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**DICYRTOMA (PTENOTHRIX) CASTANEA, NEW SPECIES  
FROM THE SAVANNAH RIVER PLANT  
(COLLEMBOLA: DICYRTOMINAE)**

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ABSTRACT

A new species, *Dicyrtoma (Ptenothrix) castanea* Snider, is described from South Carolina. It shares morphological characteristics with *Dicyrtoma (Ptenothrix) vittata* (Folsom) and *Dicyrtoma (Ptenothrix) renateae* n.sp. (Snider 1985). Separation of *D. castanea* from those species is accomplished by color pattern and presence of clavate subapical filaments on the unguiculi. The type locality is Aiken County, South Carolina, litter in low, mixed hardwood forest.

RESUMEN

Se describe una nueva especie, *Dicyrtoma (Ptenothrix) castanea* Snider, de Carolina del Sur. La misma comparte características morfológicas con *Dicyrtoma (Ptenothrix) vittata* (Folsom) y *Dicyrtoma (Ptenothrix) renateae* n.sp. (Snider 1985). *D. castanea* puede separarse de las especies anteriores mediante su patrón de coloración y la presencia de filamentos subapicales en forma de clavo en la unguícula. La localidad tipo es el condado de Aiken en Carolina del Sur, donde se encuentran en la hajarasca de bosques bajos y mixtos de madera dura.

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This paper is another in a series describing Collembola from the Savannah River Plant, Aiken, South Carolina. Since 1980 I have examined collections taken at the SRP for new distribution records. Many range extensions have been discovered and will be reported elsewhere. Here my purpose is to describe a new species of *Dicyrtoma*.

*Dicyrtoma (Ptenothrix) castanea*, NEW SPECIES

COLOR AND PATTERN (♀): Background creamy white with purple, tan and olive polygons of pigment. Head from between bases of antennae to vertex with light bluish, broken line; frons with black double macula between bases of antennae, polygons of olive-purple below antennal bases, lower frons with light dusting of olive; gena with light bluish dusting, becoming intense posteriorly. Body thoracic area with light dusting of bluish-purple, dorsum light purple, irregular, becoming light tan posteriorly; abdomen with lateral polygons of light tan, 3 broad areas lacking pigment; abdominal segment VI light tan-yellow bordered with purple; papilla of bothriothrix A dark purple; legs with light dusting of olive-purple; furcula colorless (Fig. 1 & 2).

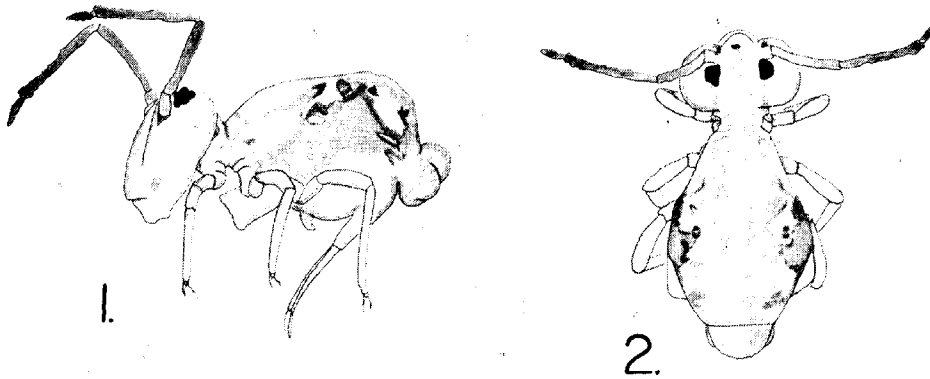


Fig. 1-2. *Dicyrtoma (Ptenothrix) castanea* n. sp. 1. Habitus, lateral view; 2. Habitus, dorsal view.

HEAD: Eyes 8 + 8 with dark pigment; ocellus D  $\frac{1}{2}$  diameter of C, ocelli ABCE subequal, FGH smaller and subequal (Fig. 3). Mean antennal ratio 1:3.5:4.5:1.75, ANT IV without subsegmentation, having a single file of 5-6 setulae (Fig. 4); ANT III with 1 dorsal and 4 ventral cup sensilla (Fig. 5); ANT II not distinctly subsegmented, with 3 dorsal and 1 ventral cup sensilla (Fig. 6); ANT I with 4 dorsal and 1 ventral setae (Fig. 7). Dorsal cephalic setae short, spine-like, 5 unpaired facial setae (Fig. 8), 1 + 1 oval organs on lower frons. FORELEG: Coxa with 1 seta (Fig. 9); trochanter with 3 anterior and 1 posterior setae (Fig. 10); femur with basal posterior and distal anterior oval organs, with 1 cup sensillum on outer margin (Fig. 11); tibiotarsus with 4 cup sensilla and 3 oval organs on anterior surface (Fig. 12), 1 oval organ on posterior surface (Fig. 13), and tenet hairs acuminate; pretarsus with anterior and posterior setulae; unguis lacks tunica with small lateral teeth and weak inner tooth (sometimes 2); unguiculus with serrate outer margin, apical filament reaching beyond tip of unguis, clavate (Fig. 14). MESOLEG: Coxa with 3 anterior setae and 1 hair sensillum (Fig. 15); trochanter with 4 anterior and 1 posterior setae (Fig. 16); femur with anterior and posterior oval organs, cup sensillum on outer margin (Fig. 17); tibiotarsus with 5 cup sensilla and 3 oval organs on anterior surface (Fig. 18), 1 oval organ on posterior surface (Fig. 19); pretarsus with anterior and posterior setulae; unguis lacks tunica, with small lateral teeth and weak inner tooth (sometimes 2); unguiculus with serrate outer margin, apical filament reaching beyond tip of unguis, clavate (Fig. 20). METALEG: Coxa with 4 anterior setae and oval organ (Fig. 21); trochanter with 5 anterior and 1 posterior setae (Fig. 22); femur with anterior and posterior oval organs, cup sensillum on outer margin (Fig. 23); tibiotarsus with 5 cup sensilla and 3 oval organs on anterior surface (Fig. 24), posterior surface with 1 oval organ, differentiated setae strongly serrate (Fig. 25); pretarsus with anterior and posterior setulae; unguis lacks tunica, with small lateral teeth and 1 small inner tooth; unguiculus with serrate outer margin, apical filament reaching beyond tip of unguis, clavate (Fig. 26). GREAT ABDOMEN: Collophore with 1 + 1 subapical and 1 + 1 lateral setae, sacs warty (Fig. 27). Corpus of tenaculum with 4 setulae, ramus with 3 teeth and horn (Fig. 28). Manubrium with 9 + 9 dorsal setae (Fig. 29). Dens with 3-2-1-1- Ve setae (Fig. 30), dorsal setae consistent with genus (Fig. 31), E setae ratio  $E_1/E_2 = 1.30$  and  $E_3/E_2 = 2.07$  (Fig. 32). Mucro with inner and outer teeth, 25-34 outer and 31-33 inner (Fig. 33). Circumanal setae M, M' and N spine-like and smooth, seta sa normal; other setae follow pattern M N T H G Ao sa, Ao, A<sub>1</sub>,  
3 2 ± ± ± ± -

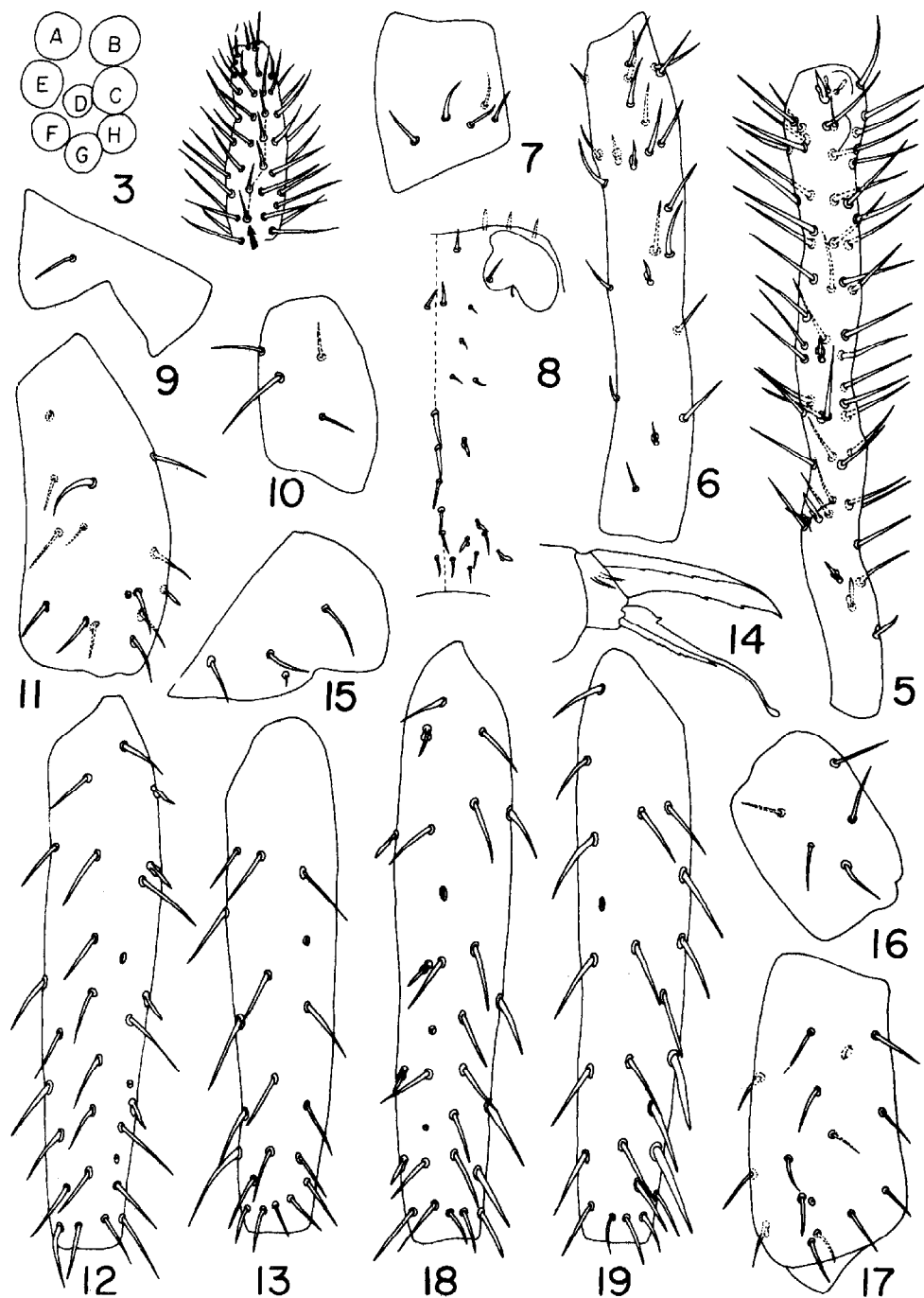


Fig. 3-19. *Dicyrtoma (Ptenothrix) castanea* n. sp. 3. Left eypatch; 4. ANT IV showing postero-ventral setulae; 5. ANT III; 6. ANT II; 7. ANT I; 8. Frons, showing posterior of unpaired facial setae; 9. Forecoxa; 10. Foretrochanter; 11. Forefemur; 12. Foretibia, anterior view; 13. Foretibia, posterior view; 14. Foreclaw; 15. Mesocoxa; 16. Mesotrochanter; 17. Mesofemur; 18. Mesotibia, anterior view; 19. Mesotibia, posterior view.

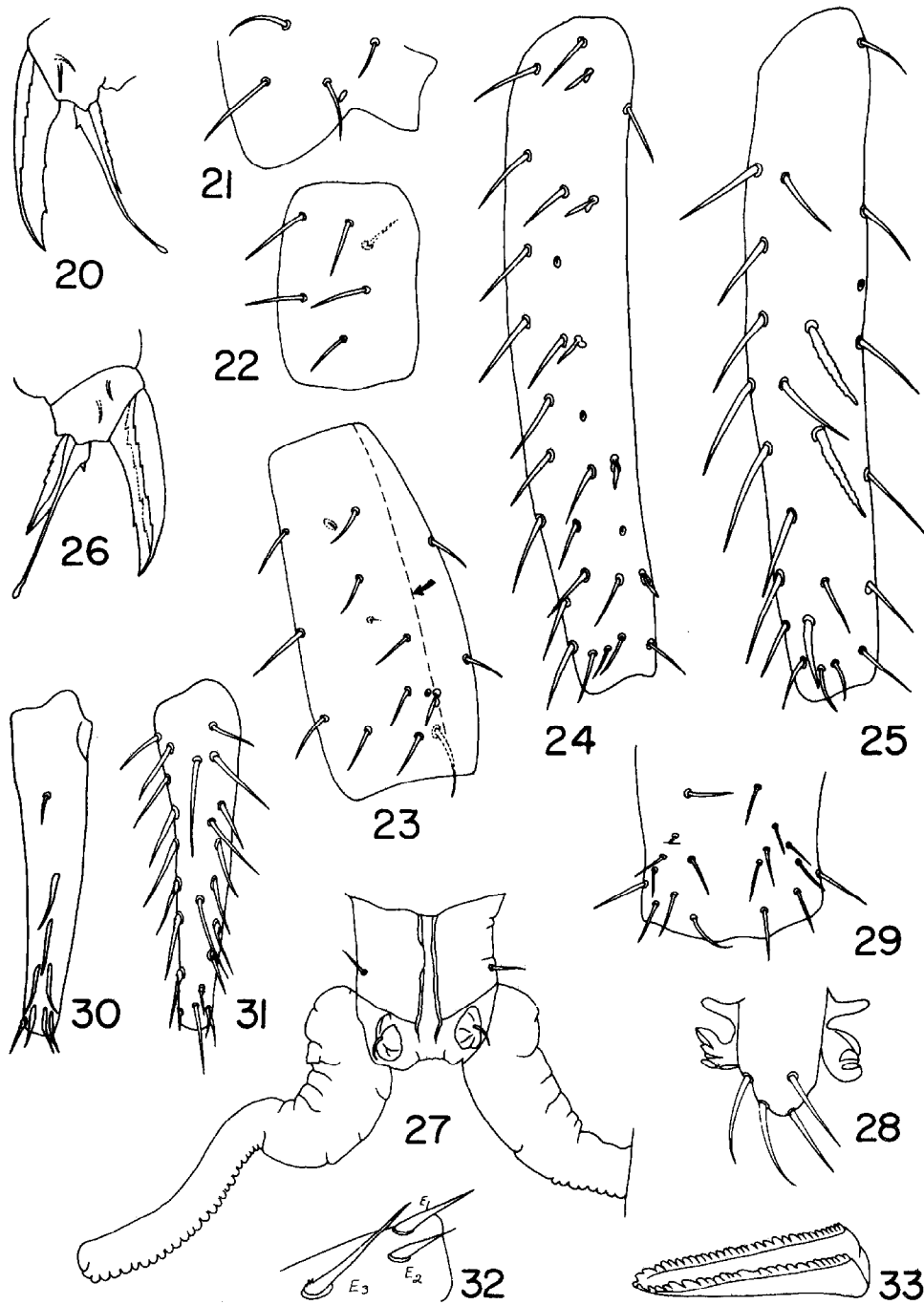


Fig. 20-33. 20. Mesoclaw; 21. Metacoxa; 22. Metatrochanter; 23. Metafemur (arrow and dotted line indicates anterior margin); 24. Metatibia, anterior view; 25. Metatibia, posterior view; 26. Metaclaw; 27. Colophore, anterior view; 28. Retinaculum; 29. Manubrial setae; 30. Dens, ventral surface; 31. Dens, dorsal surface; 32. Dental setae, E<sub>1</sub>-E<sub>3</sub>; 33. Mucro.

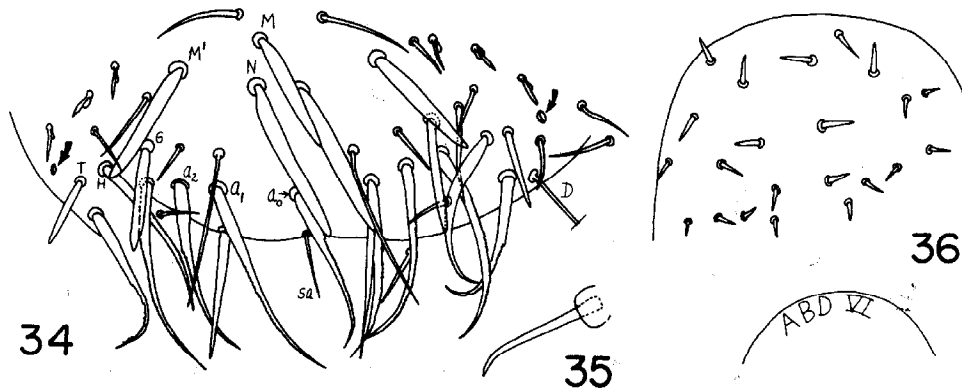


Fig. 34-36. 34. ABD VI of ♀ showing position of oval organs (arrows) and critical setae; 35. ♀ subanal appendage; 36. Posterior view of great abdomen.

$A_2$ ,  $A_3$  and H serrate (Fig. 34). Female subanal appendage long, acuminate and curved (Fig. 35). Body setae short, dagger-like (Fig. 36). Bothriothrix D present. Length up to 1 mm.

DIAGNOSIS: *Dicyrtoma (Ptenothrix) castanea* Snider keys out closest to *Dicyrtoma (Ptenothrix) vittata* (Folsom) in Christiansen and Bellinger (1981). This is the second species described from the Savannah River Plant that appears to be an exception to the subgenus with respect to facial setae. *Dicyrtoma (Ptenothrix) renatae* n. sp. (Snider, 1985) also exhibits more than 2 unpaired facial setae. *D. castanea* differs from *D. renatae* n. sp. and *D. vittata* by having clavate apical filaments on the unguiculi. Like *D. renatae*, *D. castanea* has circumanal seta G present. Color pattern alone will separate the species. However, *D. castanea* is close to *D. vittata* with respect to serrate circumanal setae, differentiated tibiotarsal setae, and antennal subsegmentation. Besides color pattern, *D. castanea* may be separated from *D. vittata* using the following morphological characteristics:

<i>D. castanea</i>	<i>D. vittata</i>
Circumanal seta G present	absent
Female subanal appendage smooth	ciliate
Unguis with 5-6 small lateral teeth	2 lateral teeth
$E_1/E_2 = 1.30$ , $E_3/E_2 = 2.07$	$E_1/E_2 = 1.00$ , $E_3/E_2 = 2.30$

TYPES: Holotype (♀) and 1 paratype mounted on slides in CMCP-9; 6 subadult paratypes in alcohol. Holotype and paratypes deposited in the Entomology Museum, Michigan State University. Collection data: South Carolina, Aiken County, near rail bridge on Road F, Savannah River Plant, litter in low, mixed hardwoods, "October 27, 1983," W. Hargrove, collector.

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A NEW SPECIES OF *PARATETRACNEMOIDEA*  
GIRAULT, 1915, FOUND IN NORTH AMERICA, WITH A  
DISCUSSION OF GENERIC PLACEMENT  
(HYMENOPTERA: ENCYRTIDAE)

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## ABSTRACT

*Paratetracnemoidea americana* NEW SPECIES (North America) is described and compared with *P. malenoti* (Mercet) (Europe) and *P. breviventris* Girault (Australia). The genus presently holds three described species, but undetermined specimens have been reported from South Africa and Australia. The taxonomic history of the genus and its better known junior synonym, *Rhinoencyrtus*, is reviewed and reasons for its placement in the Copidosomatini are given. Unusual morphological features including a peculiar protuberance on the head and rudimentary venation at the base of the forewing are illustrated and discussed.

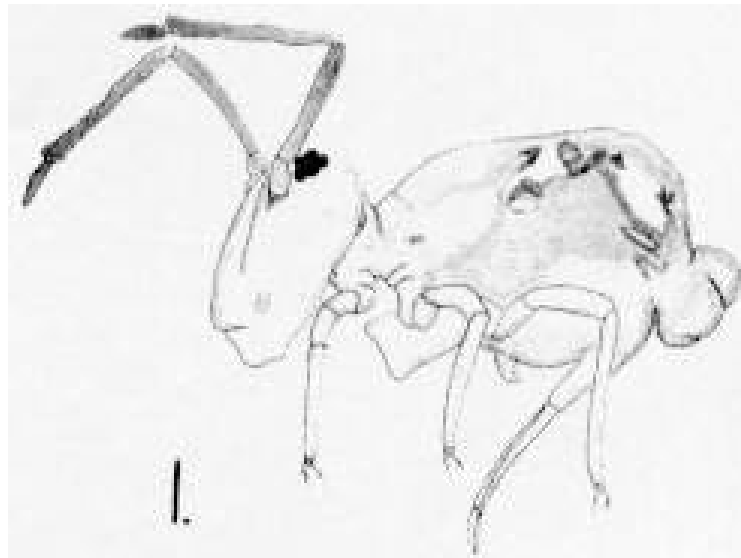
## RESUMEN

*Paratetracnemoidea americana*, una especie nueva en norteamérica, se describe y se compara con *P. breviventris* Girault (Australia) y *P. malenotti* (Mercet). El género tiene actualmente tres especies descritas, pero especímenes no-determinados se han reportado del África del Sur y Australia. La historia taxonómica del género y su mejor conocido sinónimo junior se discute y las razones por su colocación en el Copidosomatini se explican. Las características morfológicas diferentes, incluyendo una protuberancia peculiar en la cabeza y una nervadura rudimentaria en la base del ala anterior, se ilustran y se discuten.

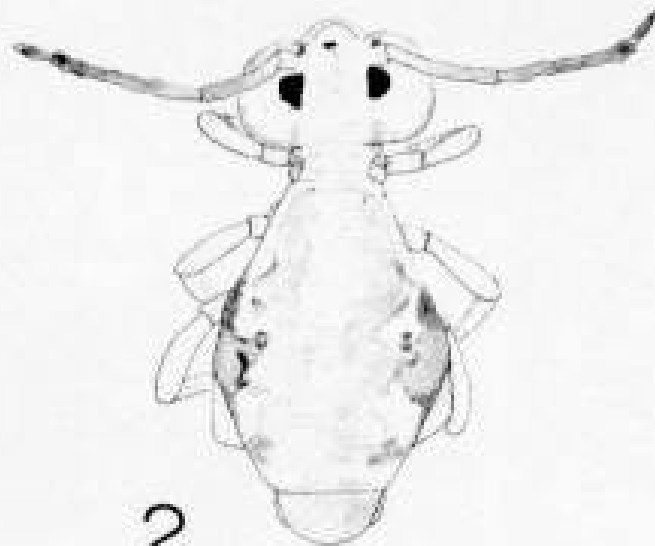
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INTRODUCTION

Material submitted for identification by Mr. T. D. Miller of Boise, Idaho is conspecific with other material of an undescribed species of *Paratetracnemoidea* taken from several localities in North America. Previously the genus was known under its junior synonym, *Rhinoencyrtus* Mercet, but no species name was available for North American material. This paper provides a name for Mr. Miller's work and considers the placement of *Paratetracnemoidea* among 500 genera of Encyrtidae currently recognized.



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