

Two New *Stenosini* Species in the Genus *Araeoschizus* LeConte from Baja California, Mexico (Coleoptera: Tenebrionidae)

Charles S. Papp

7451 Albezzia Lane, Sacramento, California 95828

The first *Araeoschizus* species from the northern part of the Baja California Peninsula was described by Blaisdell (1943) as *antennatus* collected at Punta Prieta, by E. A. Michelbacher and E. S. Ross from the California Academy of Sciences, in 1938. The most expansive collecting was done in the 1970s by F. G. Andrews, A. R. Hardy, T. D. Eichlin and M. Wasbauer from the California Department of Food and Agriculture; their material supplied most of the specimens for my revision of the genus (1981). Also, W. H. Clark, P. H. Blom, and others from the Orma J. Smith Museum of Natural History, Albertson College, Caldwell, Idaho and the University of Idaho, Moscow contributed generously to the further study of this genus.

It was a puzzle for me to classify the material William H. Clark initially collected in the broader San Agustin area. Subsequent collecting supplied more material (over 700 specimens) from this area, where, according to I. L. Wiggins (1980), four distinct plant communities meet: (1) the Californian Region, (2) the Baja California Coniferous Forests, bordered to the west by (3) a Microphyllous Desert habitat, and to the south by (4) the Sarcophyllous Desert Region (Fig. 1).

There are two recognized subspecies from this general area:

Araeoschizus antennatus clarki Papp (1989:335–337) is characterized as the more slender form. Head narrower posteriorly (more so in many specimens). Ocular lobe posterior to eye flat, not well outlined; ocular ridge shallow, with row of dense, erect to semierect squamules. Prothorax similar to *A. a. antennatus*, except the squamules on the longitudinal median ridge (creating the groove) and those along the margin of the prothorax are goldish yellow, erect and long, longer than those squamules of the ocular ridge. Elytral costae with dense row of somewhat shorter and erect squamules; rows of squamules in the elytral interspaces are much smaller, sparsely spaced and posteriorly decumbent, like those parallel with the tightly fused sutural line. Overall dark brown; prothorax slightly darker, appendages slightly lighter in color; surface shiny. Known to occur in the Rancho Santa Inez area (550 m elev.), found by W. H. Clark in foraging columns of the ant *Neivamyrmex nigrescens* Cresson.

Araeoschizus antennatus blaisdelli Papp (1989:338) with much paler, less dense and generally narrower squamules than *A. a. clarki*. The squamules at anterior half of elytra slightly thinner and somewhat roundedly pointed; in posterior half narrow and club shaped, resembling that of *A. a. antennatus*. Squamules on the longitudinal ridges of the elytra are shorter, sparser; those in the interspaces shorter and more sparsely spaced. Uniformly lighter brown; surface shiny. From the Rancho Santa Inez area (550 m elev.); also found in Valle Montevideo La Laguna Wash, 18 km W of Bahia de Los Angeles. W. H. Clark and P. E. Blom collectors.

On several collecting trips of William H. Clark and his collecting companions,

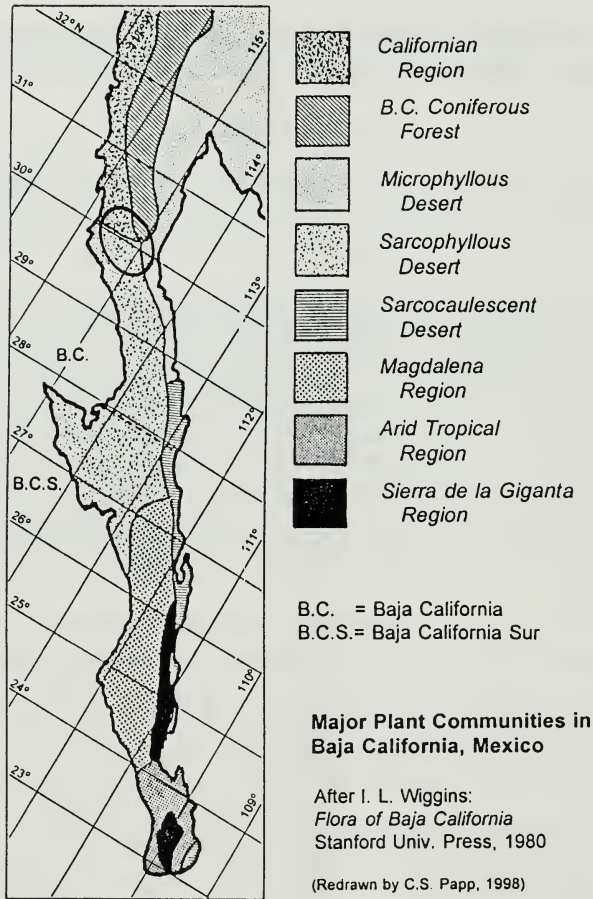


Fig. 1. The eight plant communities of Baja California. The area encircled is where four communities meet. (After I. L. Wiggins, 1980).

they were able to collect more specimens in a wider area of, as we now call it, the Four Corners (Figs. 1 and 2).

Araeoschizus agustinus Papp, n. sp. (Fig. 3)

In some respects the species resembles *squamulissimus* Papp (1981) from Diablo Dry Lake east of the Sierra de Juarez, some 50 miles W of the Colorado River delta, but the latter species is far more squamulose, head longer than broad with deeper and longer ocular groove; prothorax longer than broad and edges heavily squamulose. Dark brown, shiny throughout.

Head.—Slightly (one-tenth) longer than broad, about evenly rounded. Ocular groove shallow more so posterior to eye; ridge slightly elevated, with erect and short squamules; ocular lobe similarly squamulose. Occipital triangular impression shallow, occipital region roundly elevated. Surface minutely punctured and with forwardly decumbent short pale squamules. Frontal edge fairly straight, slightly serrated, with few longer, hair-like squamules. Eyes large, almost covering the width of the ocular groove, with 20 facets dorsally and 5 ventrally. Antennae

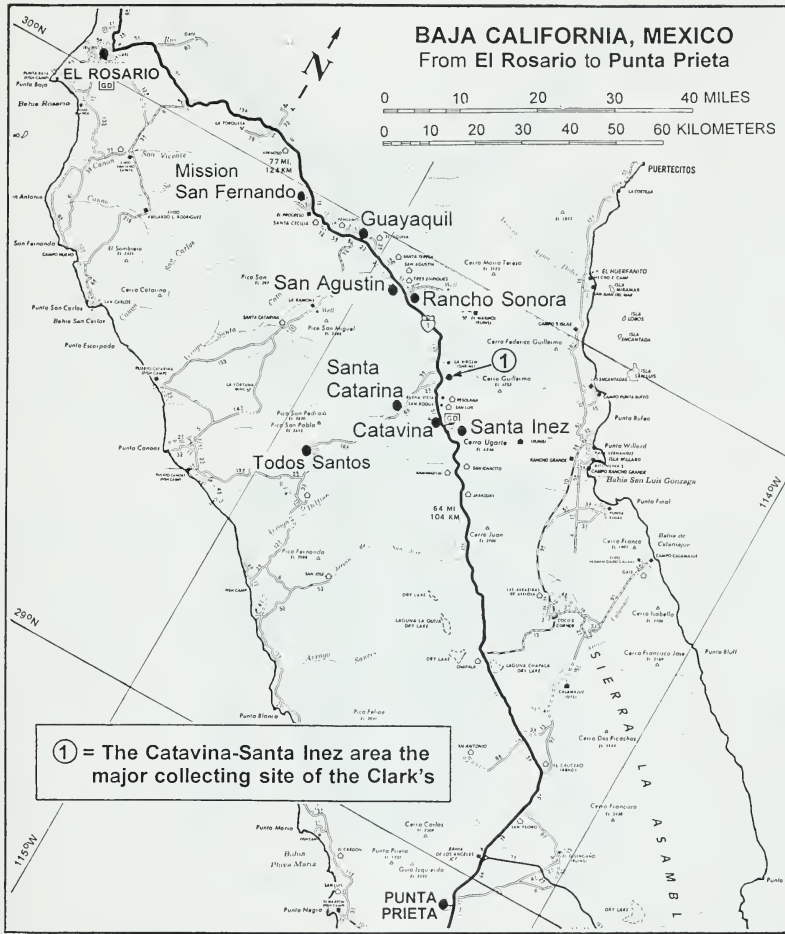


Fig. 2. The major localities mentioned in the text.

robust; segments with row of forwardly decumbent narrow squamules on anterior margins of all segments with thinner squamules on sides.

Prothorax.—About as long as broad (occasionally very slightly longer), anterior margin broader with well defined anterior pronotal angle; moderately constricted posteriorly with short pronotal angle. Longitudinal groove shallow and relatively broad; ridges with semierect narrow squamules with posterior end of ridges longer, rosette-like. Edge densely squamulose, about the size of squamules on longitudinal ridge. Surface granulose, with sporadically spaced forwardly decumbent squamules shorter than those on margin.

Elytra.—About one-third longer than head and prothorax combined. Sides in middle two-thirds parallel; shoulders broadly, posterior end more narrowly rounded. Longitudinal ridges prominent, sharply elevated, on ridge with posteriorly decumbent, curved, narrow squamules. Puncture lines very prominent; there are no secondary rows of squamules. Sutural line shallow, with a row of somewhat shorter and more sparsely spaced squamules than on longitudinal ridges.

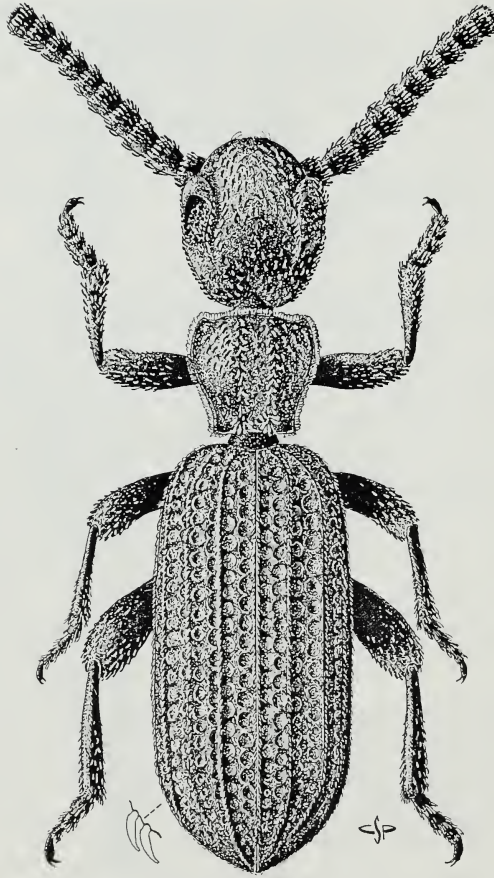


Fig. 3. *Araeoschizus agustinus* Papp, n. sp.

Underside

Head: Basal groove of sublial plate deep; proboscis very shallow, frontal margin straight. Gular impression very shallow (almost non-existent). Surface coarsely punctate and very sparsely covered with forwardly decumbent short squamules. Prothorax: Surface with larger punctures than head; prosternal ridge evenly rounded; prosternal process narrow and more squamulose than rest of prothorax. Hind body: Surface with large, deep punctures, each puncture with a posteriorly decumbent short and thin squamula; these somewhat longer toward posterior end of body. Legs: Medium pair smallest, posterior pair largest; sparsely squamulose throughout; tarsi with somewhat longer, hair-like squamules.

Length: 4.1–4.5 mm.

Distribution

Holotype: San Agustin, elevation 580 m, in Ethylene Glycol Pitfall Trap (EGPT), VI. 16. 1991 to V. 27. 1992, William H. Clark, Paul E. Blom and Ellen M. Clark collectors. In the Orma J. Smith Museum.

Paratypes: 12 specimens from the same location (in EGPT).

Additional specimens (all in EGPT): 3 from the same location, VI. 20. 1990–

III. 10. 1991 by W. H. and Ellen M. Clark collectors.—14 from 1 mi N of Santa Catarina (Ranch), XII. 9. 1991–VIII. 3. 1992 by W. H. Clark and P. E. Blom collectors.—8 from 1.5 km SW from Guayaquil, elev. 600 m, VI. 16. 1991–V. 27. 1992 by W. H. & E. Clark, P. E. Blom and David M. Ward collectors.—10 from 10 km SE Rancho Sonora, elev. 600 m, III. 12. 1991–VII. 16. 1991 by W. H., M. H., C. J. & K. D. Clark and Jane C. Luther collectors.—2 from 9 km NW Santa Inez, VII. 17. 1991–V. 26. 1992 by W. H. and E. M. Clark collectors.—1 from 2 km E Mission San Fernando, elev. 480 m III. 12. 1991–VII. 3. 1991.—7 from 11 km ENE El Rosario, elev. 140 m VI. 22. 1991–III. 9. 1992.—1 from Valle Montevideo Wash, 18 km W Bahia de Los Angeles, elev. 380 m, III. 19. 1991–VIII. 19. 1991.—1 from Rancho La Ramona, elev. 500 m, III. 21. 1991–VII. 3. 1991.—4 from 2 km E Mission San Fernando, elev. 480 m, VII. 3. 1991–V. 20. 1992 by W. H. Clark collector.

Araeoschizus blomi Papp, n. sp. (Fig. 4)

Resembles *antennatus* Blaisdell (1943), however *blomi* can easily be differentiated by the robust antennae, the narrow posterior portion of head, the more prominent longitudinal groove of prothorax and the unique arrangement of squamules. Secondary row of squamules hardly detectable. Brown to blackish brown, shiny; also smaller.

Head.—Almost twice as long as prothorax; occipital portion narrowly rounded with prominent, yet small, occipital impression. Ocular lobes only slightly elevated, rounded, inner ocular ridge angularly placed (parallel to margin of head in *antennatus*), short, slightly elevated with prominent row of decumbent squamules. Ocular groove short, abruptly flattened posteriorly. Vertex round, evenly elevated, a slight horizontal impression between ocular lobes separates it from the nearly flat frons. Surface finely punctured, with forwardly decumbent squamules. Sides with erect longer squamules, more sparsely spaced on anterior margin. Frontal margin almost straight, with several semierect spine-like squamules. Eyes with 14–16 facets dorsally, with 5–6 facets ventrally. Antennae more robust; joints are squamulose, more densely so on anterior margin of each segment.

Prothorax.—Anterior margin slightly curved inwardly, angles more narrowly rounded than that of *antennatus*, posterior third constricted. Longitudinal groove evenly deep, one third as wide as length of posterior margin of prothorax; finely punctured. Ridges with long, erect squamules (see top insert of Fig. 4), anterior and posterior end slightly decumbent, as long as squamules on margin of prothorax, which are on sides horizontally, on anterior and posterior margin vertically erect, on the latter somewhat shorter, dense, more numerous. Surface finely punctured, with very few forwardly decumbent short squamules.

Elytra.—Slightly longer than head and prothorax combined. Shoulders narrowly rounded, sides in mid-third almost parallel. Primary cordae prominent, on frontal fourth longer, erect, other places with shorter and posteriorly decumbent, slightly club-shaped squamules. Puncture lines are prominent, punctures deep, closely spaced; secondary row of squamules between them hardly detectable, consists of short, thin, sporadically spaced, posteriorly decumbent squamules. Sutural line slightly elevated and with very short, thin, posteriorly decumbent squamules.

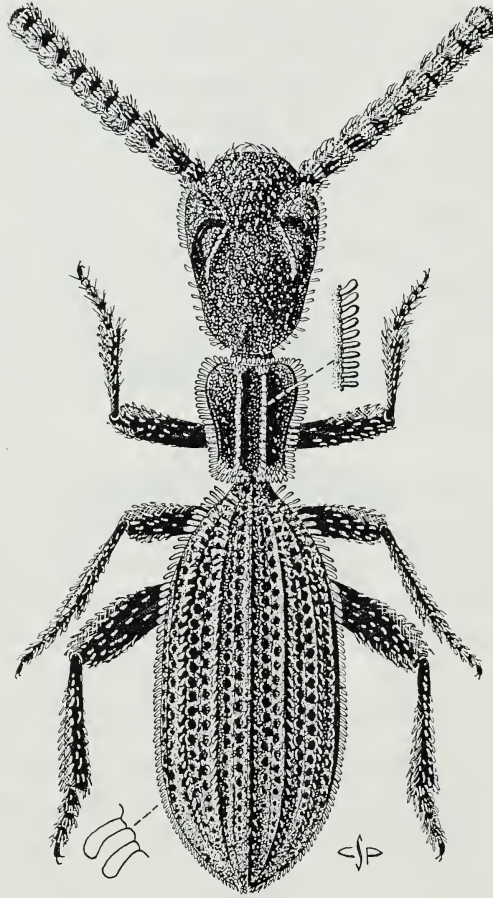


Fig. 4. *Araeoschizus blomi* Papp, n. sp.

Underside

Head: Densely punctured; with few forwardly decumbent squamules. Basal groove of sublabial plate deep, posteriorly extended into a rounded-triangularly shaped impression about half way to the very deep gular impression. Margin of sublabial plate straight; wide, proboscis long, sharply pointed, at base deeply carinate. Prothorax: Prosternal ridge highly elevated, with few, very short, erect squamules on ridge. Coarsely punctured. Prosternal process broad and with rounded posterior margin; squamulose. Hind body: With large, closely fit punctures, each puncture with narrow, posteriorly decumbent thin squamules longer than diameter of punctures. Legs: Middle pair smallest, hind pair largest; covered with relatively long narrow squamules, these thinner and longer toward tip of tibia; longer and thinner on tarsi.

Length: 3.8–4.1 mm.

Distribution

Holotype: 9 mi N of Rancho Santa Inez, elevation 550 m, in EGPT, III. 18. 1991–VII. 17. 1991, by W. H., Mary H., Cynthia J. & Caren D. Clark and James C. Luther collectors. In the Orma J. Smith Museum of Natural History.

Paratypes: 12 specimens, same location, same collectors; in the same Museum.

Additional specimens (all in EGPT): 45 from San Agustín, elevation 580 m, III. 10. 1991–VII. 16. 1991, same collectors; additional 21 specimens from the same location XII. 21. 1988–VIII. 29. 1989 by W. H. Clark collector.—2 from 2 km SE Rancho Sonora, VII. 16. 1991–V. 27. 1992, W. H. & E. M. Clark and P. E. Blom collectors.—3 from 5 km SW Guayaquil, 600 m elevation, III. 23. 1991–VIII. 3. 1991 and VII. 3. 1991–V. 27. 1992 by the same collectors.—3 from Santa Inez, III. 13. 1991–VII. 17. 1991 by W. H. and Mary H. Clark collectors; 11 specimens VII. 4. 1991–I. 4–5, 1992 by W. H. Clark and P. E. Blom collectors.

It will be interesting to see what specimens the Clarks come up with south from Santa Inez. No doubt, *antennatus* was reported in the above mentioned general area (Papp, 1981:324) 13 mi E from El Rosario, collected by G. E. & E. S. Ross and V. L. Vesterby in 1938 and later by W. H. Clark in 1978 to recently. It would be interesting to find out the distribution of this species further to the south and behind the type locality, Punta Prieta. I believe *antennatus* is the dominant species in the center two-thirds of Baja California.

In the collection of the California Academy of Sciences there is a specimen from Baja California Sur with spines on all femora and with secondary rows of squamules on elytra. The specimen was collected by S. C. Williams in an isolated area at San Miguel de Comundu at 1500 ft. elevation on April 21, 1969. This area should be intensively collected. This unique specimen belongs to Group I in the key (Papp, 1981:295), the first ever collected in the southern portion of the Baja California Peninsula.

Literature Cited

- Blaisdell, F. E. 1943. Contribution Toward the Knowledge of the Insect Fauna of Lower California. No. 7: Coleoptera, Tenebrionidae. Proc. Calif. Acad. Sci. 24(7):171–188, pls. 10 and 11.
- Papp, C. S. 1981. Revision of the Genus *Araeoschizus* LeConte (Coleoptera: Tenebrionidae). Ent. Arb. Mus. Frey, 29:273–420, 68 figs.
- . 1989. Notes on the Stenosini genus *Araeoschizus* LeConte from Baja California, Mexico (Coleoptera: Tenebrionidae). Entomography, 6:335–340, 3 figs.
- Wiggins, I. L. 1980. Flora of Baja California. Stanford University Press, 1025 pp., 970 figs. (see pp. 21–26).

Accepted for publication 7 May 1998.