

**TWO NEW SPECIES OF *ACANTHOSCELIDES* (COLEOPTERA:
BRUCHIDAE) ASSOCIATED WITH *PHASEOLUS* (LEGUMINOSAE)
FROM ARGENTINA, WITH THE DESCRIPTION OF A NEW
SPECIES-GROUP, AND A NEW SYNONYM**

JOHN M. KINGSOLVER

Systematic Entomology Laboratory, IIBIII, Agric. Res., Sci. and Educ.
Admin., USDA, % U.S. National Museum of Natural History, Washington,
D.C. 20560.

Abstract.—Two new species, *Acanthoscelides comptus* and *A. caracallae* are described and critical characters of external morphology and of male genitalia are illustrated. Since these species are associated with *Phaseolus*, the genus to which many of the common bean varieties belong, they are of potential importance to bean growers. A new species-group, the *suaveolus* group, is characterized, a key to the species now included in the group is provided, and a new synonym *Acanthoscelides clandestinus* (Motschulsky, 1874) (= *Bruchus multisignatus* Sharp, 1885) is proposed.

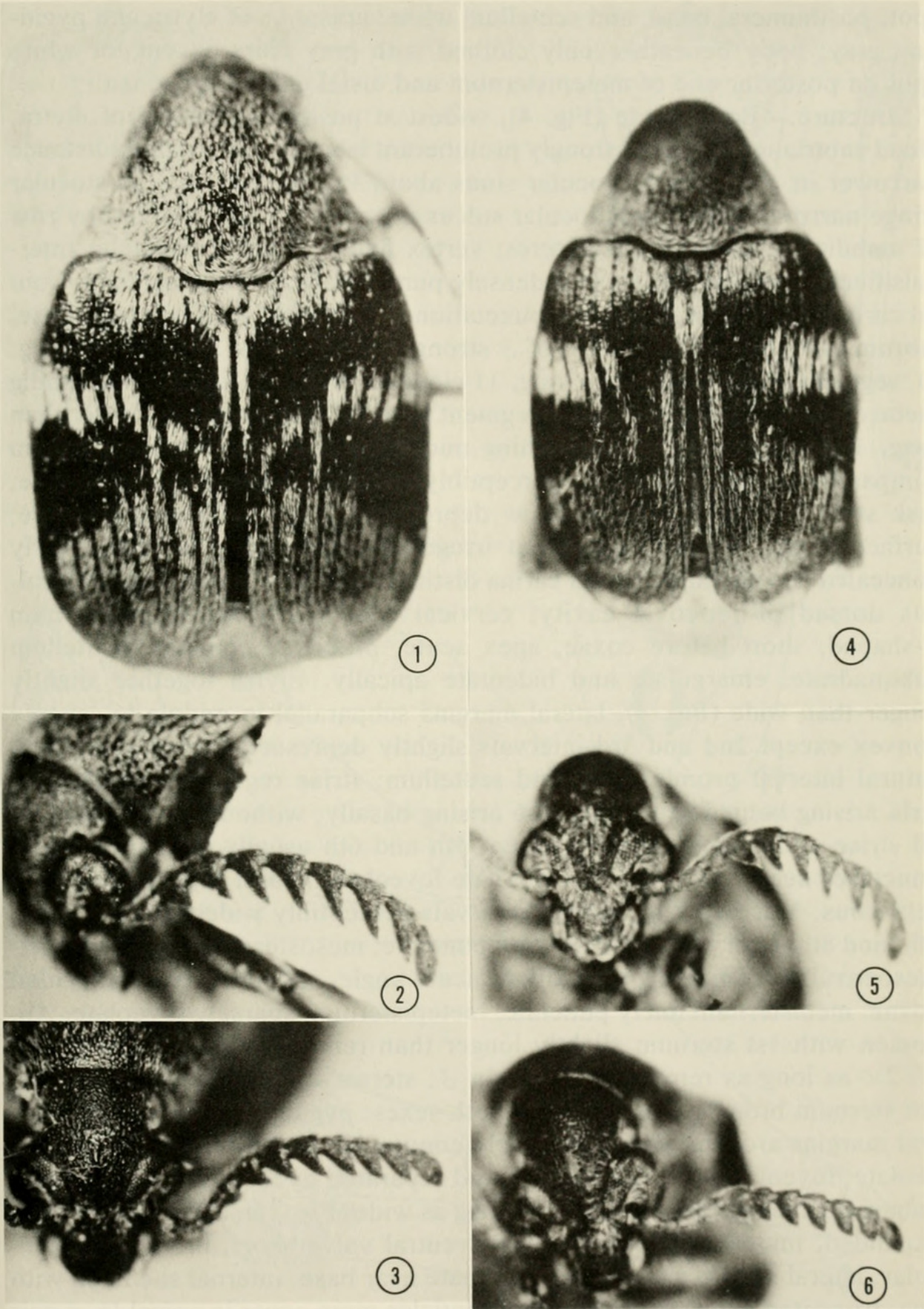
Arturo L. Terán and Susana Muruaga de L'Argentier, Fundación Miguel Lillo, Tucumán, Argentina, have recorded biological data for two new species of Bruchidae from the Tucumán area. To provide names for these species, the following descriptions are provided. Because both species attack seeds of species of *Phaseolus*, they are of potential importance to commercial bean crops.

Acanthoscelides comptus Kingsolver, NEW SPECIES

Figs. 4-6, 11-13

Measurements.—Body length, 2.3-2.7 mm, width, 1.9-2.1 mm; pronotal length, 0.9-1.0 mm, width, 1.1-1.2 mm.

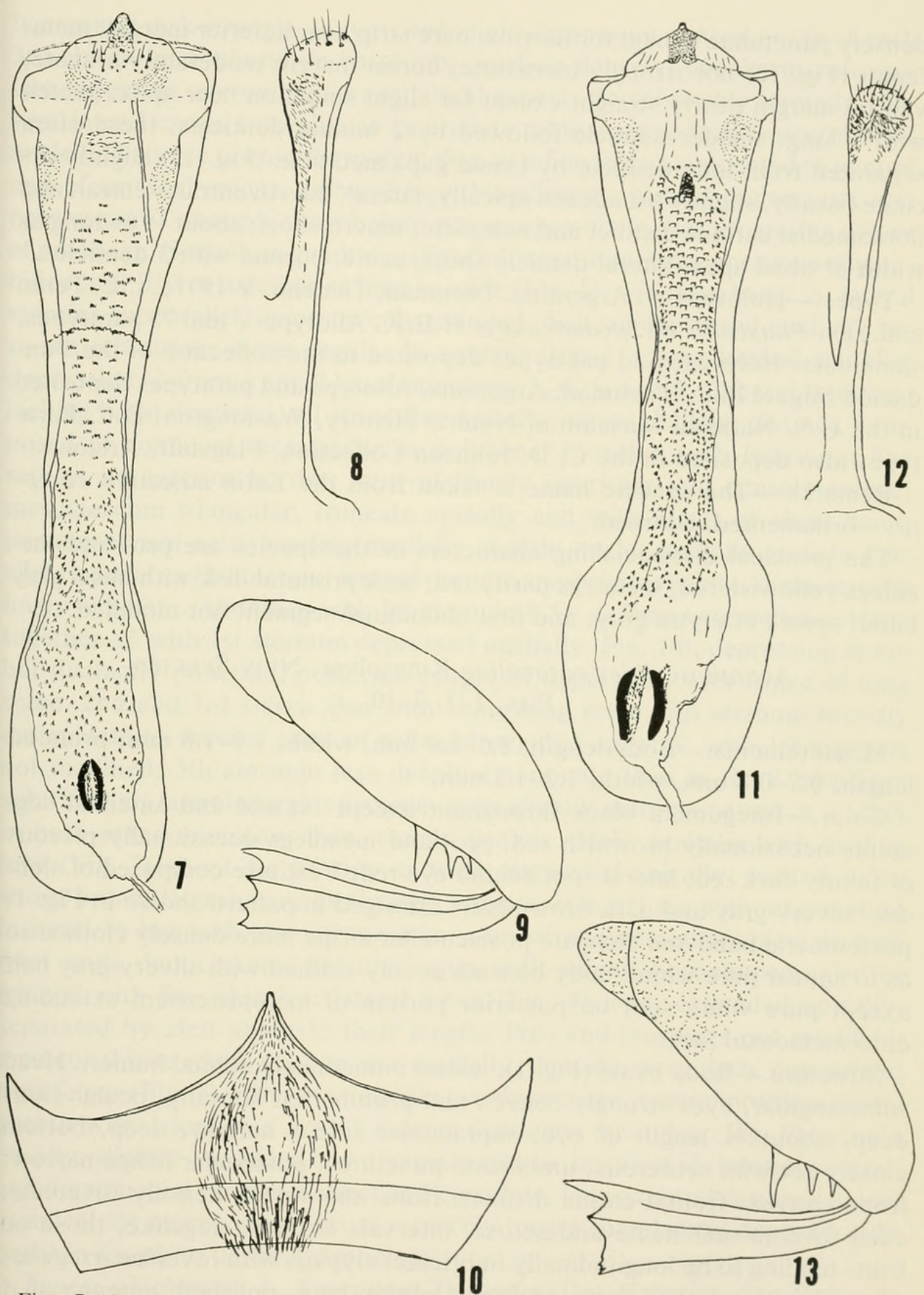
Color.—Integument black except pro- and mesolegs, distal $\frac{3}{4}$ of metafe-mur, metatibia, metatarsus, and at least proximal 4 segments and sometimes entire antenna dark red to reddish yellow, head behind eye usually with a reddish spot. Vestiture of silvery-gray, white, and dark brown slender hairs in pattern as in Fig. 4; with median, subcircular pronotal spot of dark brown hairs and with flanks of pronotum and transverse basal band gray; elytra with basal, elongate spots on intervals 2, 3, 4, and 5, elongate postscutellar



Figs. 1-3. *Acanthoscelides caracallae*. 1, Habitus, dorsal aspect. 2, ♂ antenna. 3, ♀ antenna. Figs. 4-6. *A. comptus*. 4, Habitus, dorsal aspect. 5, ♂ antenna. 6, ♀ antenna.

spot, posthumeral band, and scutellum white; apical $\frac{2}{5}$ of elytra and pygidium gray; body beneath evenly clothed with gray hairs except for white spot on posterior end of metepisternum and distal end of metacoxa.

Structure.—Body ovate (Fig. 4), widest at posthumeral band of elytra. Head subtriangular, eyes strongly protuberant laterally, interocular distance narrower in ♂ than in ♀; ocular sinus about $\frac{1}{2}$ length of eye; postocular fringe narrow, sparse; supraocular sulcus not well defined, marked by row of umbilicate, setiferous punctures; vertex finely, densely punctate, intervals finely granulose, frons less densely punctate, intervals granulose, frontal carina fine, distinct; clypeus punctation as on frons, intervals granulose, labrum bare, polished; antenna of ♂ strongly serrate from 3rd segment (Fig. 5), segments 6–10 wider than long, 11 elongate-elliptical, in length reaching metacoxa, in ♀ serrate from 4th segment (Fig. 6), segments 5–10 wider than long, 11 elongate-elliptical, reaching middle of metepisternum. Pronotum campaniform, lateral margins perceptibly arcuate, basal margin bisinuate, disk strongly convex with shallow depression near each posterior angle; surface finely, densely, somewhat irregularly punctate, punctures nearly concealed by vestiture; lateral carina distinct anteriorly joining cervical sulcus dorsad of procoxal cavity; cervical boss bisetiferous; prosternum T-shaped, short before coxae, apex acute, procoxae connate. Scutellum subquadrate, emarginate and bidentate apically. Elytra together slightly longer than wide (Fig. 4), lateral margins subparallel in middle $\frac{1}{3}$, evenly convex except 2nd and 3rd intervals slightly depressed behind scutellum, sutural interval prominent behind scutellum; striae regular in course, 1st stria arising behind scutellum, 2–6 arising basally, without basal denticles, all striae ending free apically except 5th and 6th usually conjoined; striae punctures deep, set in ovate or obovate foveolae in basal $\frac{1}{3}$, each puncture setiferous; 3rd, 5th, 7th, and 9th intervals perceptibly wider than 2nd, 4th, 6th, and 8th; intervals imbricate, not punctate; mesosternum lingulate; post-mesocoxal sulci meeting medially at acute angle, slightly expanded behind coxae; metasternum finely punctate, metepisternum sparsely foveolate. Abdomen with 1st sternum slightly longer than remaining sterna together in ♀, $2\times$ as long as remaining sterna in ♂, sterna strongly telescoped in ♂, 5th sternum broadly emarginate in both sexes; pygidium subtriangular, lateral margins arcuate, disk moderately convex, surface finely, shallowly foveolate, foveolae generally discrete and separated by a diameter. Male genitalia with median lobe about $4\times$ as long as wide (Fig. 11), apex and cucullus expanded, middle of lobe narrowed, ventral valve short, broad, subtriangular, lateral margin shallowly emarginate near base, internal sac lined with fine, truncated denticles in basal $\frac{1}{2}$, denticles more acute in apical $\frac{1}{2}$, a pair of short, boat-shaped sclerites near apex of sac surrounding a mass of fine spicules; lateral lobes long (Fig. 12), slender, spatulate apically, separated by deep cleft. Pro- and mesolegs not modified; metacoxal face reniform,



Figs. 7-10. *Acanthoscelides comptus*. 7, ♂ genitalia, median lobe. 8, ♂ genitalia, right lateral lobe, ventral aspect. 9, Metaleg. 10, 1st and 2nd abdominal sterna of ♂. Figs. 11-13. *A. comptus*. 11, ♂ genitalia, median lobe. 12, ♂ genitalia, right lateral lobe, ventral aspect. 13, Metaleg.

densely punctulate except for narrow, bare strip near anterior margin; meta-femur (Fig. 13) not strongly incrassate, dorsal margin moderately arcuate, ventral margin nearly straight except for slight sinuation near apex; pecten with 1 long, slender denticle followed by 2 minute denticles, these often separated from long denticle by broad gap; metatibia (Fig. 13) slightly arcuate basally, slightly broadened apically, lateral, lateroventral, ventral, and dorsomedial carinae distinct and complete; mucro short, about $\frac{1}{2}$ as long as width of tibial apex, lateral denticle short, acute; corona with 3 denticles.

Types.—Holotype ♂, Argentina. Tucumán, Ticucho, V-1977, A. L. Terán coll., ex. *Phaseolus* aff. *peduncularis* H.B.K. Allotype ♀ and 75 paratypes, same data. Holotype and paratypes deposited in the collection of the Fundación Miguel Lillo, Tucumán, Argentina. Allotype and paratypes deposited in the U.S. National Museum of Natural History, Washington, D.C. Paratypes also deposited in the C. D. Johnson Collection, Flagstaff, Arizona.

Remarks.—The specific name is taken from the Latin adjective *comp-tus*—ornamented, adorned.

The principal distinguishing characters of the species are pro- and meso-legs yellowish red; metalegs partly red; dark pronotal disk with basal gray band; apices of elytra gray; and first abdominal segment not modified.

Acanthoscelides caracallae Kingsolver, NEW SPECIES

Figs. 1–3, 7–10

Measurements.—Body length, 2.5–2.9 mm, width, 1.7–1.8 mm; pronotal length, 0.7–0.8 mm, width, 1.2–1.3 mm.

Color.—Integument black throughout except 1st and 2nd antennal segments occasionally brownish red; pro- and meso-legs occasionally piceous or faintly dark red; lateral spot behind eye red. Vestiture composed of slender, silvery-gray and dark brown hairs arranged in pattern shown in Fig. 1; posthumeral band and elongate postscutellar stripe more densely clothed so as to appear pure white; body beneath evenly clothed with silvery-gray hair except pure white spot on posterior portion of metepisternum extending onto metacoxal face.

Structure.—Body ovate (Fig. 1), widest immediately behind humeri. Head subtriangular, eyes strongly convex and protuberant laterally; ocular sinus deep, about $\frac{3}{4}$ length of eye; supraocular sulcus narrow, deep, bottom closely set with setiferous, umbilicate punctures; postocular fringe narrow; frons convex, frontal carina distinct; frons and vertex densely foveolate, each foveola umbilicate and setose, intervals narrow, ridgelike, those on frons tending to be longitudinally imbricate; clypeus with foveolae irregular, somewhat larger than those on frons; labrum bare, polished; antenna of ♂ strongly serrate (Fig. 2), extending to 1st abdominal segment, moderately serrate in ♀ (Fig. 3) but reaching only to humerus. Pronotum campaniform, lateral margins slightly arcuate, basal margin bisinuate, apical margin strong-

ly arcuate; disk strongly convex with slight depression opposite base of each 3rd elytral interval and on basal lobe; surface densely, evenly microfoveolate, intervals micropunctate; in lateral aspect, dorsal profile strongly convex, lateral carina traceable as an arcuate, obtuse ridge from posterolateral angle $\frac{1}{2}$ distance to anterior margin then as a fine sulcus connected to ventral end of cervical sulcus; cervical boss bisetiferous; pleural region concave; prosternum T-shaped, short before coxae, apex acute, not separating apices of procoxae. Scutellum quadrate, slightly longer than wide, apex emarginate, bidentate. Elytra together as long as wide (Fig. 1), widest at basal $\frac{1}{3}$, lateral margins subparallel, apices evenly rounded, disk subdepressed medially between 6th striae; striae regular in course, stria 1 arising behind scutellar depression, 2 from a small basal puncture, 3, 4, 5, and 6 subbasal in origin, lacking basal denticles, all striae free apically; striae shallow, distinct, composed of confluent rectangular or polygonal foveolae each bearing a fine seta at its anterior border; intervals finely imbricate and densely setose; mesosternum triangular, truncate apically and with a tuft of short hairs; postmesocoxal sulci meeting medially at right angle, laterally arcuate parallel to coxal cavity margin; metepisternum sparsely foveolate; metasternum finely punctate. Abdomen with 1st sternum $1.5\times$ as long as remaining sterna together, ♂ with 1st sternum depressed medially (Fig. 10), depression finely but distinctly punctate, posterior margin of depression with fringe of long setae, 2nd and 3rd sterna also with some long setae, 5th sternum broadly emarginate to receive apex of reflexed pygidial apex; ♀ with 1st sternum not modified, 5th sternum less deeply emarginate than in ♂, ♂ pygidium subtriangular, lateral margins arcuate, apex slightly more narrowed in ♀, disk in both sexes microfoveolate, evenly convex. Male genitalia with median lobe (Fig. 7) about $4\times$ as long as wide, expanded apically; ventral valve short, broad, lateral margins strongly arcuate; internal sac without armature in basal $\frac{1}{2}$ but with short transverse rows of minute setae, apical $\frac{1}{2}$ with fine, acute denticles and spicules, apex with pair of boat-shaped sclerites fringed with fine spicules; lateral lobes (Fig. 8) long, expanded apically, separated by cleft about $\frac{1}{2}$ their length. Pro- and mesolegs not modified; metacoxal face reniform, concave medially, densely, irregularly punctulate; metafemur (Fig. 9) with dorsal profile evenly arcuate, ventral profile sinuate; pecten with 1 long and 1 or 2 shorter denticles; metatibia (Fig. 9) arcuate basally, slightly expanded and distinctly sinuate in apical $\frac{1}{2}$; lateral, ventral, and dorsomedial carinae distinct and complete, lateroventral carina obsolete in apical $\frac{1}{4}$; mucro short, acute, scarcely longer than lateral denticle, subequal in length to coronal denticles.

Types.—Holotype ♂, Argentina, Tucumán, Dpt. Trancas, San Pedro de Colalao, 21-IX-1952, A. L. Terán coll., ex semillas de *Phaseolus caracalla*. Allotype ♀ and 53 paratypes, same data. Other paratypes, ARGENTINA: same data as type except IX-1953 (16); same data as type except IV-1953

median line and lateral spots; ♂ eyes larger than ♀ eyes
..... *A. clandestinus* (Motschulsky)

LITERATURE CITED

Motschulsky, V. 1873 (1874). Enumération des nouvelles espèces de Coléoptères rapportés de ses voyages. Bull. Soc. Imp. Nat. Moscou 46: 203–252.

Sharp, D. 1885. Biologia Centrali-Americana, Insecta, Coleoptera, Bruchidae 5: 437–504.



Kingsolver, John M. 1981. "2 New Species Of Acanthoscelides (Coleoptera, Bruchidae) Associated With Phaseolus (Leguminosae) From Argentina, With The Description Of A New Species group, And A New Synonym." *Proceedings of the Entomological Society of Washington* 83, 52–59.

View This Item Online: <https://www.biodiversitylibrary.org/item/55215>

Permalink: <https://www.biodiversitylibrary.org/partpdf/57714>

Holding Institution

Smithsonian Libraries and Archives

Sponsored by

Smithsonian

Copyright & Reuse

Copyright Status: In copyright. Digitized with the permission of the rights holder.

Rights Holder: Entomological Society of Washington

License: <http://creativecommons.org/licenses/by-nc-sa/3.0/>

Rights: <https://biodiversitylibrary.org/permissions>

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.