A NEW SPECIES OF *LASCONOTUS* (COLEOPTERA: COLYDIIDAE) FROM ARIZONA AND SOUTH DAKOTA, U.S.A.[1]

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ABSTRACT: *Lasconotus fitzgibbonae,* a new species in the Colydiidae, is described. It is compared with *Lasconotus coronatus* (Hinton) from Mexico, originally described in the genus *Chrysopogonius* Hinton, now a synonym of *Lasconotus* Erichson. The South Dakota specimens were found under the root bark of *Pinus edulis* Engelm.

KEY WORDS: *Lasconotus,* Colydiidae, Coleoptera, *Pinus*, bark beetles, trapping, Arizona, South Dakota, U.S.A.

In 1984, two specimens of a beetle collected in South Dakota were submitted to the Systematic Entomology Laboratory in Washington, DC, by the USDA Forest Service Laboratory in Lakewood, Colorado. They had been collected under root bark of *Pinus edulis* Engelman.

They were compared by Kingsolver and Stephan with a paratype specimen of *Chrysopogonius coronatus* Hinton (1935) from Mexico in the collection of the National Museum of Natural History in Washington.We concluded that it represented a new species near *C. coronatus. Chrysopogonius* Hinton was recently synonymized with *Lasconotus* Erichson by Ivie and Slipinski (1990). We agree with this synonymy although we think that certain morphological characteristics differentiate the two species from other species of *Lasconotus,* and that the two species form a distinct group within *Lasconotus.* In Stephan (1989, p. 51) reference was made to the new species herein described.

Distinguishing characters for the group are: (1) A shaggy double tuft of golden setae on the anterior pronotal margin (figs. 1 and 4); (2) procoxal cavities narrowly open, not closed as in other *Lasconotus*; (3) third antennal segment longer than either the second or fourth; (4) the dorsal pubescence consisting of sparse, long, erect recurved setae, whereas in other *Lasconotus*, it is dense, short and recumbent.

Additional specimens of the new species were captured in trapping surveys for bark beetles in Arizona conducted by Moser's research group in 2001-2002 (Moser et al., 2005). These surveys were made to detect the extent of infestation of the southern pine beetle, *Dendroctonus frontalis* Zimmermann (SPB), and its sibling species, the Mexican pine beetle, *Dendroctonus mexicanus* Hopkins (XPB), both infesting *Pinus chihuahuana* Englemann and other pine species in

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the Coronado National Forest in the Chiricahua Mountains where the Mexican pine beetle was detected for the first time in the United States.

Some of the Lindgren funnel traps were baited with a southern pine beetle lure containing frontalin and a synergistic bait containing turpentine. Others were baited with component lures of frontalin, exo-brevocomin and myrcene to attract western pine beetle, *Dendroctonus brevicomus* LeConte (WPB), another species closely related to the Mexican pine beetle.

Specimens of the new *Lasconotus* were apparently attracted to the bait funnels which suggests that they probably are associates of the bark beetles. Of the 41 males and females captured, 71% landed on the WPB trap. One each landed in April and June, seven each in July and August, nine in September, and one in October. A description of this new species follows.

Lasconotus fitzgibbonae Kingsolver, Stephan, and Moser, NEW SPECIES

Figs. 1-6

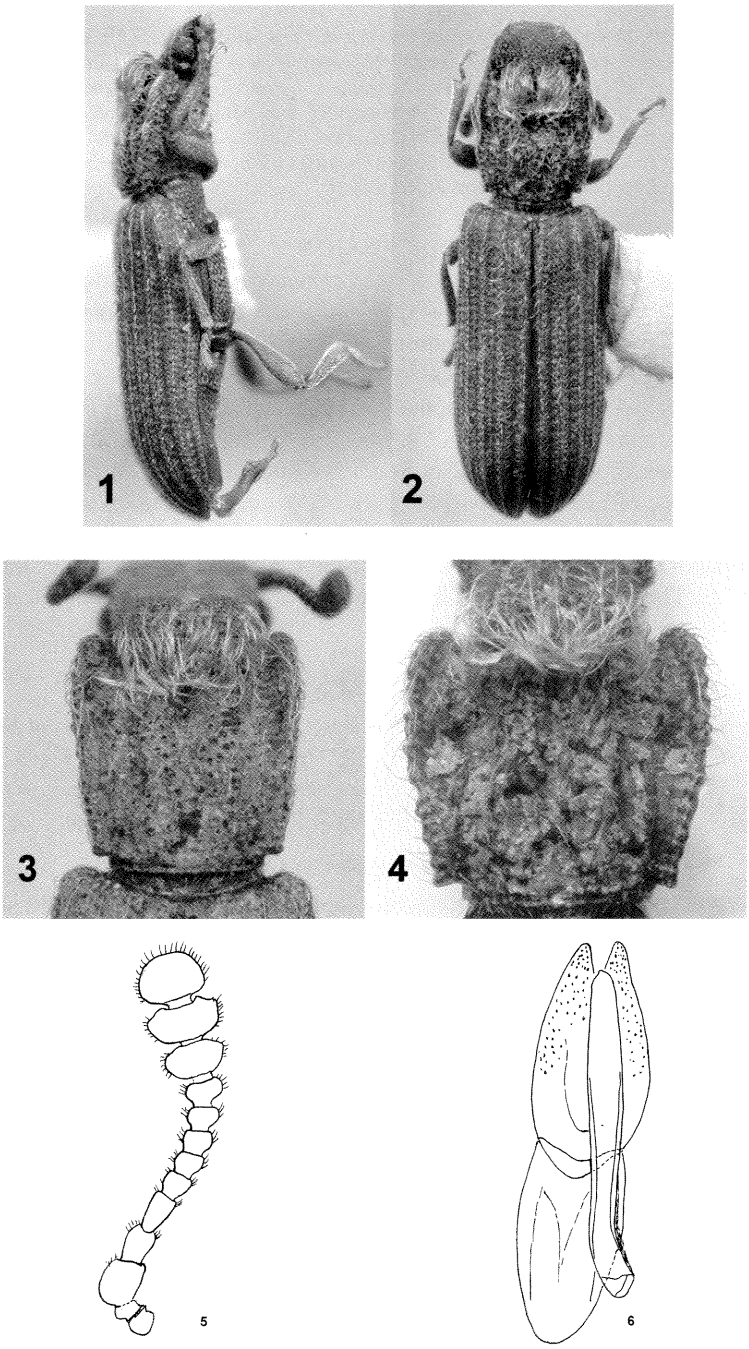
Color dark reddish brown throughout; antennae dark red; costal setae golden.

Body length: 3.25 - 3.5 mm. **Width:** 0.8 - 1.0 mm.

Body elongate, depressed, pronotum and elytra with lateral margins subparallel; costate, costae with recumbent setae. **Head** medially depressed, laterally elevated above eyes; dorsal surface of cranium and clypeus finely tuberculose, each tubercle bearing a fine, curved seta; eye strongly convex, facets fine; postocular lobe tuberculose; ventral surface of head coarsely punctate; antennal club three-segmented, third segment longer than second or fourth. **Pronotum** with anterior margin bilobate, each lobe with shaggy tuft of long golden setae (Figs. 1 and 2); anterior half of lateral margin with setae directed posteriorly, those on posterior half directed anteriorly; pronotal disk with short, setose costae (Fig. 2), lateral submarginal sulcus with brief setose costa; basal margin finely carinate; each anterior corner produced into short lobe; posterior corner shallowly emarginate; marginal carina with shallow dimple at midpoint; prosternum with ventral surface densely foveolate to punctate; shallow sulcus extending from posterior angle to margin of procoxal cavity; procoxal cavities not completely closed. Mesosternum convex, posterior half finely punctate, anterior half more coarsely punctate; median sulcus extending anteriad three-fourths distance from posterior margin; intercoxal piece concave to receive medial process of prosternum. Scutellum minute, sulcate. Elytra elongate, each elytron acute apically, 2X as long as basal width; with six elongate costae, the pleural costa originating on the prominent humerus and gradually approaching the pleural margin toward apex then merging with it in apical tenth; second and fourth costae merging near apex of elytron; each costa set with moderately long, recurved golden setae; interstices each with two rows of shallow punctures, each puncture with an extremely fine recumbent seta set in its anterior rim. Pygidium semicircular, broadly sulcate, with apical fringe of fine setae. Ventral surface of abdomen densely, finely punctate, punctures in transverse rows, each with a fine, caudally directed seta. Legs with surfaces finely punctate; densely, finely setose.

Comparison with other species. Differences between the paratype of *Lasconotus coronatus* (Hinton) and *L. fitzgibbonae* are in body length– *L. coronatus* is 4.6 mm, and *L. fitzgibbonae* is 3.25 to 3.50 mm.- and in the shape and relative width of the lateral pronotal margins in dorsal aspect (figs. 3 and 4), lateral pronotal carina with deep dimple at midpoint. The pronotal margin of *coronatus* is more arcuate than that of *fitzgibbonae* and the anterior angle is broader.

Type Material: Holotype (sex not determined). ARIZONA, Cochise Co., Chiricahua Mts., Pinery Canyon, 2000 ft.. N31°, 57.557', W109° 18.873', 28 August 2001, leg. Bobbie Fitzgibbon, ex. WPB Lindgren trap CH-2, near XPB infested Chihuahua pine. Fourteen paratypes with inclusive dates August 21, 2001 to January 2002, same locality. Twenty-five paratypes with inclusive dates July 2, 2002 to October 5, 2002, same data except Turkey Creek, 2000 m, N31° 51.280', W109° 51.883', leg. Bobbie Fitzgibbon, Lindgren trap, near *Pinus chihuahuana,* 18 March, 2002. Two paratypes, South



Figures 1-6. 1. *Lasconotus fitzgibbonae,* habitus, dorsal aspect; 2. Same, lateral aspect; 3. Same, pronotum, dorsal aspect; 4. *Lasconotus coronatus,* pronotum, dorsal aspect; 5. *L. fitzgibbonae,* antenna; 6. Same, male genitalia.

Dakota, Black Hills, February 20, 1988, under root bark *Pinus edulis,* Curtis O'Neil. Holotype and paratypes are deposited in the National Museum of Natural History, Washington, DC. Paratypes are deposited in the Florida State Collection of Arthropods, Gainesville, Florida; The Texas A.& M. Collection, College Station, Texas; The Department of Entomology Collection, Montana State University, Bozeman, Montana; The Slipinski Collection, CSIRO, Australia.

Etymology: This species is named for Bobbie Fitzgibbon, Entomologist R3, who cordinated the trap collections in the Coronado National Forest project.

DISCUSSION

Thirteen of the specimens of *L. fitzgibbonae* were host to phoretic uropod deutonymphs of an unidentified species of *Uroobovella* Berlese determined by John Moser. This mite normally is an associate of the bark beetles *Hylastes fuligidus* Blackman, *Hylurgops porosus* (LeConte), and *Dendroctonus valens* Leconte, all of which attacked roots or bases of the same pines infested by SPB and XPB. The occurrence of the mites on *L. fitzgibbonae,* plus the fact that this *Lasconotus* was collected under root bark of pine in South Dakota indicates that *L. fitzgibbonae* is an associate of one or more of the bark beetle species perhaps as a predator. Also collected in 2002 in Lindgren traps at the Turkey Creek location were the Colydiines *Lasconotus simplex* Kraus on March 4 and *L. laqueatus* LeConte on March 25. These were identified by Stephan.

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