

Two New Species of *Lepidocyrtus* from Puerto Rico and Descriptive Notes for *L. ramosi* Mari Mutt (Collembola: Entomobryidae)

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ABSTRACT. – The new species *Lepidocyrtus paracaprilesi* from the Caribbean National Forest, and *L. fimicolus* from Vieques Island, are described. Brief descriptive notes and remarks on the variability of the labial chaetotaxy are given for *L. ramosi* Mari Mutt, 1986.

RESUMEN. – Se describen las nuevas especies *Lepidocyrtus paracaprilesi* y *L. fimicolus* en base a ejemplares colectados en el Bosque Nacional del Caribe y en la isla de Vieques, respectivamente. Se presentan breves notas descriptivas y comentarios sobre la variabilidad de la quetotaxia labial de *L. ramosi* Mari Mutt, 1986.

INTRODUCTION

Since the publication of my paper describing 12 species of Puerto Rican *Lepidocyrtus* (Mari Mutt, 1986), two new species of this genus have come to my attention. The first species was collected in the Caribbean National Forest, an area containing the last remnants of virgin forest in Puerto Rico. The second species was collected in Vieques Island, a municipality southeast of the mainland. The latter species, and specimens of *L. nigrosetosus* Folsom and *Seira brasiliana* Arlé collected with it, represent the first records of Collembola from Vieques.

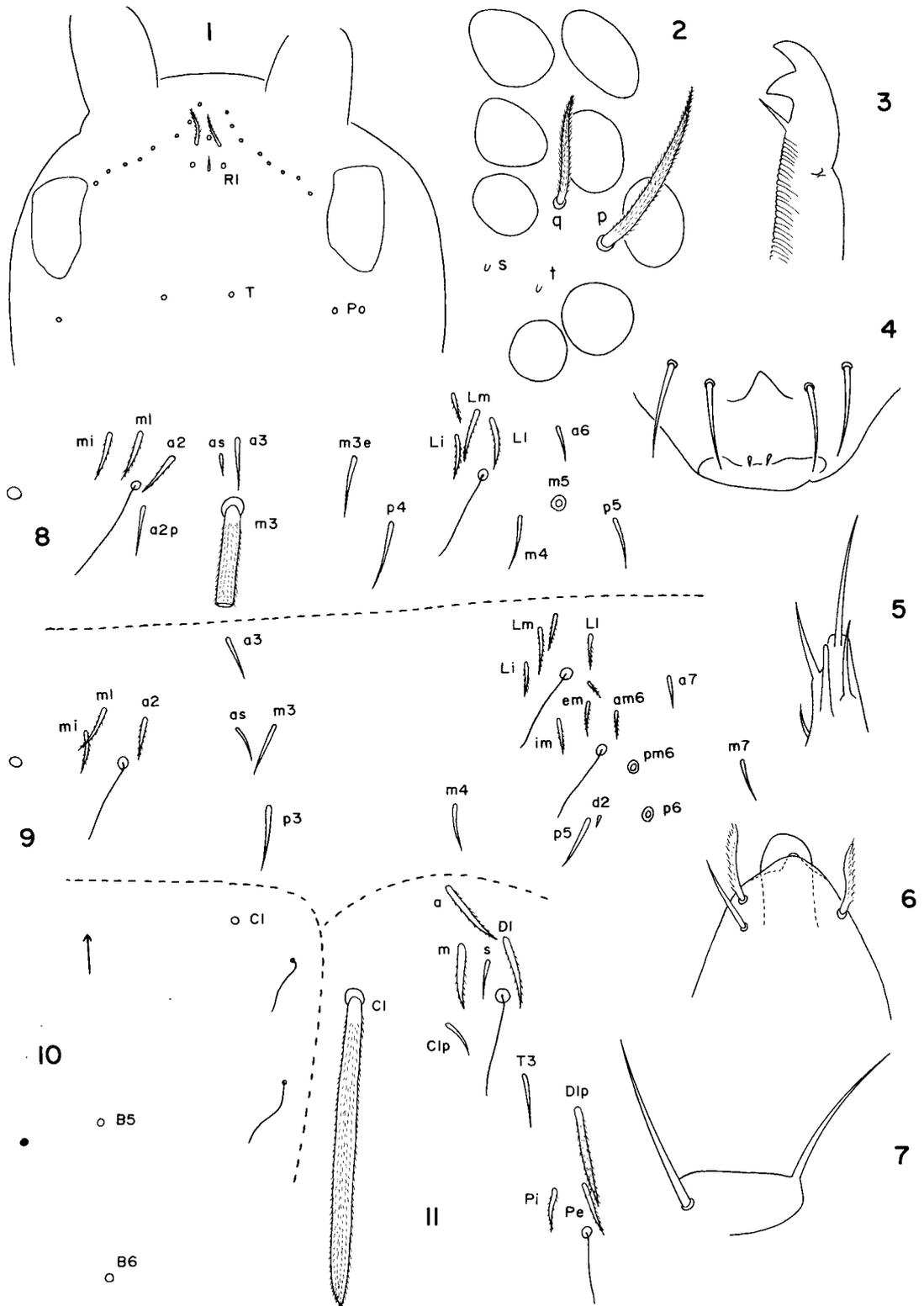
In 1980 I mailed to Dr. Peter F. Bellinger a culture of *Willowsia jacobsoni* that inadvertently contained several specimens of a *Lepidocyrtus*. Dr. Bellinger has continued culturing both species but it was not until recently that I received for identification a sample of the population of the *Lepidocyrtus*. These specimens belong to *L. ramosi* Mari Mutt, 1986, a species originally described from a handful of specimens. This opportunity to study additional material has allowed me to assess the variability of some characters.

All the specimens studied for this contribution remain in my collection. As with previous papers, abbreviations such as Ant. 2, Th. 2, Abd. 2, etc. stand for second antennal segment, second thoracic segment, etc.

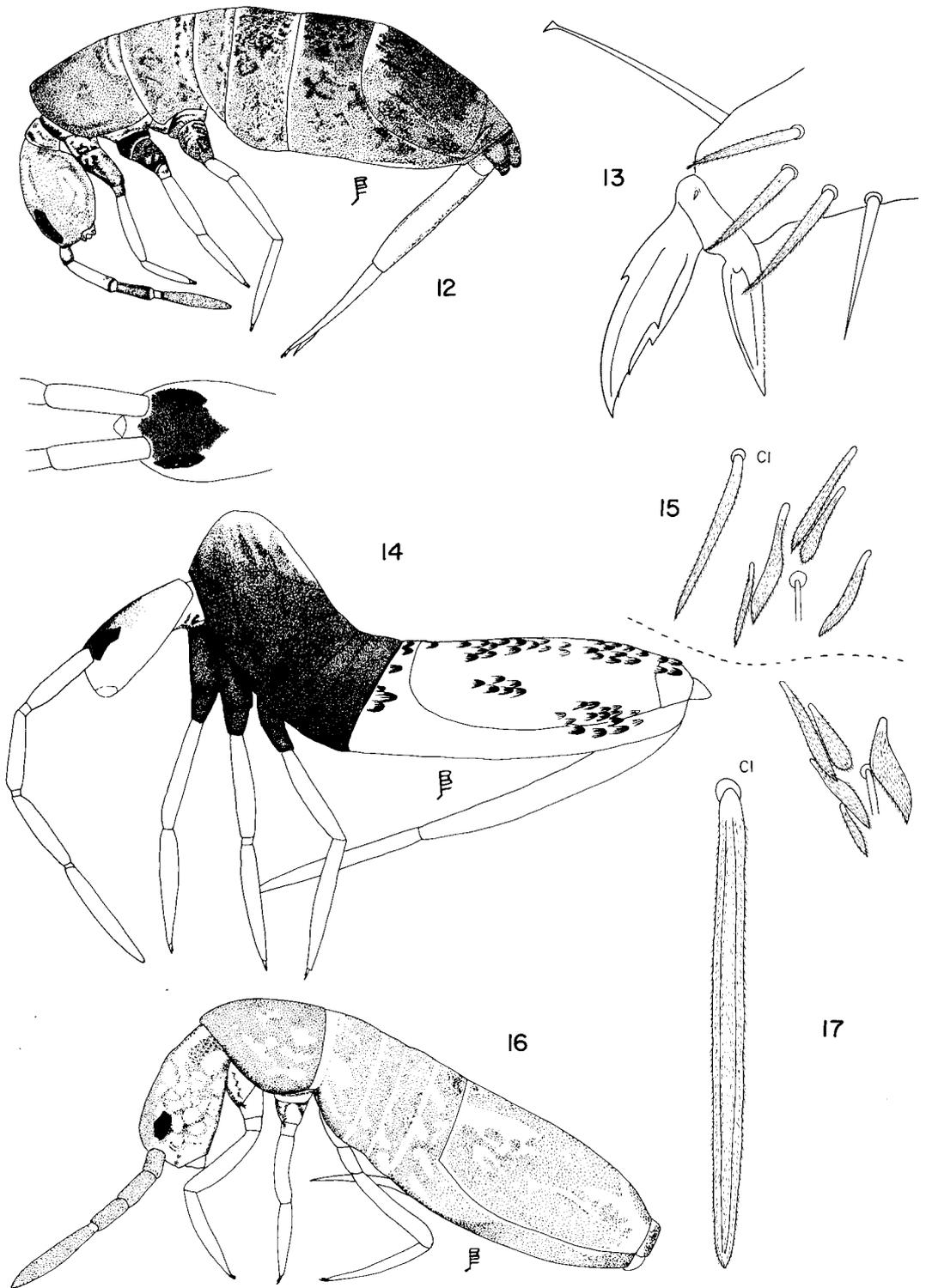
Lepidocyrtus paracaprilesi sp. nov.

This species is so similar to *L. caprilesi* Wray, 1953 that a complete description would read like a verbatim copy of my re-description published in 1986. Only two characters distinguish both forms: the beautiful striking coloration of *L. paracaprilesi* (Fig. 14, compare with Mari Mutt, 1986: Figs. 16, 17, 22) and its lack of Abd. 4 macrochaeta C1 (the "I" seta in Gisin's system). This macrochaeta is substituted by a ciliated seta not much longer than one of the modified setae associated with the adjacent bothriothrix (cf. Figs. 15, 17; compare also the diameters of the insertions of C1 and the bothriothrix). The difference in chaetotaxy is constant—I have verified this by reexamining all my specimens of *L. caprilesi* mounted on slides, including three that were collected sympatrically with *L. paracaprilesi* in May of 1987. The largest specimen of *L. paracaprilesi* measures 2.0 mm. The colophore is deep violet like the anterior part of the body.

Material Examined. —Caribbean National Forest (El Yunque), near the University of Puerto Rico house, on mosses growing on palms and other trees, 7.111.1987, F. N. Soto-Adames, holotype and 3 paratypes on slides plus 1 specimen in alcohol. As preceding, along the trail to Mt. Britton and at the peak of Mt. Britton, 27.V.1987, F. N. Soto-Adames and J. A. Mari Mutt, 3 on slides and 1 in alcohol.



Figs. 1-11. 1-5. *Lepidocyrtus fimicolus* sp. nov. 1. Head macrochaetotaxy. 2. Eyes and interocular chaetotaxy. 3. Mucro. 4. Apical row of labral setae and labral margin. 5. Outer labial papilla. 6. *L. ramosi* Mari Mutt, 1986, apex of Ant. 4. 7-10. *Lepidocyrtus fimicolus* sp. nov. 7. Maxillary palp. 8. Chaetotaxy of Abd. 2. 9. Chaetotaxy of Abd. 3. 10. Position of macrochaetae on right side of Abd. 4. 11. Setae associated with bothriotricha of Abd. 4.



FIGS. 12-17. 12, 13. *Lepidocyrtus fimicolus* sp. nov. 12. Habitus. 13. Metathoracic claws. 14, 15. *L. paracaprilesi* sp. nov. 14. Habitus and distribution of pigment on dorsum of head. 15. Seta CI and setae associated with anterior bothriotrichum of Abd. 4. 16. *L. ramosi* Mari Mutt, 1986, habitus. 17. *L. caprilesi* Wray, 1953, seta CI and setae associated with anterior bothriothrix of Abd. 4.

Lepidocyrtus fimicolus sp. nov.

Length to 1.2 mm. Mesonotum not projecting over head. Violet pigment uniformly distributed over head, body, colophore and legs until trochanter (Fig. 12). Intensity of pigment varies from light violet-gray to almost black. Antennae, legs, colophore and dorsum of furcula without scales. Ant. 4 without apical papilla. Head macrochaetae: R0, R1, T, Po; a pair of ciliated setae near R0 (Fig. 1) could be mistaken for the R1 setae but their length and the position of the median microchaeta indicate that the macrochaetae present are R1 and that setae R2 are absent. Eyes g and h not greatly reduced (Fig. 2). Interocular setae: pq; a pair of small scale insertions near eyes g and h correspond to setae s and t. Prelabral setae ciliated, labral setae smooth. Setae of third labral row similar in length and shape (Fig. 4). Labral intrusion V-shaped. Outer labral papillae absent, inner papillae represented by a pair of minute denticles. Labial chaetotaxy: al – a5, MIM2r(reduced)ELIL2. Setae of maxillary palp and differentiated seta of outer labial papilla as in Figs. 7, 5. 4+4 ciliated setae along cephalic groove. Body macrochaetae: 00/0221+2; positions of macrochaetae of Abd. 4 as in Fig. 10. Chaetotaxy of Abd. 2 as in Fig. 8; ml and a2p present, a3 inserted very close to as, m3 a long macrochaeta. Chaetotaxy of Abd. 3 and trichobothrial complex of Abd. 4 as in Figs. 9, 11. Trochanteral organ V-shaped and with 10-12 setae. Claws as in Fig. 13, unguiculus lanceolate and with one outer lamella lightly serrated. Smooth seta opposite tent hair of metathoracic legs subequal in length to unguiculus. Anterior face of colophore with 10-12 ciliated setae and no scales. Dental tubercle absent. Mucronal spine without denticles (Fig. 3).

Diagnosis. —*Lepidocyrtus fimicolus* can be readily distinguished from all other Puerto Rican species by its uniform dark coloration and rather plump body without a thoracic hood. Only three other local species possess head macrochaetae (see Table 1 in Mari Mutt, 1986) and none of them have the formula found in *L. fimicolus*. A character unique to the new species is the presence of Abd. 2 seta ml (Fig. 8).

Material Examined. —Vieques Island, Front Beach, Naval Base, under cow dung, 22.111.1986, F. N. Soto-Adames, holotype and 9 paratypes on slides plus 85 specimens in alcohol.

Lepidocyrtus ramosi Mari Mutt, 1986

In the original description of this species I stated that labial setae L1 and L2 are ciliated. In five specimens at hand these setae are ciliated on both sides of the head but in the other specimens they are smooth on both sides or ciliated in one side and smooth in the other. Such variability contrasts with the stability of the interocular chaetotaxy (pqst, with seta q missing in only one of the 20 eye patches examined) and the lack of Abd. 3 seta d2 in both sides of the body of the 10 specimens examined. This last character was used recently to separate *L. ramosi* from the closely related Colombian species *L. nilatus* Mari Mutt, 1987. The new specimens possess more pigment than the ones used to describe the species (Fig. 16, compare with Mari Mutt, 1986:Fig. 107) and the thoracic hood is better developed but it still does not project over the head. Behind the huge papilla on the apex of Ant. 4 there is a small cuticular protuberance (Fig. 6) not noted before but which I have now found in the type specimens.

Material Examined. —The ten specimens mounted on slides and the 66 kept in alcohol were taken from a culture maintained in the laboratory of Dr. Peter F. Bellinger, California State University, Northridge, California. This culture derives from specimens found by me in 1980 under the leaf axils of dead banana leaves in Mayagüez.

Acknowledgments. —I wish to thank Mr. Felipe N. Soto-Adames for collecting the two new species described in this paper. Mr. Raymundo Padilla Torres kindly prepared the habitus drawings.

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Accepted: 10 September 1988.