SOME NEW SCOLOPS (HOMOPTERA, FULGORIDAE) WITH NOTES ON OTHER SPECIES.

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Scolops socorroensis sp. n.

Figs. 5, 5a.

Close to **S. maculosus** Ball but more robust, cephalic process shorter and more slender and costal cell spotted with fuscous. Length from tip of cephalic process to tip of elytra 6mm. in female; 5mm. in male.

Cephalic process about as long as front, three-fourths as wide as vertex at sulcus, quite parallel sided for most of its length, dorsal carinae remarkably parallel clear to tip, median ventral carina stopping at sulcus. Elytra very broad, about length of abdomen.

Color: Greenish or straw yellow heavily spotted with black and brown. Cephalic process dark brown except for light ventral compartment and dorsal carinae. Vertex, pronotum and scutellum greenish yellow with the usual black spots; scutellum sometimes with additional spots along cephalic margin. Elytra straw yellow with large part of clavus and corium smoky, costal cell spotted with fuscous, veins distinctly alternately white and brown spotted, with several small and a large dark brown or black apical spots. Below greenish yellow washed with brown.

Male **holotype,** female **allotype,** a male and four female **paratypes** were all taken by the junior author in Socorro County, New Mexico, Aug. 18, 1927.

Types deposited in Snow Entomological collection except one paratype in Dr. Ball's collection.

Scolops neomexicanus sp. n.

Figs. 7, 7a.

Close to **S. socorroensis** sp. n. but larger, more elongate and with a shorter cephalic process. Costal cell spotted with fuscous. Length from tip of cephalic process to tip of elytra 6.5-7mm. in female; 6mm. in male.

Cephalic process as long as or slightly longer than

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)nt, nearly as wide as vertex at sulcus, tapering ghtly from sulcus to tip, dorsal carinae gradually con-rging apically, median ventral carina stopping at lcus. Elytra usually slightly exceeding abdomen.

Color: For the most part straw yellow, distinctly ged with green especially on pronotum and scutellum; general lighter than **S. socorroensis.** Cephalic process rk except for the pale ventral compartment and dorsal rinae. Vertex, pronotum and scutellum with the usual ack spots. Tegulae dark brown. Elytra straw yellow, metimes with large smoky areas, costal cell spotted th fuscous, veins distinctly alternately brown and hite, apex with a number of dark spots. Below green-h yellow marked with brown.

Male **holotype,** female **allotype** and a series of **ratypes** were all taken by the junior author in Colfax unty, New Mexico, Aug. 21, 1927. Additional para-pes were taken by the same collector in Las Animas unty, Colorado, Sept. 22, 1927. Blue Springs, New exico, 1927; Culberson County, Texas, 1927; Apache unty, Arizona, Aug. 16, 1927. Three other para-pes from Apache County, Arizona, were taken on the me day by Doctor P. A. Readio, and one paratype was ken by L. D. Anderson in Las Animas County, Color-o, Sept. 22, 1927.

Types deposited in Snow Entomological Collection cept two paratypes in Dr. Ball's collection.

Scolops texanus sp. n.

Figs. 6, 6a.

Close to **S. neomexicanus** sp. n. but larger and with stouter cephalic process. Costal cell spotted with scous. Length from tip of cephalic process to tip of tra 7.5-8 mm. in female; 7 mm. in male.

Cephalic process as long or slightly longer than)nt, nearly as wide as vertex at sulcus, tapering slight-from sulcus to tip, dorsal carinae gradually converg-g apically, median ventral carina stopping at sulcus. ytra moderately long, slightly exceeding abdomen.

Color: Straw yellow tinged with green; in general newhat lighter than two preceding species. Cephalic ocess dark brown except for greenish dorsal carinae d ventral compartment. Vertex, pronotum and scutel-n greenish brown with the usual black spots. Tegulae own. Elytra yellowish brown, veins distinctly spotted th brown except sometimes for the tips of media and

cubitus, with four to six black spots in apical cells, the outer spots usually the largest. Below greenish brown spotted with fuscous.

Male **holotype,** female **allotype,** and a male and two female **paratypes** were all taken by the junior author at Valentine, Texas, July 13, 1927.

Types deposited in Snow Entomological Collection.

Scolops excultus sp. n.

Figs. 2, 2a.

A large reddish-brown species close to **S. grossus** but with an even larger cephalic process. Length from tip of cephalic process to tip of elytra 8 mm. in female; 7-7.5 mm. in male.

Cephalic process usually as long as front, very stout; wider than vertex at the sulcus, strongly inflated apically, practically parallel margined clear to apex, median ventral carina continuing on to apex of process. Elytra moderately long, somewhat exceeding abdomen.

Color: Distinctly reddish brown all over. Process, pronotum and scutellum definitely spotted with many white spots, and with carinae narrowly darker. Veins of elytra darker, spotted with white but not as distinctly as in **S. grossus.** Underside reddish brown, spotted all over with white spots especially on process and legs.

Male **holotype,** female **allotype** and two male **paratypes** taken by junior author in Taylor County, Texas, July 11, 1928.

This species along with **S. grossus** and **S. immanis** makes a group of three closely related species. It has the most extreme development of the cephalic process thus far found in the genus. **S. grossus** has a somewhat larger process than **S. immanis** and **S. excultus** has a process still larger. (See figures 1-3.)

Scolops (Belonocharis) californicus sp. n.

Figs. 4, 4a.

Close to **S. pallidus** but smaller, darker, distinctly spotted, and with a shorter and stouter cephalic process. Length from tip of cephalic process to tip of elytra 6.5-7.5 mm. in female; 6-7 mm. in male.

Cephalic process longer than front, three-fourths as wide as vertex at sulcus, distinctly narrowed apically, dorsal carinae gradually converging apically, median ventral carina stopping near sulcus but frequently con-

tinued on to process as a light line. Elytra as long as or slightly longer than abdomen.

Femora and tibiae of legs, especially of prothoracic legs, flattened to form characteristic of the subgenus.

Color: Straw yellow, distinctly spotted with dark brown. Cephalic process straw yellow, mottled with brown, with darker lines along lateral carinae and between dorsal carinae. Vertex, pronotum and scutellum straw yellow, pretty thoroughly mottled with brown except for larger yellow median area of scutellum. Elytra with veins distinctly alternated with white and brown, usually with larger dark spot on posterior half of claval suture and one or two large dark apical spots. Underside straw to greenish yellow, mottled with brown, particularly on the legs.

Male **holotype,** female **allotype,** and a large series of **paratypes,** all from Laguna Mountain, California, taken by the junior author on July 6, 1929. Additional paratypes were taken by the junior author in Orange County, California, on July 14, 1929.

Types deposited in the Snow Entomological Collection except two paratypes in Dr. Ball's collection.

Scolops (Belonocharis) pallidus var. **punctatus** var. n.

Size and form of **S. pallidus** but differing in color in that normally all the veins of the elytra are definitely spotted with dark brown, giving them a mottled appearance.

In Uhler's species the elytra vary greatly from a practically unmarked condition, through slight spotting, to a definitely striped appearance in the darker specimens in which there are dark stripes along the costal margin, between the sectors, and along the sutural margin. In all cases the outer branch of the first sector, or Sc plus R, and the third anal vein are light and unmarked, making two light stripes in between the three dark ones. In the variety **punctatus** there is no striped appearance, since all the veins of the elytra are rather evenly spotted.

Male **holotype,** female **allotype** and a large series of **paratypes** were taken by the junior author in the San Jacinto Mountains, California, July 21, 1929. Additional paratypes were taken at the same time and place by L. D. Anderson.

Types deposited in Snow Entomological Collection,

except two paratypes in Dr. Ball's collection.

Notes on Other Species.

Scolops maculosus. Known hitherto from Colorado and New Mexico. The writers have before them a very large series of this species from Coconino, Yavapai, Navajo and Apache Counties, Arizona.

Scolops pungens.

A series of specimens from Polk County Arkansas adds this state to the list from which this species has been secured.

Scolops angustatus

Specimens of this species are at hand from the following states from which it has not hitherto been recorded: Arizona, New Mexico, Texas.

Scolops vanduzei

A good series of this species is at hand from New Mexico and Texas from which states it has not previously been recorded.

Scolops snowi

A very large series of this species was taken by the junior author in Coconino county, Arizona, and in Zion National Park, Utah.

Scolops sulcipes

Specimems from Michigan add this state to the large number in which this species occurs.

Scolops fumidus

The Junior author took fifteen specimens of this species on Laguna Mountain and in Orange County, California, in the summer of 1929.

Scolops immanis

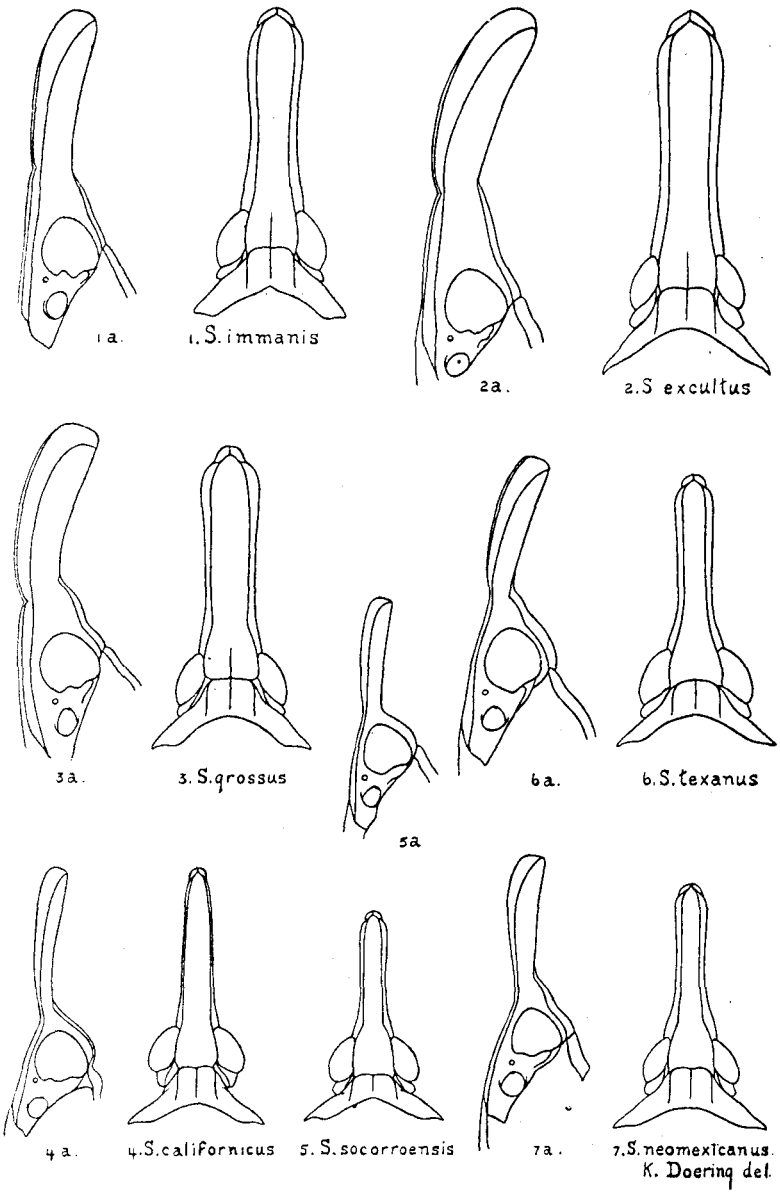
A good series of this species is at hand from Kenna, New Mexico, and two specimens from Roosevelt Co., N. Mex.

Scolops grossus

A large series of this species was taken by the junior author in Taylor County, Texas, July 11, 1928.

Correction Regarding Type Specimens

The holotype of **S. stonei** and the allotypes of **S. snowi** and **S. pruinosus** are deposited in Dr. Ball's collection instead of in the Snow Entomological Collection as previously reported.


1a.
1. S. immanis
2a.
2. S excultus
3a.
3. S. grossus
5a
6a.
6. S. texanus
4a.
4. S. californicus
5. S. socorroensis
7a.
7. S. neomexicanus.
K. Doering del.