

NEW SPECIES OF SCAPHOIDEUS¹

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ABSTRACT

Five new species of *Scaphoideus* are described: **aduncus**, **bihamatus**, and **forceps** from Texas, **soleus** from Ohio, and **procerus** from North Carolina.

The genus *Scaphoideus* was erected by Uhler in 1899. A review of the genus by DeLong (1939) included a key to 41 species and illustrations of the male genital structures of 40 species. Forty-seven species are included in the Oman check list (1949); five species are now being added to that group.

Three subgenera were suggested by DeLong in 1939 but were ruled invalid by Oman (1949) because no types were designated. These subgenus names are proposed again. The subgenus *Lonenus* (type species, *S. intricatus* Uhler) has long, convexly rounded plates, almost as long as the pygofers, and styles with long, attenuated apical portions. The subgenus *Angenus* [type species, *S. immistus* (Say)] has short, convexly rounded plates with rounded apices and styles with short, pointed, divergent apices. The subgenus *Latenus* (type species, *S. veterator* DeLong and Beery) has short plates greatly exceeded in

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length by the pygofer, with bluntly or sharply pointed apices, and styles with sharp, pointed, finger-like apices.

All holotypes, allotypes, and paratypes, unless otherwise designated, are in the DeLong collection at the Ohio State University.

Scaphoideus (Angenus) aduncus, n. sp.

(Figs. 1-2)

Length of male 5.0 mm, of female 5.2 mm. Crown bluntly angled, slightly longer at middle than basal width between eyes. Color: crown cream with a narrow dark brown line just above and one just beneath margin. A median transverse orange band with a darker brown anterior margin, band slightly produced at middle, between anterior margins of eyes. Pronotum cream, marked with orange on median basal portion; caudal half dark brown. Scutellum cream, anterior half orange. Tegmina white, veins dark brown, apical portion smoky, clavus with a large white median lobe along commissure and a smaller white lobe caudal to large lobe. Face dark brown with portions of pale arcs.

Male genitalia with plates about twice as long as broad, narrowed and rounded at apex. Style broadened on basal half, narrowed on apical half to form a long, slender, outwardly curved apex. Aedeagus with apex of shaft composed of two proximal parts distinctly surpassing apex of dorsal process; dorsal process broadest at middle, concavely curved on dorsal margin to form a long, curved, tapered, sharp-pointed apex; basal half gradually, irregularly narrowed to a slender basal attachment to shaft.

Female with posterior margin of seventh sternum angularly produced, rounded at apex on median, darkly embrowned third, slightly notched at middle.

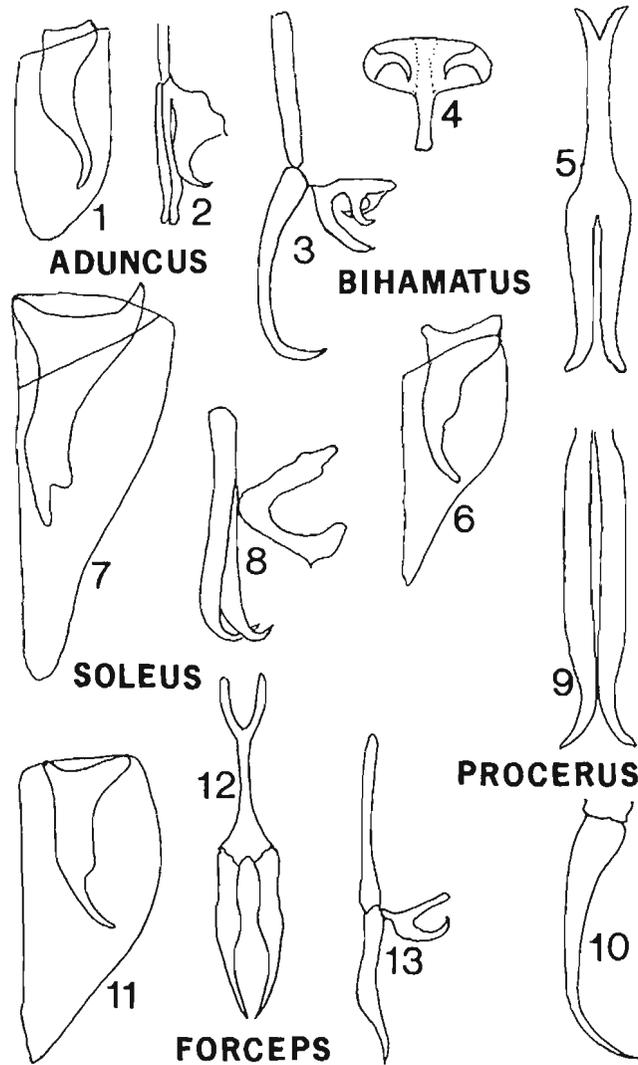
Types. Holotype male, Gillespie Co., Tex., VI-5-54, D. J. and J. N. Knull. Allotype female, same data. Paratypes: 4 ♀, same data; 2 ♀, same data but VI-11-49; 4 ♀, same data but VI-14-34; 2 ♀, same data but V-7-46; 1 ♀, Victoria, Tex., IV-23-07, Mitchell; 1 ♂, Morongo Val., Calif., VI-19-41, D. J. and J. N. Knull.

S. aduncus differs from related species by the longer apical spine on the dorsal aedeagus process, the excavated portion on the cephalad margin, and the longer shaft to which it is attached.

Scaphoideus (Latenus) bihamatus, n. sp.

(Figs. 3-6)

Length of male 5 mm, of female 5 mm. Crown as broad between eyes at base as median length. Color: crown cream, a dark brown line, interrupted at middle just above margin, and a dark brown line just beneath margin; a dark brown transverse band, distinctly pro-



FIGS. 1-13. Figs. 1-2, *Scaphoideus aduncus*, n. sp. 1, Plate, style; 2, Lat. view, apical aedeagus. Figs. 3-6, *S. bihamatus*, n. sp. 3-5, Aedeagus, lat., cephalad, vent. views; 6, Vent. view, plate, style. Figs. 7-8, *S. soleus*, n. sp. 7, Vent. view, plate, style; 8, Lat. view, aedeagus. Figs. 9-10, *S. procerus*, n. sp. Vent, lat., views of aedeagus. Figs. 11-13, *S. forceps*, n. sp. 11, Vent. view, plate, style; 12, 13, Vent., lat. views of aedeagus.

duced at middle, between anterior margins of eyes; basal portion mostly orange tinted, crown of female more densely colored. Pronotum cream with pale brown mottling. Scutellum mostly pale brown, a small white spot on middle of each side. Tegmina white, veins brown, costal apical margin and a spot on disc, dark brown; anteapical cells pale brown; clavus with three small white lobes on each side of commissure. Face pale brown with dark brown arcs.

Male genitalia with plates twice as long as basal width, gradually narrowed on apical half to a narrow, sharp-pointed apex. Style twice as long as broad, concavely curved on outer margin; inner margin convexly curved, narrowed apically to form a long, narrow, finger-like, outwardly curved apex. Aedeagus with apical portion of shaft curved dorsally; dorsal portion attached to shaft bearing a caudal finger-like process; cephalad portion bearing two conspicuous, inwardly curved spines.

Female with the posterior margin of the seventh sternum angularly produced, apex bluntly angled and embrowned.

Types. Holotype male, Jewett, Tex., IV-10-50, D. J. and J. N. Knull. Allotype female, same data but V-4-46.

S. bihamatus can be distinguished from all other described species by the two large spines on the dorsal process of the aedeagus.

Scaphoideus (Latenus) soleus, n. sp.

(Figs. 7-8)

Length of male 6 mm, of female, 6 mm. Crown produced and bluntly angled, almost a third wider between eyes at base than median length. Color: crown cream with a faint, dark brown line above margin; a narrow, transverse, dark brown band with anterior produced lobe at middle, between anterior margins of eyes. Pronotum cream with irregular dark brown mottling. Scutellum cream with dark brown spots in basal angles, a longitudinal paler brown area at middle. Tegmina white with brown veins; apical cells dark brown; clavus brown with three white lobes along commissure; irregular brown pigment on cells. Face cream with portions of dark brown arcs.

Male genitalia with plate two and one-half times as long as basal width, gradually tapered to narrow, blunt, rounded apex. Style broad at base, gradually narrowed to less than half its basal width, then abruptly narrowed on outer margin to form a short, finger-like apex. Aedeagus with apical portion of shaft composed of two parallel processes slightly broadened at two-thirds their length, then tapered to slender, curved, sharp-pointed apices; dorsal portion U-shaped, the base of U connected to shaft, caudal apical portion enlarged.

Female with posterior margin of seventh sternum angularly produced, apex bluntly angled and embrowned.

Types. Holotype male, Franklin Co., Ohio, VI-18-50, D. J. and J. N. Knull. Allotype female, same data.

The shape and the enlarged caudal end of the dorsal process of the aedeagus will distinguish *S. soleus* from other described species.

Scaphoideus (Latenus) procerus, n. sp.

(Figs. 9-10)

Length of male 6 mm, female unknown. Crown bluntly angled, as long as basal width between eyes. Color: crown white, a black line below margin, an interrupted brown marginal line above margin, broken at middle, a broadened brown portion on each side of median white spot. A transverse orange band, produced at middle, between anterior margins of eyes. Pronotum cream, mottled with pale brown. Scutellum pale brown, with a white spot at middle on each side. Tegmina pale brown with white areas. Veins darker brown. Face pale brown with white arcs.

Male genitalia with plate twice as long as median width, convexly rounded on outer margin, apex blunt, rounded. Style broad at base, apical portion slender, finger-like, bent outwardly. Apical portion of aedeagal shaft divided, elongate, slender; in lateral view tapered to form a slender apical spur, curved dorsally. Without a dorsal portion above shaft.

Types. Holotype male, Tryon, N.C., 6-1, at light, W. W. Fiske.

S. procerus can be distinguished from all other described species by the absence of a dorsal portion of the aedeagus above the shaft.

Scaphoideus (Latenus) forceps, n. sp.

(Figs. 11-13)

Length of male 5.5 mm, female unknown. Crown bluntly angled, a little wider between eyes at base than median length. Color: crown white, transverse brown band, produced at middle, between anterior margins of eyes; black line above and below margin, upper line broken at middle. Pronotum white with irregular orange markings covering most of pronotum. Scutellum with anterior half orange, posterior half white. Tegmina white, subhyaline, veins brown, apex narrowly dark brown, irregular brown markings in cells; clavus with three white lobes along commissure. Face pale brown with two heavy black bands below margin and two sets of pale brown arcs.

Male genitalia with plate twice as long as median width, apex bluntly angled. Style elongate, narrowed from base to two-thirds its length, then abruptly narrowed on outer margin, tapered to a narrow pointed apex. Aedeagus with apical portion of shaft broadened in ventral view and divided, forming two separate pieces; each piece concavely narrowed on inner apical margin forming a sharp-pointed apex; dorsal aedeagal process U-shaped.

Types. Holotype male, Jewett, Tex., V-23-51, D. J. and J. N. Knull.

The short, concavely narrowed, slender, forcep-like tips of the two pieces of the apical portion of the shaft will separate *S. forceps* from other described species of the genus.

LITERATURE CITED

- DeLong, D. M. 1939. A review of the Genus *Scaphoideus*. Proc. Entomol. Soc. Wash. 41:33-45.
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