; yellow or red.

Previous papers on Florida centipedes include a short listing by Chamberlin (1958) and a key to the scolopendromorph genus ***Cryptops*** (Crabill 1969). Additional records appear in miscellaneous taxonomic papers, most notably that of Crabill (1960). We report here only the scolopendromorph fauna because pervasive taxonomic problems impede identifications of the Lithobiomorpha and Geophilomorpha. The scolopendromorphs include the largest and most conspicuous centipedes of Florida and are readily recognized since the colors stand out in contrast to the substrate. They are usually found in decaying leaf litter and under rocks, logs, and the bark of decaying logs. Larger species can inflict painful bites. Ten species in both scolopendromorph families, Cryptopidae and Scolopendridae, occur in Florida and are distinguished by the characters in the key below. Distributions are depicted in the accompanying maps (Maps 1-3), and pertinent anatomical drawings appear in Crabill (1969), Shelley (1988), and with the key below (Fig. 2-10). ***Cryptops hortensis*** Leach, which Crabill (1969) thought might occur here, has never been encountered and is excluded from the key. ***Cryptops floridanus*** and ***C. denmarki*** are known only from their type localities, and their taxonomic validities are uncertain. Crabill (1969) did not examine the type specimens in preparing his key to ***Cryptops***, and one or both names may be synonymous with ***C. hyalinus***. Also, ***C. parydrus*** could be a synonym of ***C. denmarki***. These matters will be addressed in a future review of Nearctic Scolopendromorpha. The section of the following key pertaining to ***Cryptops***, couplets 8-10, is adapted from Crabill (1969). Color, approximate maximum body length, and range in Florida are included for each species in the key.

1. With four ocelli on each side of cephalic plate (Fig. 2)..... .....Scolopendridae.....2
   Without ocelli.....Cryptopidae.....5
2. Proximotarsi of legs 1-20 with a prominent ventrodistal spur (Fig. 3).....3
   Without ventrodistal spurs; blue-green; 50 mm; statewide..... .....***Hemiscolopendra punctiventris*** (Newport)
3. Spiracles triangular, with tripartite, valvular partition (Fig. 4).....4
   Spiracles not triangular, without valve; yellow; 45 mm; Dade Co..... .....***Rhysida longipes*** (Newport)
4. First tergite with prominent, procurved suture; green; 60 mm; statewide (Fig. 5).....***Scolopendra viridis*** Say
   Without this character; yellow; 200 mm; Dade and Monroe counties (Fig. 1).. .....***Scolopendra alternans*** Leach
5. 23 pairs of legs and pedal segments.....6
   21 pairs of legs and pedal segments.....7
6. First and second antennomeres sparsely hirsute in comparison to third and more distal articles; brown-orange; 60 mm; Jackson Co. (Fig. 6)..... .....***Scolopocryptops nigridius*** (McNeill)
   First antennomere sparsely hirsute in comparison to second and more distal articles; yellow-orange; 70 mm; panhandle and peninsula south to Sarasota Co. (Fig. 7).....***Scolopocryptops sexspinosus*** (Say)
7. Ultimate legs extremely large, robust; yellow; 40 mm; statewide (Fig. 8)... .....***Theatops posticus*** (Say)
   Ultimate legs only slightly larger than penultimate.....8
8. First tergite with cervical suture (Fig. 9-V).....9
   First tergite lacking cervical suture but with two paramedian sutures; yellow; 15 mm; Dade Co.....***Cryptops denmarki*** Chamberlin
9. Cephalic plate (C) with long sutures (S), paramedian sutures (P) of 2nd tergite (II) incomplete; yellow; 15 mm; statewide (Fig. 9)..... .....***Cryptops hyalinus*** Say
   Cephalic plate with short sutural fragments (Fig 10-CS); paramedian sutures of 2nd tergite complete (Fig. 10-IIP).....10
1Ø. First tergite (I) with incomplete paramedian sutures (Fig. 10-IP); yellow; 20 mm; Gilchrist, Martin, Dade, and Monroe counties..... .....***Cryptops parydrus*** Crabill
   First tergite with complete paramedian sutures; yellow; 15 mm; Alachua Co. .....***Cryptops floridanus*** Chamberlin



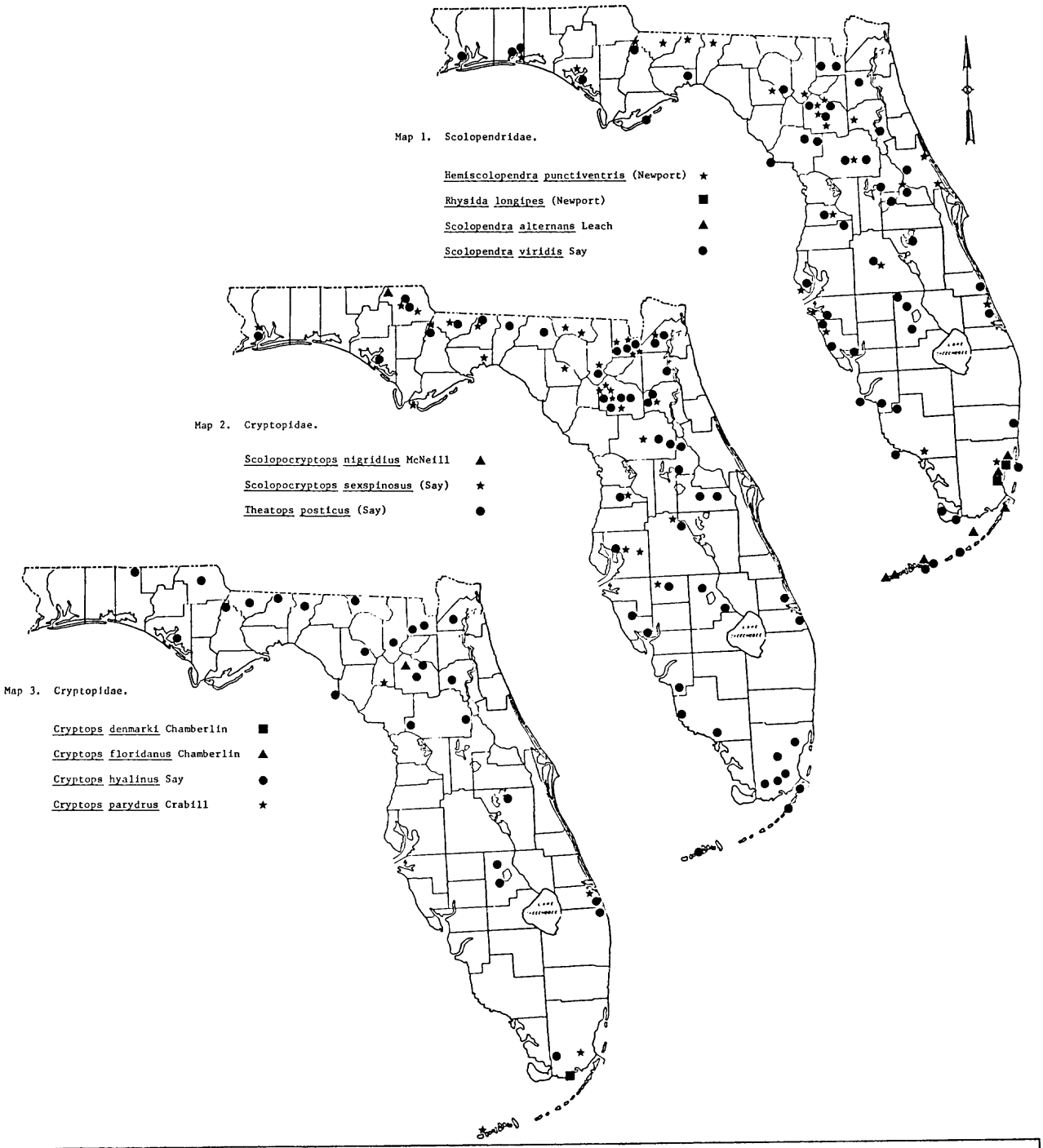
References

Chamberlin, R. V. 1958. Some records of chilopods from Florida. Ent. News 69:13-14.

Crabill, R. E., Jr. 1960. A new American genus of cryptopid centipede, with an annotated key to the scolopendromorph genera from America north of Mexico. Proc. U.S. Natl. Mus. 111:1-15.

_____. 1969. A new Floridian ***Cryptops*** with key to the state's species (Chilopoda:Scolopendromorpha:Cryptopidae). Proc. Biol. Soc. Washington 82:201-204.

Shelley, R. M. 1988. The scolopendromorph centipedes of North Carolina, with a taxonomic assessment of ***Scolopocryptops gracilis peregrinator*** (Crabill). Florida. Ent. 70(4), in press.



Map 1. Scolopendridae.

Hemiscolopendra punctiventris (Newport) ★
Rhysida longipes (Newport) ■
Scolopendra alternans Leach ▲
Scolopendra viridis Say ●

Map 2. Cryptopidae.

Scolopocryptops nigridius McNeill ▲
Scolopocryptops sexspinosus (Say) ★
Theatops posticus (Say) ●

Map 3. Cryptopidae.

Cryptops denmarki Chamberlin ■
Cryptops floridanus Chamberlin ▲
Cryptops hyalinus Say ●
Cryptops parydrus Crabill ★

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