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On the Turkish species of *Sunius*. IV. New micropterous species from southwestern Anatolia and additional records (Coleoptera: Staphylinidae, Paederinae)

V. ASSING

A b s t r a c t : Three species of *Sunius* CURTIS, 1829 from southwestern Anatolia are described, illustrated, and distinguished from similar congeners: *S. akianus* sp.n. (Muğla), *S. aculeatus* sp.n. (Muğla), and *S. dumanlianus* sp.n. (Antalya). All of them are micropterous and presumably local endemics; their distributions are mapped. Additional records are presented for four species. The presence of *S. fallax* (LOKAY) in Turkey is confirmed. Including the doubtful *S. adanensis* (LOKAY), 15 species of *Sunius* are now known from Turkey.

Key words : Coleoptera, Staphylinidae, Paederinae, *Sunius*, Palaearctic region, Turkey, taxonomy, new species, new records.

Introduction

In a recent revision, 10 species of *Sunius* CURTIS were recorded from Turkish territory (ASSING 2001). In the meantime, one additional species from Antalya has been described (ASSING 2003). The identity of *S. adanensis* (LOKAY) is still doubtful, since only females have become known and the Turkish *Sunius* species can be identified with sufficient reliability only based on the male primary and secondary sexual characters. The type specimen from Syria examined earlier is a paralectotype and not a syntype, as stated in ASSING (2001). Believing that he had identified a character distinguishing *S. adanensis* from similar congeners (a posterior incision of the female tergite IX), GUSAROV (1994) had designated the syntype from Adana as the lectotype. However, other Turkish species, too, have a similarly emarginated female tergite IX.

Several field trips to Turkey carried out in 2002 by Paul Wunderle (March/April), Armin Rose (March), and the author (March/April, July, October), and subsequently examined further material yielded, besides various additional records, three new species from southwestern Anatolia. The discovery of more undescribed species and the new records show that our current knowledge of the Turkish *Sunius* fauna is still far from complete. This conclusion is particularly supported by the fact that the five – locally endemic – species of the *S. tuberiventris* group have become known only from the extreme west (two species) and the east (three species) of the Taurus mountains (ASSING 2001, 2003, and present paper); similarly, two unnamed species probably belonging to this species group (represented only by females) were found only in the west (Bey Dağları) and in the

east (Nur Dağları) (ASSING unpubl.). Not a single species, however, has yet been found in the central parts of the Taurus mountains between the Bey Dağları and the area to the northwest of Silifke, Mersin (Map 1).

2. Material

The material referred to in this study is deposited in the following public institution and private collections:

MHNG Muséum d'histoire naturelle, Genève
cAss author's private collection
cRos private collection Armin Rose, Oldenburg
cWun..... private collection P. Wunderle, Mönchengladbach

3. Species descriptions and additional records

Sunius melanocephalus (FABRICIUS)

Additional material examined: Sinop: 2 exs., Çiflik near Sinop, 20.V.1976, leg. Besuchet & Löbl (MHNG). Samsun: 1 ex., Samsun-Kavak, 20.V.1967, leg. Besuchet (cAss). Artvin: 1 ex., Hopa-Arhavi, 14.V.1967, leg. Besuchet (MHNG).

C o m m e n t : The species is here recorded from Samsun and Artvin for the first time.

Sunius anatolicus ASSING

Additional material examined: Muğla: 2♂♂, 2♀♀ [all macropterous], N Fethiye, Çalış, 36°40'31N, 29°06'18E, 5 m, near beach, sifted from grass roots, 1.X.2002, leg. Assing (cAss). Antalya: 23♂♂, 10♀♀ [all brachypterous], 70 km NE Fethiye, Gülübeli pass, 36°50'12N, 29°45'38E, 1450 m, meadow, under stones and sifted from grass roots, 29.III.2002, leg. Assing (cAss); 2♂♂, 1♀, W Antalya, 10 km E Saklikent, 36°53'35N, 30°22'05E, 1195 m, *Acer* litter near stream, 18.III.2002, leg. Rose (cRos).

C o m m e n t s : The species is here recorded from Muğla province for the first time. Its known range is confined to southwestern Anatolia (ASSING 2001).

Sunius fallax (LOKAY)

Material examined: Istanbul: 1 ex., Altınşehir, 28.VII.1969, leg. Besuchet (MHNG); 1 ex., Halkali, 3.VIII.1969, leg. Besuchet (cAss).

C o m m e n t s : The presence of *S. fallax* in Turkey is here confirmed for the first time. The male primary and secondary sexual characters are illustrated by ASSING (1995).

***Sunius phasianus* (BORDONI)**

Material examined: Erzurum: 1 ex., Erzurum-Tortum, 12.V.1967, 2000 m, leg. Besuchet [same data as holotype] (MHNG). Kahramanmaraş: 1 ex., S Tekir, 900-1400 m, 5.V.1978, leg. Besuchet & Löbl (cAss).

C o m m e n t s : These records are within the known range of *S. phasianus*.

***Sunius akianus* sp.n. (Figs 1-9, Map 2)**

H o l o t y p e ♂: TR - Muğla, 6, 1900 m, 60km NE Fethiye, Temel -> Girdev Gölü, grass, 36°44'42N, 29°38'27E, 3.X.2002, V. Assing / Holotypus ♂ *Sunius akianus* sp.n. det. V. Assing 2002 (cAss). Paratypes: 4♂♂, 12♀♀: same data as holotype (cAss).

D e s c r i p t i o n : 3.3-4.0 mm (abdomen extended). Facies as in Fig. 1. Forebody uniformly ferruginous, head not darker than pronotum; abdomen (except for the slightly lighter apex) dark brown to blackish brown, distinctly contrasting with forebody; legs and antennae testaceous. Head approximately as wide as long (length measured from anterior margin of clypeus); puncturation coarse and well-defined, not very dense, interstices on average distinctly wider than diameter of punctures (Fig. 2); microsculpture usually absent, occasionally with indistinct traces of microsculpture; eyes of moderate size, postocular region in dorsal view approximately 1.5 times as long as eyes (Fig. 2).

Pronotum slightly (approximately 0.95 ×) narrower than head and approximately as wide as long; puncturation similar to that of head; without microsculpture; shape and arrangement of puncturation similar to those of other Turkish congeners (Fig. 2).

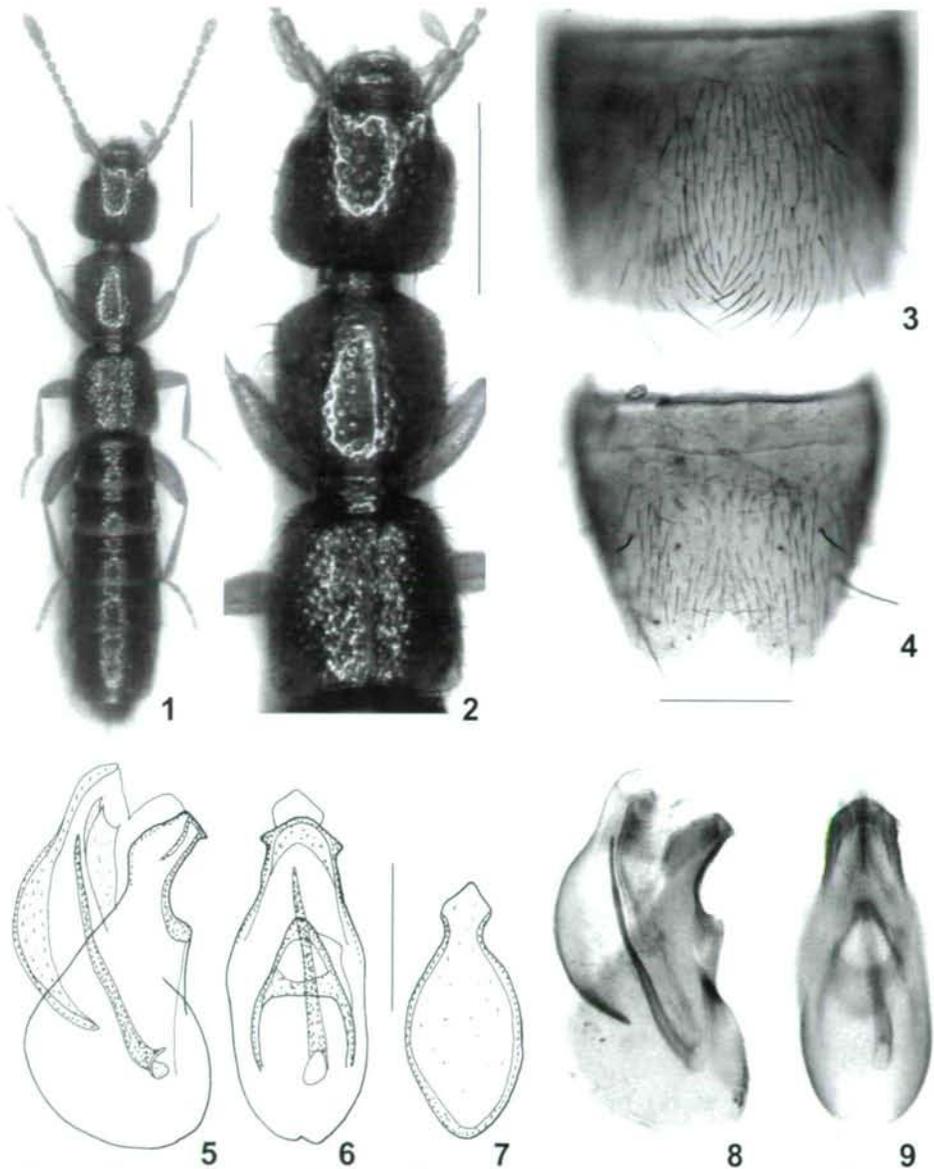
Elytra 1.10-1.15 times as wide and at suture approximately 0.8 times as long as pronotum; puncturation somewhat finer, denser, and less well-defined than that of head and pronotum (Fig. 2); microsculpture absent or indistinct. Hind wings reduced.

Abdomen distinctly wider than elytra (Fig. 1); puncturation fine and dense; pubescence dark; posterior margin of tergite VII without palisade fringe.

♂: sternite VII posteriorly with conspicuous pattern of modified pubescence, posterior margin in the middle with shallow concavity (Fig. 3); sternite VIII with rather broad posterior incision, without additional modifications (Fig. 4); aedeagus of similar general morphology as in other species of the *S. phasianus* group, apex with distinct toothlike processes in ventral view; internal sclerotized structure basally not distinctly hooked (Figs 5-9).

E t y m o l o g y : The name is derived from the Ak Dağlar, the mountain range where the type locality is situated.

C o m p a r a t i v e n o t e s a n d s y s t e m a t i c s : Based on the morphology and chaetotaxy of the male sternite VII (Fig. 3) and on the morphology of the aedeagus (obliquely truncate and angled apex in lateral view, dentate sides at apex in ventral view, long dark rod-like structure in internal sac), *Sunius akianus* doubtlessly belongs to the *S. phasianus* group, which previously included at least four Turkish species: *S. phasianus* (BORDONI), *S. dolabrifer* ASSING, *S. nurdaghensis* ASSING, and *S. rastrifer* ASSING (ASSING 2001). The new species is readily separated from *S. rastrifer* by the absence of a palisade fringe at the posterior margin of the abdominal tergite VII, from *S. phasianus* and *S. dolabrifer* by the uniformly ferruginous head and pronotum, and from *S. nurdaghensis* by the morphology of the aedeagus, i. e. by the rounded apex (ventral



Figs 1-9: *Sunius akianus* sp.n.: (1) facies; (2) forebody; (3) ♂ sternite VII; (4) ♂ sternite VIII; (5, 6, 8, 9) median lobe of aedeagus in lateral and in ventral view; (7) apico-dorsal plate of aedeagus. Scales: 1-2: 0.5 mm; 3-9: 0.2 mm.

view), by the presence of pronounced subapical lateral projections (ventral view), and by the basally less distinctly dilated rod-like structure in the internal sac.

Distribution and bionomics: The type locality is situated in the central northwestern slopes of the Ak Dağlar (Map 2), a mountain range which hosts another endemic congener, *S. brachati* ASSING of the *S. tuberiventris* group. The types of

S. akianus were sifted from soil and grass roots on a rather moist north slope at an altitude of 1900 m.

***Sunius aculeatus* sp.n. (Figs 10-19, Maps 1-2)**

H o l o t y p e ♂: TR - Muğla, 4, 1750 m, 30km NE Fethiye, Boncuk Dağı, Koru, 36°50'56N, 29°14'04E, 2.X.2002, V. Assing / Holotypus ♂ *Sunius aculeatus* sp.n. det. V. Assing 2002 (cAss).
Paratypes: 1♂, 7♀: same data as holotype (cAss).

D e s c r i p t i o n : Small species, 2.5-2.9 mm (abdomen extended). Facies as in Fig. 10. Forebody uniformly ferruginous, head not darker than pronotum; abdomen (except for the slightly lighter apex) dark brown to blackish brown, distinctly contrasting with the forebody; legs and antennae testaceous. Head weakly oblong, approximately 1.1 times as long as wide (length measured from anterior margin of clypeus); puncturation variable, usually coarse and well-defined, in central dorsal area very sparse, in lateral areas rather dense (Fig. 11); microsculpture usually absent; eyes small, not distinctly projecting from lateral outline of head, postocular region in dorsal view approximately 2.5-3.0 times as long as eyes (Fig. 11).

Pronotum 0.85-0.92 times as wide as head and approximately 1.10 times as long as wide; puncturation similar to that of head; without microsculpture; puncturation variable, usually somewhat denser than that of head (Fig. 11).

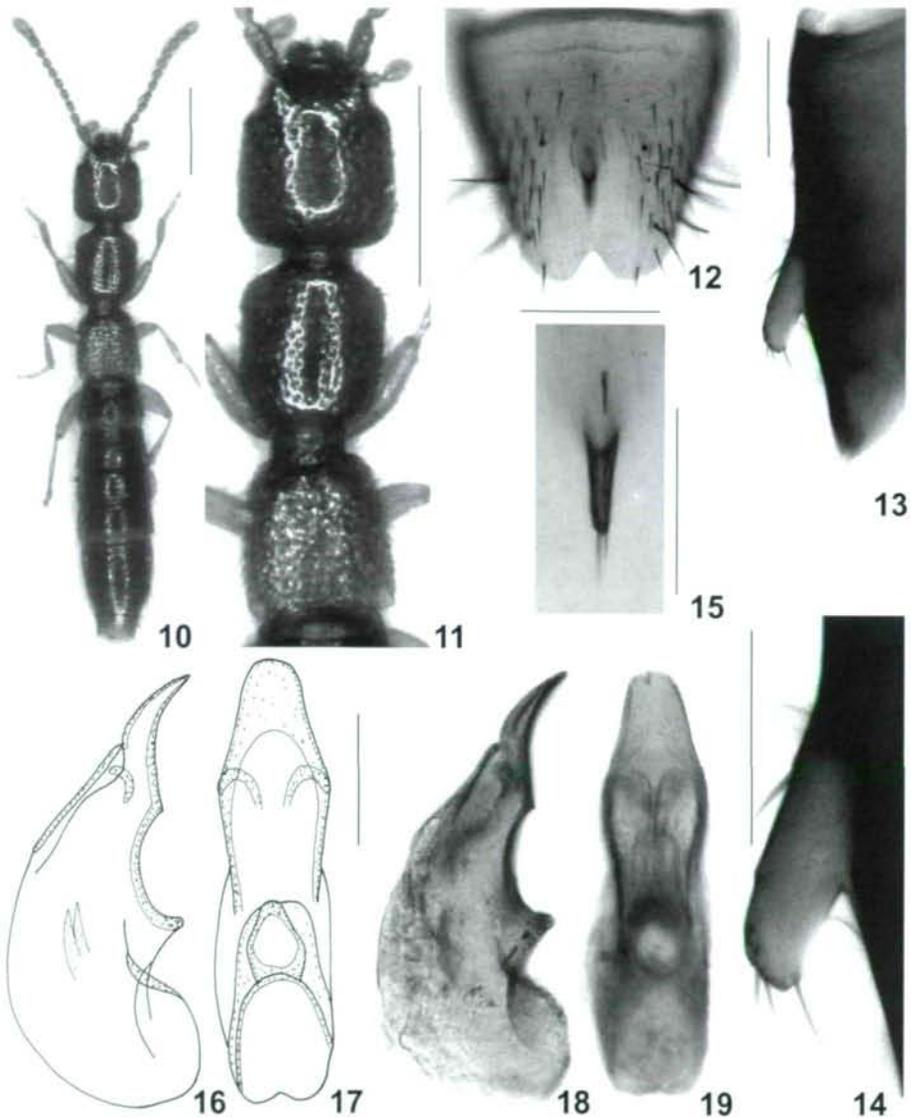
Elytra approximately as wide as pronotum; at suture about 0.75 times as long as pronotum; puncturation somewhat ill-defined (Fig. 11); microsculpture absent or indistinct. Hind wings reduced.

Abdomen distinctly wider than elytra (Fig. 10); puncturation very fine and dense; pubescence dark; microsculpture distinct; posterior margin of tergite VII without palisade fringe.

♂: sternite VII unmodified; sternite VIII highly distinctive, with obliquely projecting process in the middle, posterior median area without setae, anterior median area with very few scattered setae, posterior margin with small median emargination (Figs 12-15); aedeagus of similar general morphology as in other species of the *S. tuberiventris* group, internal sac with two semitransparent spines (Figs 16-19).

E t y m o l o g y : The name (Lat., adj.: armed with sting) refers to the conspicuous process of the male sternite VIII.

C o m p a r a t i v e n o t e s a n d s y s t e m a t i c s : As can be inferred from the morphology of the male sternite VIII (median modification, small posterior emargination) and from the general morphology of the aedeagus, *S. aculeatus* evidently belongs to the *S. tuberiventris* species group, which, in Turkey, is distributed in southern Anatolia (Taurus range). From all its congeners, this species is distinguished by the conspicuous process of the male sternite VIII alone. In other Turkish species of the *S. tuberiventris* group the male sternite VIII has a tubercle furnished with more or less tomentose pubescence. From *S. brachati*, which is known only from the Ak Dağlar in the western Taurus, it is additionally separated by the presence of spines in the internal sac of the aedeagus; in the other three Turkish representatives of this species group, *S. tuberiventris* ASSING, *S. wunderlei* ASSING, and *S. balkarensis* ASSING, which are endemic in the eastern Taurus, the internal sac contains more numerous and more distinctly sclerotized spines.



Figs 10-19: *Sunius aculeatus* sp.n.: (10) facies; (11) forebody; (12) ♂ sternite VIII in ventral view; (13) ♂ sternite VIII in lateral view; (14) process of ♂ sternite VIII in lateral view; (15) process of ♂ sternite VIII in ventral view; (16-19) median lobe of aedeagus in lateral and in ventral view. Scales: 10-11: 0.5 mm; 12: 0.2 mm; 13, 15-19: 0.1 mm; 14: 0.05 mm.

Distribution and bionomics: The type locality is situated in the Boncuk Dağı (Maps 1, 2), where the types were sifted from debris under shrubs and xerophytes at an altitude of approximately 1750 m.

***Sunius dumanlianus* sp.n.** (Figs 20-25, Map 2)

Holotype ♂: TR - Antalya, 12-, 1230 m, N Kalkan, Dumanlı Dağı, cedar-pine forest, pasture, 36°24'01N, 29°25'53E, 5.X.2002, V. Assing / Holotypus ♂ *Sunius dumanlianus* sp.n. det. V. Assing 2002 (cAss). **Paratypes**: 5♂♂, 6♀♀: same data as holotype (cAss).

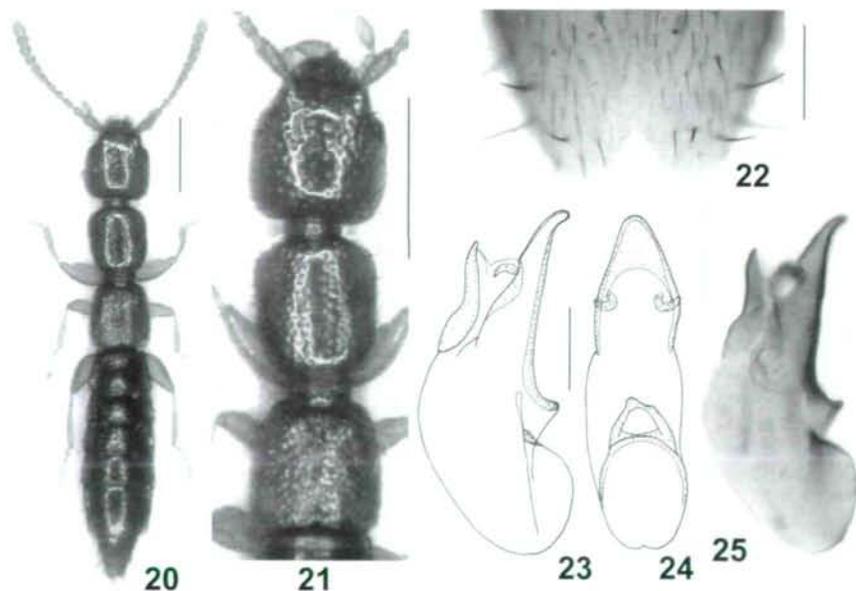
Description: 2.5-3.3 mm (abdomen extended). Facies as in Fig. 20. Forebody uniformly ferruginous, head not darker than pronotum; abdomen (except for the slightly lighter apex) dark brown to blackish brown, distinctly contrasting with the forebody; legs and antennae testaceous. Head 1.05-1.10 times as long as wide (length measured from anterior margin of clypeus); puncturation distinct and well-defined, not very dense, interstices clearly wider than diameter of punctures (Fig. 21); microsculpture absent; eyes small, weakly projecting from lateral outline of head; postocular region in dorsal view more than twice as long as eyes (Fig. 21).

Pronotum slightly (approximately 0.90-0.95 ×) narrower than head and approximately 1.10 times as long as wide; shape as in Fig. 21); puncturation denser than that of head (Fig. 21); without microsculpture.

Elytra approximately as wide as pronotum and rather short, at suture about 0.75 times as long as pronotum; punctures dense, relatively large, but shallow and ill-defined (Fig. 21); microsculpture absent or indistinct. Hind wings reduced.

Abdomen wider than forebody (Fig. 20); puncturation fine and dense; pubescence dark; with distinct microsculpture; posterior margin of tergite VII without palisade fringe.

♂: sternite VII unmodified; sternite VIII posteriorly with relatively broad emargination, without additional modifications (Fig. 22); aedeagus very distinctive, in lateral view with basally straight and apically slightly curved ventral process, in ventral view with obtusely



Figs 20-25: *Sunius dumanlianus* sp.n.: (20) facies; (21) forebody; (22) posterior part of ♂ sternite VIII; (23-25) median lobe of aedeagus in lateral and in ventral view. Scales: 20-21: 0.5 mm; 22-25: 0.1 mm.

pointed apex, and without conspicuous sclerotized structures in internal sac (Figs 23-25).

E t y m o l o g y : The name is derived from the Dumanlı Dağı, the mountain range where the type locality is situated.

C o m p a r a t i v e n o t e s a n d s y s t e m a t i c s : This species cannot be attributed to any of the species groups known from Turkey and thus holds a rather isolated systematic position. It is readily distinguished from all other Turkish congeners by the completely different morphology of the aedeagus and the different male secondary sexual characters.

D i s t r i b u t i o n a n d b i o n o m i c s : *Sunius dumanlianus* sp.n. is probably endemic in the Dumanlı Dağı, a rather isolated mountain in the very southwest of the province of Antalya (Map 2). The types were sifted from grass roots and soil between stones in and at the edge of a cedar forest at an altitude of 1200-1250 m.

Zusammenfassung

Drei in Südwest-Anatolien endemische Arten der Gattung *Sunius* CURTIS 1829 werden beschrieben, abgebildet und von anderen türkischen Arten unterschieden: *S. akianus* sp.n. (Muğla), *S. aculeatus* sp.n. (Muğla) und *S. dumanlianus* sp.n. (Antalya). Alle drei Arten sind micropter und vermutlich lokalendemisch. Ihre Verbreitung wird anhand von Karten veranschaulicht. Für vier weitere Arten werden neue Nachweise gemeldet. Das Vorkommen von *S. fallax* (LOKAY) in der Türkei wird bestätigt. Einschließlich *S. adanensis* (LOKAY), einer Art mit ungeklärter Identität, sind nunmehr 15 *Sunius*-Arten aus der Türkei bekannt geworden.

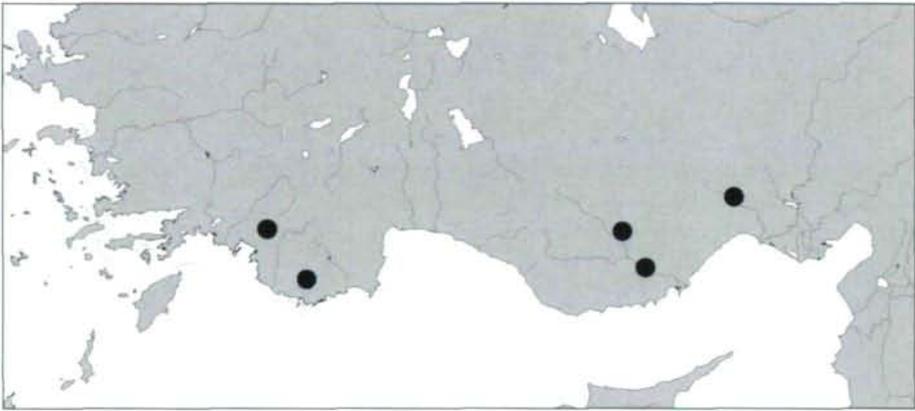
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Map 1: Distributions (type localities) of the Turkish species of the *Sunius tuberiventris* group. From west to east: *S. aculeatus* sp.n., *S. brachati* ASSING, *S. tuberiventris* ASSING, *S. wunderlei* ASSING, and *S. balkarensis* ASSING.



Map 2: Distributions of *Sunius akianus* sp.n. (filled circle), *S. aculeatus* sp.n. (open circle), and *S. dumanlianus* sp.n. (black square).