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3.0011 Two New Species of *Corticeus* From Mexico and Honduras (Coleoptera: Tenebrionidae)

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The genus *Corticeus* Piller and Mitterpacher is represented on every continent except Antarctica. Blackwelder (1945, p. 533) lists 10 species from Central and South America and Arnett (1963, p. 685) lists 13 from the United States. Most occur with bark beetles (Family Scolytidae), but their roles are poorly understood. Some authors have called them bark beetle predators, while others have regarded them as fungivorous, scavengers, or saprophagous. The literature on feeding habits has been well summarized by Struble (1930), Chamberlin (1939), and Parker (1969). Parker's extensive studies showed that *C. substriatus* (LeConte) eats a variety of foods in the subcortical niche; he concluded that the species is omnivorous.

The senior author has been accumulating specimens of *Corticeus* for a number of years, hoping ultimately to prepare a revision of the New World species or at least of the North American components of the genus. Most long series of these beetles have come from individuals conducting bark beetle studies. Two such investigators, J. F. Coyne and R. C. Wilkinson, collecting subcortical associates of *Dendroctonus frontalis* Zimm. in outbreak areas in Honduras, found large numbers of two species of *Corticeus*. A third worker, W. E. Rose, found one species common with *D. frontalis* infestations in Mexico.

Although it is premature to undertake a complete generic revision at this time, scientific names are needed for several pending manuscripts. These two very distinctive species are clearly different from any of the seven treated by Champion (1886, pp. 171-173 and 1913, p. 162) and hence should not add to the confusion in this poorly understood genus.

Both male and female genitalia of the two species were studied and, on the basis of limited dissections of other species, these structures were found to be nondiagnostic in distinguishing between species.

The senior author has prepared the descriptions and is to be cited as the author of the two species described below; the junior author took the photographs and is responsible for the ecological data.

Corticeus coynei Triplehorn, NEW SPECIES

Holotype, sex undetermined: elongate, slender, subcylindrical, light reddish-brown, glabrous, shining. Head uniformly coarsely and densely punctured; antennae reddish-brown with fuscous spots on apico-medial portions both dorsally and ventrally of segments 3 to 10; apical segment lighter; eyes coarsely faceted, separated dorsally by less than twice the observed dorsal diameter of one eye (figure 1) and ventrally by less than the observed ventral diameter of one eye (figure 2); ventral surface of head with only a few widely spaced fine punctures. Pronotum slightly broader than long, convex, lateral margins feebly arcuate, apical margin truncate, angles obtuse, not produced; basal margin arcuate, angles obtuse, slightly reflexed;

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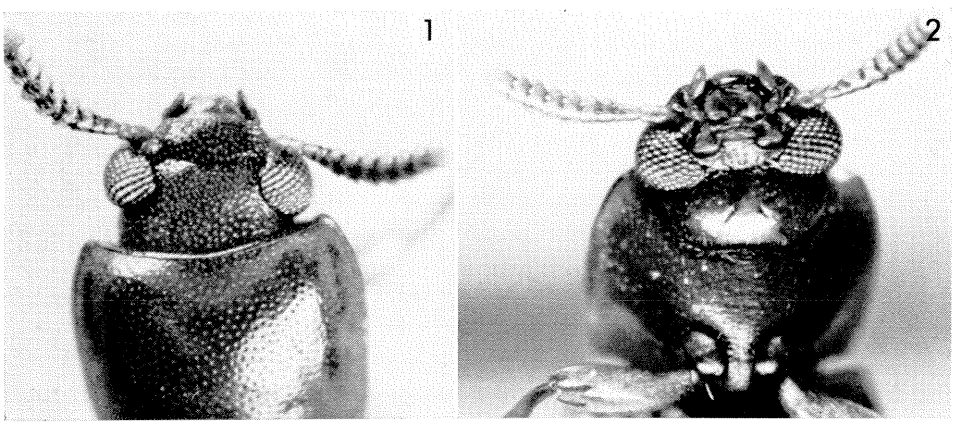
entire perimeter finely beaded; surface moderately coarsely and densely punctured. Elytra slightly wider than pronotum, coarsely, densely, and confusedly punctured; pygidium with punctures becoming increasingly coarse from base to apex. Ventral surface lighter than dorsum with legs still lighter; flanks of prothorax coarsely and densely punctured; prosternum strongly alutaceous with fine, dense but very shallow punctures; prosternal process shallowly grooved and finely margined between procoxae, its apex deflexed and broader behind; mesosternum and metasternum and basal four abdominal sterna finely and sparsely punctured, dull and alutaceous; terminal abdominal sternum coarsely and densely punctured. Length: 3.4 mm; width: 1.1 mm.



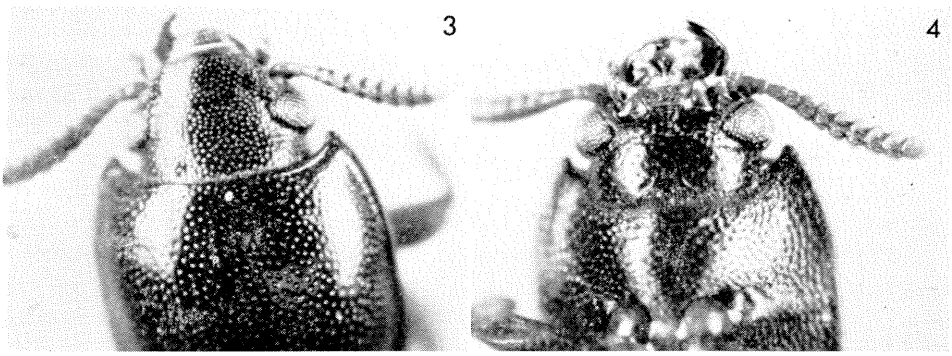
Figures 1-2. *Corticeus coynei* n. sp. Dorsal and ventral aspects of head. Eyes are large and narrowly separated. Pronotal angles are rounded.

Types: Holotype and 75 paratypes from Cedros, Honduras, February 1, 1965, J. F. Coyne, associated with *D. frontalis* and *Ips* spp. from *Pinus oocarpa;* 4 paratypes from Picacho, F. S., F. M., Honduras, Jan. 26, 1965, E. W. Clark, 2 from *Pinus oocarpa* and 2 from *Pinus pseudostrobus.* Holotype and paratypes in National Museum of Natural History; paratypes in Southern Forest Experiment Station, Pineville, La., Ohio State University Collection of Insects and Spiders, and British Museum (Natural History). The senior author has seen one additional specimen taken in 1966 in company with four specimens of *C. rosei* at Tegucigalpa, Honduras, from boring dust of *D. frontalis* ex. *P. oocarpa.*

Remarks: This species is named for the collector of the type series, J. F. Coyne, USDA Forest Service, Gulfport, Miss. It differs from *C. sordidus* Champion (1913, p. 162) in having the pronotum slightly broader than long and in not having the elytral punctures in rows. We have not seen *sordidus,* which is known only from a single specimen taken near Guatemala City. From the measurements given (length: 3¾ mm; width: ⅞ mm) it is a much more slender species than *coynei.* Other characters mentioned in the description of *sordidus* but not found in *coynei* are a deep transverse frontal groove, alutaceous elytral surface, and a constriction immediately before the hind angles of the pronotum. C. M. F. von Hayek compared paratypes of *coynei* with the unique type of

sordidus and reports (personnal communication) that they are not conspecific.

There is very little variation in the type series and no evident sexual dimorphism. Range in size of type series: length: 3.0 to 3.7 mm; width: 1.1 to 1.3 mm.



Figures 3-4. *Corticeus rosei* n. sp. Dorsal and ventral aspects of head. Eyes are small and widely separated. Apical pronotal angles are acutely prominent.

Corticeus rosei Triplehorn, NEW SPECIES

Holotype, sex undetermined: elongate, slender, subcylindrical; pronotum, base of head, and scutellum black, anterior portions of head and elytra light reddish-brown, glabrous, shining. Head coarsely and densely punctured; antennae uniformly light reddish-brown; eyes small, finely faceted, separated dorsally by almost 2½ times the observed dorsal diameter of one eye (Figure 3) and ventrally by twice the observed ventral diameter of one eye (Figure 4); ventral surface of head black, coarsely and densely punctured. Pronotum slightly broader than long, convex, lateral margins parallel medially, arcuate basally and apically; apical margin broadly emarginate with apical angles strongly produced; basal margin arcuate, angles obtuse; entire perimeter finely beaded, somewhat flattened and reflexed along lateral margins, surface moderately coarsely and densely punctured. Elytra as wide as pronotum, substriate on disc, confusedly punctured laterally, punctures all subequal in size; pygidium coarsely and densely punctured. Ventral surface black, legs and mouthparts light reddish-brown; flanks of prothorax rugosely punctured, somewhat strigose; prosternum finely and densely punctured, transversely strigose; prosternal process shallowly grooved and finely margined between procoxae, its apex deflexed and broader behind; mesosternum and metasternum and abdominal sterna densely punctured with punctures becoming increasingly larger on lateral portions of sclerites; terminal abdominal sternum flattened medially. Length: 3.8 mm; width: 1.4 mm.

Types: Holotype and 30 paratypes from Puebla, Mexico, August to December, 1964, W. E. Rose, associated with *D. frontalis* and *Ips* spp.; 13 paratypes from 4 miles west of Rio Frio, (Mexico) Mexico, July 9, 1959, B. and B. Valentine, 10,500 feet, on *Pinus;* 2 paratypes from Amecameca, Mexico, March 17, 1954, R. L. Furniss, *Pinus hartwegii;* 1 paratype from Tlexcala (probably Tlaxcala), Mexico, March 13, 1954, R. L. Furniss and J. P. Perry, *Pinus rudis.* In addition to the type series the senior author has seen four specimens from Cedros, Honduras (included in the same vial with the type series of *C. coynei* (see above), four from Tegucigalpa, Honduras, 1966, from boring dust of *D.*

frontalis ex *P. oocarpa,* 2 specimens from Picacho, F. S., F. M., Honduras, Jan. 26, 1965, E. W. Clark, *Pinus oocarpa,* 1 from Valle de Angeles, Honduras, Feb. 12, 1965, E. W. Clark, *Pinus pseudostrobus.* Holotype and paratypes in National Museum of Natural History; paratypes in Southern Forest Experiment Station, USDA Forest Service, Pineville, La., Ohio State University Collection of Insects and Spiders, and British Museum (Natural History).

Remarks: This species is named for the collector of the type series, W. E. Rose. The coloration—consisting of a black ventral surface, black head, thorax, and scutellum, and reddish-brown elytra—is apparently unique and is quite constant in the series available. In size, body conformation and pronotal shape it is similar to the North American *C. parallelus* (Melsheimer). No external characters for separating the sexes were found.

This species appears to be dimorphic and the dimorphism is definitely not sexual. The one form (as in the holotype) has much more prominent apical pronotal angles, more broadly expanded lateral pronotal margins, and the head and pronotum are smooth and shining between the punctures. In the second form the head and pronotum are distinctly alutaceous, and the lateral pronotal margins are narrow with apical angles acute, but not conspicuously prolonged. These two forms are quite distinct and readily separable, and there is a possibility that two similar sympatric species are involved, but existing biological information more strongly suggests dimorphism. Range in size of type series: Length: 3.0 to 3.8 mm; width: 1.2 to 1.4 mm.

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DESCRIPTORS: Coleoptera; Tenebrionidae; *Corticeus;* new species; Honduras and Mexico.

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ABSTRACT—Two new species of *Corticeus* from Mexico and Honduras *C. coynei* and *C. rosei* Triplehorn are described. These were collected as subcortical associates of *Dendroctonus frontalis* Zimm., the southern pine beetle.

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