

NEW SPECIES AND NEW RECORDS OF THE LIGNYODINE
WEEVIL GENUS *PLOCETES* LECONTE (COLEOPTERA:
CURCULIONIDAE) FROM CHIAPAS, MEXICO

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Abstract.—Four new species of *Plocetes* LeConte from the state of Chiapas, Mexico, *P. ancylus*, *P. hebetatus*, *P. incilatus*, and *P. velatus*, are described and illustrated. *Plocetes bahamensis* (Casey), *P. obscurus* (Champion), *P. ornatus* (Champion), and *P. cerberus* Clark are reported for the first time from Chiapas. These Mexican *Plocetes* were collected on plants in the genera *Chiococca*, *Deppea*, and *Rondeletia* (Rubiaceae).

The lignyodine genus *Plocetes*, as revised by Clark (1982), contained 65 New World species. Only two of these, *P. pilatus* Clark and *P. zonatus* (Champion), were reported to occur in Chiapas. The purpose of this paper is to record the occurrence and host-plant relationships of eight additional species of *Plocetes*, four of them new, collected in Chiapas after the revision was completed. Host plants of the weevils were identified by Robert Kral of Vanderbilt University. The holotype and allotype of each of the new species are deposited in the National Museum of Natural History, Washington, D.C. (USNM). Paratypes and other specimens referred to are in the collections of the Auburn University Entomological Museum, Auburn, Alabama, Texas A&M University, College Station, Texas, and the Instituto de Ecologia, A.C., Mexico, D.F.

Plocetes ancylus Clark, NEW SPECIES

Figs. 1, 9, 14

Holotype.—♂, MEXICO, labelled "Mexico: Chiapas/30 km NW La Angostura/14 Sep 1981/Clark & Coe" (USNM type no. 100725).

Allotype.—♀, with same label data as holotype.

Paratypes.—8 ♂, 9 ♀, with same label data as holotype.

Diagnosis.—Integument rufopiceous, legs testaceous; rostrum of male moderately stout, most strongly curved in distal ½, that of female longer, more slender, evenly curved; pronotum and elytra (Fig. 1) with pallid fulvoaeneous scales and with dark ferruginous to fuscous scales, the latter forming diffuse lateromedian maculae on pronotum and variously incomplete subbasal, median, and subapical, zigzag-shaped, transverse bands; median band widest at middle, separated from subapical band by sutural patch of whitish scales; metatibial uncus of male with dorsal prominence; median lobe (Fig. 9) abruptly bent apically, flagellum hook-shaped.

Male holotype.—*Length*: 1.95 mm. *Width*: 1.02 mm. *Eyes*: separated by distance $0.34\times$ eye length; eye height $1.3\times$ length. *Rostrum*: length $0.95\times$ pronotal length; in dorsal view, sides subparallel from base to apex; proximal portion 72% of total rostral length; lateral and dorsolateral sulci deep, bearing slender whitish scales. *Prothorax*: dorsum with intermixed slender, attenuate scales, and broader, longer, less finely attenuate fulvoaeneous scales, these replaced laterally and in posteromedian patch by broader, whitish scales similar to those on pleuron. *Elytra*: each interspace with narrow, slightly attenuate, recumbent scales and with a median row of larger, suberect, attenuate evenly distributed scales; sutural interspaces with a subapical patch of fuscous scales behind a patch of whitish scales. *Abdomen*: sterna 4 and 5 fused, suture between segments evident on extreme sides only; posteromedian portion of fused sterna 4 and 5 broadly concave, clothed with fine, recumbent, seta-like scales; sides of sterna with broader scales.

Female allotype.—*Length*: 2.03 mm. *Width*: 1.07 mm. *Rostrum*: slender, length $1.27\times$ pronotal length; in profile, dorsal margin strongly, evenly curved from base to apex; proximal portion 63% of total rostral length; lateral sulcus deep, dorsolateral sulcus narrower, shallow. *Spermatheca*: (Fig. 14).

Discussion.—*Plocetes ancylus* is known only from specimens collected on small trees (identified only as Rubiaceae) along the highway between Las Limas and La Angostura, southeast of Tuxtla Gutierrez. These trace to *P. hamifer* Clark in the key to species of *Plocetes* (Clark, 1982) if the eyes are regarded as “prominent.” The eyes are, in fact, considerably less prominent in *P. ancylus* than in *P. hamifer*. These two species are also distinguished by the darker integument and much more distinct elytral maculation in *P. ancylus*. They are similar in the structure of the median lobe of the male genitalia and hook-shaped endophallic transfer apparatus (cf. Fig. 9, and Clark, 1982: Fig. 195). In *P. hamifer* the “hook” appears to consist of a short tube from which extend a pair of “hooks” (see Clark 1982: Fig. 166). In *P. ancylus* the entire “hook” has a tubular structure, the extreme posterior portion only being divided.

The name *ancylus*, from the Greek “ankylos” (bent, crooked, or hooked), refers to the hook-shaped endophallic flagellum of this species.

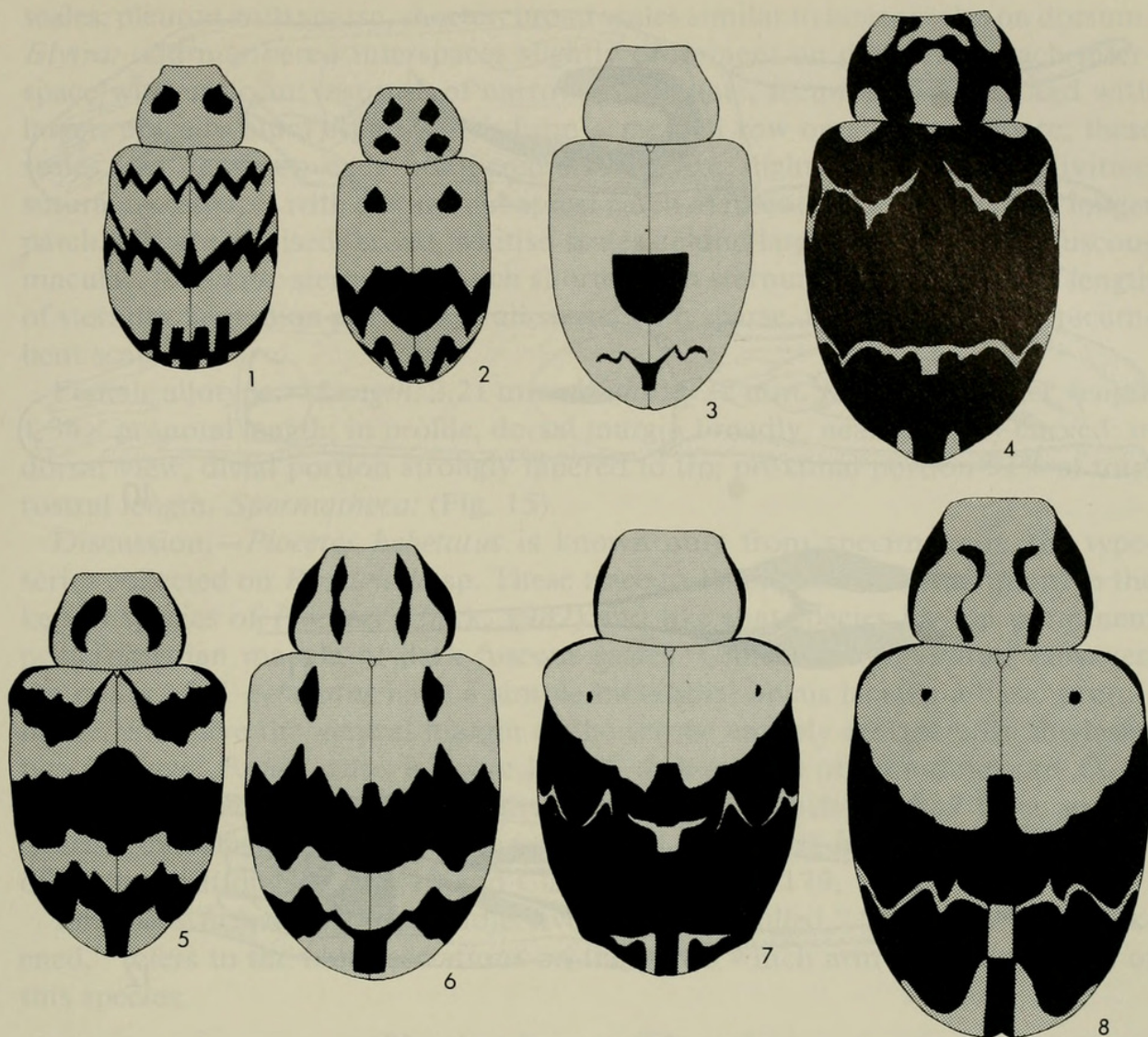
Plocetes bahamensis (Casey)

Fig. 2

Hamaba bahamensis Casey 1910: 131.

Plocetes bahamensis (Casey): Clark 1981; 1982: 53.

Two specimens, a male and a female, were collected at Ocozocoautla, Chiapas, on *Chiococca phaenostemon* Schlecht. This is somewhat surprising since *P. bahamensis* was previously known only from the Caribbean region (southern Florida, the Bahamas, and the island of Cozumel, Mexico; see Clark, 1981, 1982). The species is easily distinguished from the other known Chiapan *Plocetes* by its small size and possession of 5 rather than 6 antennal funicular articles. The Chiapas specimens (Fig. 2) are slightly larger and darker than the Cozumel specimen which in turn is slightly larger and darker than the Bahamas and Florida specimens.



Figs. 1–8. Dorsal views of pronotum and elytra. 1, *Plocetes ancylus*. 2, *P. bahamensis*. 3, *P. hebetatus*. 4, *P. obscurus*. 5, *P. incilatus*. 6, *P. velatus*. 7, *P. ornatus*. 8, *P. cerberus*.

***Plocetes hebetatus* Clark, NEW SPECIES**

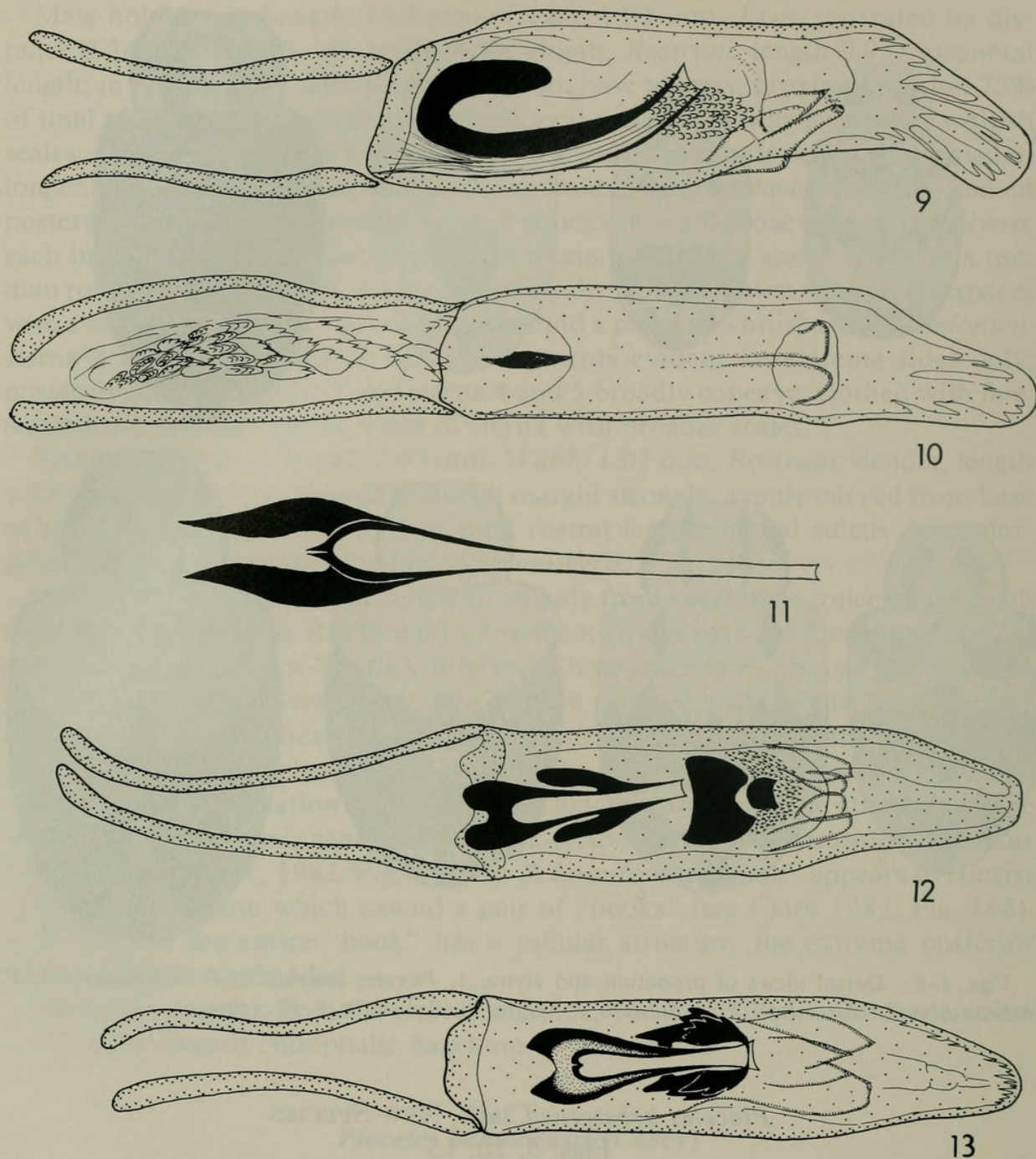
Figs. 3, 10, 15

Holotype.—♂, MEXICO, labelled “Mexico: Chiapas/6.9 km N Jitotol/11 Sep 1981/Clark & Coe” (USNM type no. 100724).

Allotype.—♀, with same label data as holotype.

Paratypes.—4 ♂, 4 ♀, with same label data as holotype; 1 ♀, with same label data, except “10 Sep 1981.”

Diagnosis.—Moderate sized, elongate, slender *Plocetes*; eyes relatively large, strongly convex, not prominent; rostrum of male and of female slender, distal portion distinctly tapered to narrow apex; pronotum and elytra (Fig. 3) with lustrous fulvoaeneus scales and dark, fuscous scales, the latter forming small lateromedian patches on pronotum and subbasal patches on elytral interspaces 4–5, a large posteromedian elytral macula extending across interspaces 1–3, and a narrow zigzag-shaped, transverse, subapical elytral band; femora unarmed;



Figs. 9–13. Dorsal views of male external genitalia. 9, *Plocetes ancylus*. 10, *P. hebetatus*. 11, *P. obscurus* (flagellum only). 12, *P. incilatus*. 13, *P. velatus*.

metatibial uncus without dorsal prominence; median lobe of male genitalia (Fig. 10) assymetrical, internal sac with distal profusion of large, bluntly serrate plates.

Male holotype.—*Length*: 2.18 mm. *Width*: 1.13 mm. *Eyes*: separated by distance $0.15 \times$ eye length; eye height $1.4 \times$ length. *Rostrum*: moderately long, slender, length $1.16 \times$ pronotal length; in dorsal view, sides of proximal portion subparallel, distal portion tapered to tip; in profile, dorsal margin most strongly curved over antennal insertions; proximal portion 67% of total rostral length; lateral sulcus deep, dorsolateral sulcus shallower. *Prothorax*: dorsum with admixture of narrow, acuminate fulvoaeneus scales, and longer broader, more pallid, apically rounded

scales; pleuron with sparse, shorter, broad scales similar to larger scales on dorsum. *Elytra*: odd-numbered interspaces slightly prominent on declivities; each interspace with uniform vestiture of narrow, acuminate, recumbent scales, and with larger, apically blunt scales which form a median row on each interspace; these scales less dense on even-numbered interspaces, slightly raised on declivities; sutural interspaces with distinct subapical patch of fuscous scales and with a longer patch of slightly raised, broad, whitish scales behind large posteromedian fuscous macula. *Abdomen*: sternum 4 much shorter than sternum 5, length 22% of length of sternum 5; median portions of all sterna with sparse, narrow, seta-like, recumbent scales.

Female allotype. — *Length*: 2.21 mm. *Width*: 1.22 mm. *Rostrum*: slender, length $1.34\times$ pronotal length; in profile, dorsal margin broadly, nearly evenly curved; in dorsal view, distal portion strongly tapered to tip; proximal portion 52% of total rostral length. *Spermatheca*: (Fig. 15).

Discussion. — *Plocetes hebetatus* is known only from specimens in the type-series collected on *Rondeletia* sp. These trace to *P. uniguttatus* (Champion) in the key to species of *Plocetes* (Clark, 1982) and like that species have a prominent posteromedian macula of dark fuscous scales. Unlike *P. uniguttatus*, however, the males of *P. hebetatus* have a simple metatibial uncus lacking a basal prominence, and have the ventral margin of the scrobe entirely ecarinate. In the latter two features, *P. hebetatus* is more like *P. denticulatus* of Honduras and Costa Rica. The armature of the internal sac of the male genitalia of all three species consists of a cluster of relatively large plates (largest in *P. hebetatus*) with a series of blunt serrations (cf. Fig. 10 and Clark, 1982: Figs. 179, 180).

The name *hebetatus*, a Latin adjective meaning “dulled,” “blunted,” or “weakened,” refers to the blunt serrations on the plates which arm the endophallus of this species.

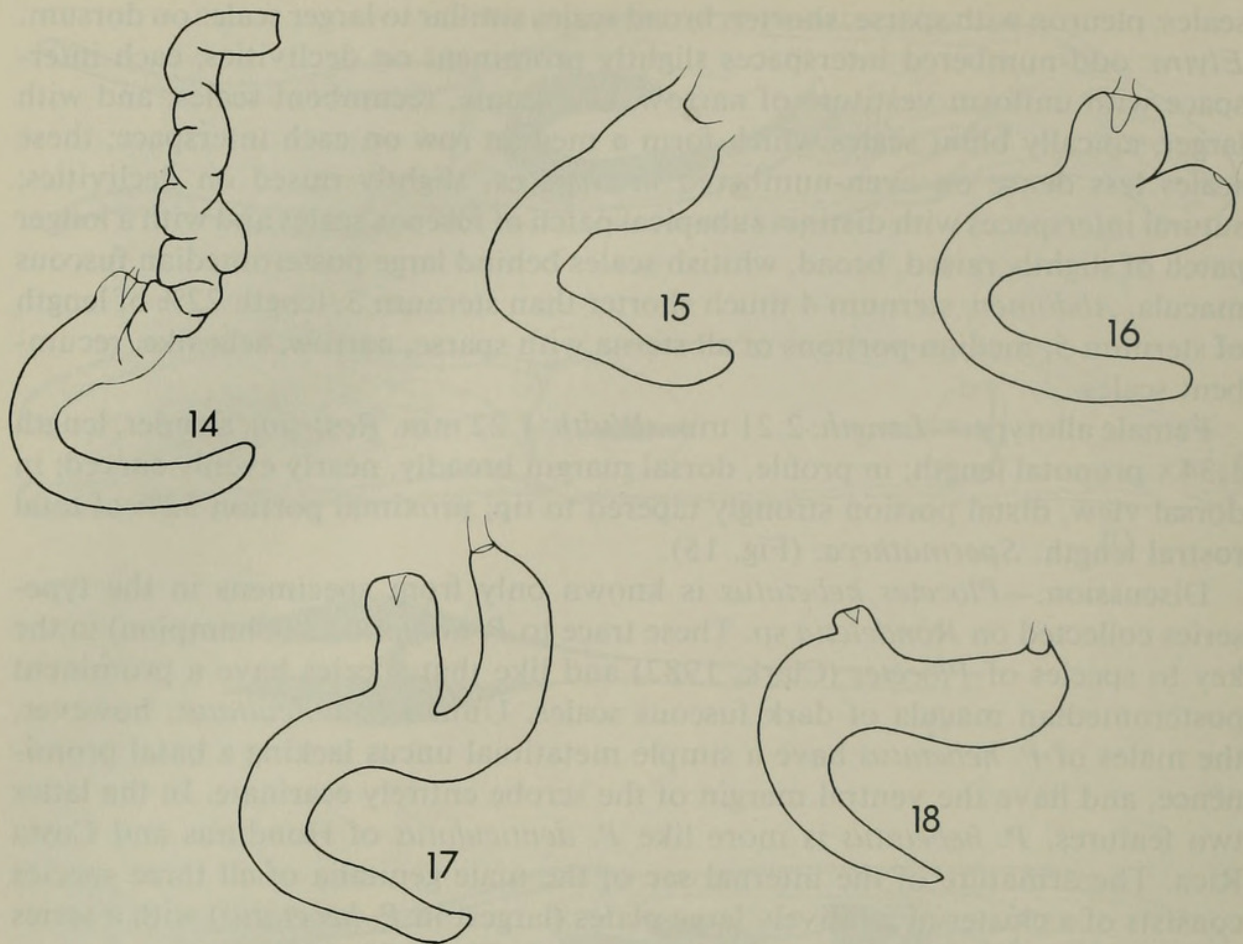
***Plocetes obscurus* (Champion)**

Figs. 4, 11

Thysanocnemis obscurus Champion 1903: 204.

Plocetes obscurus (Champion): Clark 1982: 104.

Among the Chiapas specimens collected in 1981 are 1 male labelled “Mexico: Chiapas/Ocozocoautla/7 Sep 1981/Clark and Coe,” and 13 males and 9 females labelled “Mexico: Chiapas/Ocozocoautla/23 Sep 1981/Clark and Coe.” The specimens were taken beating *Chiococca phaenostemon* Schlecht. The males key to *P. obscurus* in Clark (1982) (females cannot be keyed in that source). The flagellum of the male genitalia (Fig. 11) is very similar to that of a specimen identified as *P. obscurus* from Monterrey, Mexico (illustrated by Clark 1982: Fig. 199). That specimen differs from the Chiapas specimens in the genitalic characters, as noted, and also has fewer white suberect scales on the elytra and narrower antero- and posteromedian transverse bands of pallid elytral scales. It also differs from the specimens from the lectotype locality, Calderas, Guatemala, and from a paralectotype from Senahu, Guatemala, in the structure of the flagellum of the male genitalia (cf. Clark 1982, Figs. 197–199). A specimen from Mexico without specific locality data cited by Clark (1982) has a flagellum identical in structure to that of the Chiapas specimens.



Figs. 14–18. Spermathecae. 14, *Plocetes ancylus*. 15, *P. hebetatus*. 16, *P. incilatus*. 17, *P. velatus*. 18, *P. cerberus*.

***Plocetes incilatus* Clark, NEW SPECIES**

Figs. 5, 12, 16

Holotype.—♂, MEXICO, labelled “Mexico: Chiapas/10.2 km E Rayon/12 Sep 1981/Clark & Coe” (USNM type no. 100723).

Allotype.—♀, with same label data as holotype (USNM).

Paratypes.—2 ♂, 4 ♀, with same label data as holotype; 7 ♂, 8 ♀, with same label data, except “11 Sep 1981”; 8 ♂, 2 ♀, labelled “Mexico: Chiapas/8.6 km E Rayon/12 Sep 1981/Clark & Coe”; 3 ♂, 2 ♀, labelled “Mexico: Chiapas/3.7 km S Jitotol/9 Sep 1981/Clark & Coe.”

Diagnosis.—Rostrum of male moderately stout, strongly curved distally, straight proximally, that of female distinctly more slender, evenly curved; pronotum and elytra (Fig. 5) with pallid fulvoferruginous scales and with darker fuscous scales which form large lateromedian maculae on pronotum, an incomplete, zigzag-shaped, transverse, anteromedian band on elytra which does not extend across interspaces 1 and 2, and with broader, complete, median and subapical bands, the latter extending to apices on sutural interspaces; elytra also with large, scattered white scales; flagellum (Fig. 12) elongate, stout, enlarged distally with short distal extensions, also with a pair of lateromedian armlike extensions, with a large, deeply emarginate accessory plate and a small proximal plate.

Male holotype.—*Length*: 2.14 mm. *Width*: 1.13 mm. *Eyes*: separated by dis-

tance $0.21 \times$ eye length; eye height $1.5 \times$ length. *Rostrum*: length $0.89 \times$ pronotal length; in profile, dorsal margin straight in proximal $\frac{1}{3}$, strongly curved distally; in dorsal view, sides subparallel, distal portion abruptly wider; proximal portion 67% of total rostral length; sulci obsolete, represented by rows of shallow punctures. *Prothorax*: dorsum with long, narrow, finely acuminate, recumbent scales, and sparsely admixed, longer, wider, slightly raised scales; pleuron with sparse, fine, aeneus setae below, denser seta-like scales above. *Elytra*: each interspace with uniform vestiture of recumbent, acuminate scales, and with large fuscous and white scales in median rows which are absent from extensive portions, especially on disc. *Abdomen*: sterna uniformly clothed with sparse, aeneus, seta-like recumbent scales which are slightly wider on sides. *Legs*: femora with sparse, long, aeneus setae.

Female allotype.—*Length*: 2.20 mm. *Width*: 1.15 mm. *Rostrum*: length, $1.27 \times$ pronotal length, proximal portion 67% of total rostral length, shallowly punctate, not sulcate. *Spermatheca*: (Fig. 16).

Discussion.—*Plocetes incilatus* is known from specimens from the cloud forest habitat along Highway 195 between the communities of Bochil and Rayon, Chiapas. They were taken on *Deppea* sp. at 10.2 km E Rayon and 3.7 km S Jitotol, and on *Deppea excelsa* (HBK) Standley at 8.6 km E Rayon. These trace to *P. obscurus* in the key to species of *Plocetes* (Clark, 1982). The overall general appearance and the structure of the male genitalia (Fig. 12) suggest that *P. incilatus* belongs with *P. obscurus* in the *bicinctus* group. General structure of the median lobe and flagellum is similar in the species in this group (cf. Fig. 11–13 herein and Clark, 1982: Figs. 195–199). *Plocetes incilatus* has greater component similarity with *P. bicinctus* and *P. apparitio*. This is manifest in the possession in all three species of lateromedian extensions on the flagellum itself, as well as a similar complement of accessory armature (cf. Fig. 12 and Clark, 1982: Figs. 195, 196).

Plocetes incilatus is easily distinguished from the Panamanian *P. bicinctus* by the male genitalic characters discussed above and by its smaller size, the prominent, incomplete subbasal transverse band of dark scales on the elytra, the more widely distributed fulvoferruginous scales on the pronotum and the elytra, and the presence of numerous large, scattered white scales on the elytra.

The name *incilatus*, a Latin adjective meaning “to scold,” refers to the structure of the flagellum which looks like a woman with hands on hips correcting an errant child.

Plocetes velatus Clark, NEW SPECIES

Figs. 6, 13, 17

Holotype.—♂, MEXICO, labelled “Mexico: Chiapas/4.8 km SE Trinitaria/21 Sep 1981/Clark & Coe” (USNM type no. 100722).

Allotype.—♀, labelled “Mexico: Chiapas/Ocozocoautla/23 Sep 1981/Clark & Coe” (USNM).

Paratypes.—2 ♂, with same label data as holotype; 1 ♀, with same label data as allotype.

Diagnosis.—Integument rufopiceous, legs, rostrum, and antenna lighter; rostrum of male moderately stout, evenly curved, that of female slender; pronotum and elytra (Fig. 6) with intermixed white and pale aeneus scales and with a broad median elytral band of darker fuscous scales and a narrower posteromedian band

of such scales which is broad laterally, becomes very narrow on interspaces 2 and 3, and crosses suture as a posteriorly displaced elongate patch of dark scales; elytra with narrow, acuminate, recumbent scales and with a median row of larger, suberect, white and fuscous scales, the former largest and appearing scattered; flagellum (Fig. 13) elongate, surrounded distally by a flared cowl, surrounded proximally by a series of overlapping multidentate plates which are connected above and below flagellum by narrow bridges.

Male holotype.—*Length*: 2.70 mm. *Width*: 1.43 mm. *Eyes*: separated by distance $0.27\times$ eye length; eye height $1.4\times$ length. *Rostrum*: length, $1.05\times$ pronotal length; in profile, dorsal margin broadly, evenly arcuate; in dorsal view, sides subparallel, distal portion slightly wider; proximal portion 67% of total rostral length; lateral sulci deep, dorsolateral sulci shallower, with large punctures. *Prothorax*: dorsum with long, narrow, finely acuminate, recumbent scales, and admixed, slightly longer, wider, slightly raised scales; pleuron with sparse, short, seta-like scales below, wider, recumbent scales above. *Elytra*: each interspace with uniform vestiture of recumbent, acuminate, seta-like scales, and with a median row of broader, longer, suberect scales. *Abdomen*: sterna with sparse, aeneus, seta-like scales medially, with broader, white scales on sides. *Legs*: femora minutely toothed, with long, sparse, whitish setae.

Female allotype.—*Length*: 2.48 mm. *Width*: 1.37 mm. *Rostrum*: length, $1.1\times$ pronotal length, proximal portion 58% of total rostral length; dorsolateral sulci represented by row of shallow punctures. *Spermatheca*: (Fig. 17).

Discussion.—*Plocetes velatus* is known from specimens from two widely separated localities in Chiapas. Two female specimens from Ocozocoautla were among numerous specimens of *Plocetes obscurus*. The specimens from Trinitaria, all males, were with a larger series of *P. cerberus*. Confirmation of the host of *P. velatus* will require further field work.

The specimens of *P. velatus* trace to *P. bicinctus* (Champion) in the key to species of *Plocetes* (Clark, 1982). Genitalic characters and general overall resemblance suggest that the species belongs with that Panamanian species in the *bicinctus* group. The shape of the median lobe is similar in *P. velatus* and in the *bicinctus* group members (cf. Figs. 13 and Clark, 1982: Figs 195–199). The structure of the flagellum in *P. velatus* is also similar to that in these species, being somewhat closer to *P. bicinctus* and *P. apparitio* than to *P. obscurus*. None of these other species has a flared cowl surrounding the distal portion of the flagellum as does *P. velatus* (Fig. 13). It seems likely, however, that this structure is homologous to the long posterolateral extensions present in *P. bicinctus* and *P. apparitio* (cf. Figs. 195, 196); or, perhaps to the various distal extensions seen in the various forms of *P. obscurus* (cf. Fig. 11 herein and Clark, 1982: Figs. 197–199). Likewise, the armature accessory to the flagellum is more similar in *P. velatus*, *P. bicinctus*, and *P. apparitio*. *Plocetes velatus* is easily distinguished from *P. bicinctus* by the more extensive elytral vestiture of pallid elytral scales which consists of white and pallid aeneus scales rather than fulvoferruginous scales. *Plocetes velatus* also has a narrower pronotum which lacks the distinct latero-median c-shaped maculae characteristic of *P. bicinctus*. The absence of dark scales on the basal portion of the elytra, along with the distinctive features of the male genitalia, serve to distinguish *P. velatus* from *P. obscurus* with which it was taken

in sympatry at Ocozocoautla (cf. Figs. 11, 13 herein and Clark, 1982: Figs. 197–199).

The name *velatus*, a Latin adjective meaning “to cover” or “to conceal,” refers to the flared cowl which covers the distal portion of the flagellum of this species.

***Plocetes ornatus* (Champion)**

Fig. 7

Thysanocnemis ornatus Champion 1903: 205; Clark 1982: 105.

Previously known only from the male lectotype and female paralectotype from Guatemala (see Clark, 1982), this distinctive species (Fig. 7) is represented in the Chiapan collections by 57 specimens, collected 11 and 12 Sep 1981 at 10.2 km E Rayon, on *Rondeletia suffrutescens* T. S. Brandeg., by 1 specimen, collected 9 Sep 1981 at 3.7 km S Jitotol, and by 12 specimens, collected 10–11 Sep 1981, at 6.9 km N Jitotol on *Deppea* sp.

***Plocetes cerberus* Clark**

Figs. 8, 18

Plocetes cerberus Clark 1982: 106.

This species, known previously from the male holotype from the state of Puebla, Mexico, and from 2 male paratypes from Tampico, Mexico, is represented among the Chiapan material by 1 male and 1 female collected 15 Sep 1981 at 11.2 km S Sumidero on *Chiococca alba* (L.) Hitchc., and by 4 males and 2 females collected 21 Sep 1981 at 4.8 km SE Trinitaria on an unidentified Rubiaceae. The female, previously unknown, has only a slightly longer, more slender rostrum than does the male. The spermatheca of the species is illustrated in Fig. 18.

LITERATURE CITED

- Casey, T. L. 1910. On some new species of Balanini, Tychiini and related tribes. *Can. Entomol.* 42: 114–144.
- Champion, G. C. 1903. Curculionidae: Curculioninae, vol. 4, pt. 4, pp. 145–312. In Godman, F. D. and O. Salvin, eds., *Biologia Centrali-Americana, Insecta, Coleoptera, 1879–1911*, 7 vols. in 17 pts. Dulau and Company, London.
- Clark, W. E. 1981. The weevil genus *Hamaba* Casey (Coleoptera: Curculionidae). *Fla. Entomol.* 64: 217–222.
- . 1982. Classification of the weevil tribe Lignyodini (Coleoptera, Curculionidae, Tychiinae), with revision of the genus *Plocetes*. *Trans. Am. Entomol. Soc.* 108: 11–151.



Clark, Wayne E. 1983. "New species and new records of the lignyodine weevil genus *Plocetes* LeConte (Coleoptera: Curculionidae) from Chiapas, Mexico." *Proceedings of the Entomological Society of Washington* 85, 797–805.

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