

Stenobothrus (Stenobothrodes) clavatus spec. nov. from Greece (Orthoptera, Acrididae)

by

FER WILLEMSE

ABSTRACT. — Description of *Stenobothrus (Stenobothrodes) clavatus* spec. nov. from NW Greece, characterized by having conspicuously clubbed antennae.

INTRODUCTION

Hitherto five species of *Stenobothrus* Fischer have been reported from Greece, viz.: *S.* (s.str.) *lineatus* (Panzer), *fischeri* (Eversmann), *nigromaculatus* (Herrich-Schaeffer), *graecus* Ramme and *S. (Crotalacris) rubicundulus* Kruseman & Jeekel. In 1978 I found another species in northwestern Greece. This species with remarkable antennal clubs had not yet been described.

Stenobothrus (Stenobothrodes) clavatus spec. nov.

Material studied. — ♂ holo-, ♀ allo-, 15 ♂ 17 ♀ paratypes, labelled: Ellas, Ioánnina, Mt. Tómaros above Varyiádhēs, 1200-1600 m, 2.VIII.1978, F. Willemse (author's collection).

Description. — ♂ (figs. 1, 3-4, 7, 9, 11-12, 15), comparatively robust. Antennae (figs. 3-4) longer than combined length of head and pronotum, but shorter than length of hind femur; conspicuously club-shaped, proximal segments slightly longer than wide, apical segments strongly widened and flattened, up to four times as wide as long, greatest width of apical segments (0.7-0.8 mm) 2.3-2.6 times more than greatest width of remainder of flagellum (0.3 mm). Frontal ridge more or less sulcate below median ocellus. Fastigium verticis triangular with low median carinula, foveolae impressed, margins low. Palpi without particulars.

Pronotum (fig. 7) with lateral keels more or less obtuse-angularly impressed, transverse sulcus cutting median keel at middle of pronotal length or slightly more distad. Tympanum as usual, slit-like opening about eight times as long as wide in its middle.

Elytron (figs. 11-12) well developed, reaching or almost so tip of abdomen and hind knee or slightly longer; shape slender, anterior margin slightly curved, posterior margin almost straight, tip narrowly rounded; R straight or slightest S-shaped, in apical third divided into R1 and Rs; M in proximal two thirds little divergent from R, in apical third strongly divergent; Cu1 and Cu2 before their middle third fused or almost so or separate but very close together, before their apical third distinctly separated; costal area slightly wider than subcostal area or about of equal width; greatest width of radial area half that of medial area; medial area wide, greatest width about equal to greatest distance between C and M, with regularly arranged and slightly incrassate transverse veins. Hind wing (fig. 15) shorter than elytron, apex moderately rounded, posterior margin of first vannal area strongly convex; R divided into R1 and Rs apically and slightly incrassate, M unbranched; medial area wide, from one and half to twice as wide as radial area.

Hind margin of last abdominal tergite with wide and deep trapezoid median excision, latero-posterior edges obtusely pointed (fig. 9). Hind femur four times as long as high.

General colour various shades of brown with or without olivaceous green. Antennae brown, clubbed tips black. Frons and mouthparts pale straw-yellow. Occiput usually with pair of dark brown bands. Lateral pronotal keels of general colour or pale brown, bordered with velvety black ventrally in prozona and dorsally in metazona. Elytron with white stigma in centre of apical third, membrane especially of radial and medial areas infuscate throughout or mottled with dark brown. Hind wing with most veins blackish, membrane apically infuscate. Abdomen ventrally and laterally yellowish, dorsally orange red. Hind femur of general colour with some

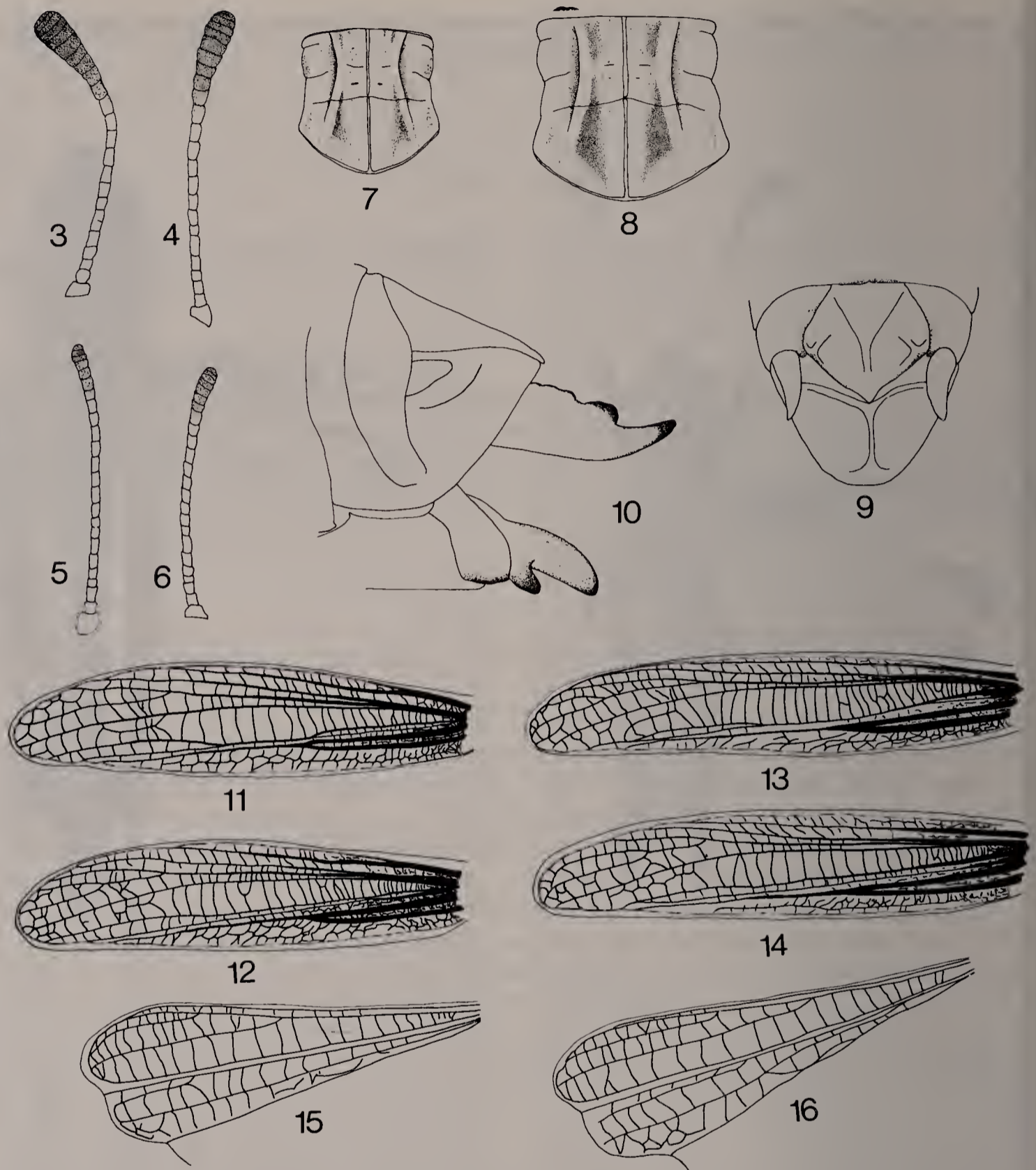


Figs. 1-2, *Stenobothrus (Stenobothrodes) clavatus* sp.n.: (1) ♂ holotype; (2) ♀ allotype

dark brown dots, lower side yellowish. Hind knee and base of hind tibia from dark brown to black, remainder of hind tibia orange red with faint postgenicular ring.

♀ (figs. 2, 5-6, 8, 10, 13-14, 16), larger than male. Antennae (figs. 5-6) shorter, about as long as combined length of head and prozona of pronotum and not quite half as long as hind femur; less conspicuously club-shaped, apical segments but little widened, greatest width (0.4 mm) 1.3 times more than greatest width of remainder of flagellum (0.3 mm). Frontal ridge and foveolae less impressed.

Pronotal lateral keels (fig. 8) as in male. Elytron (figs. 13-14) reaching apical third of hind femur, far from reaching tip of abdomen. Venation of hind wing as in male (fig. 16). Ovipositor valves with strong basal teeth (fig. 10). Colouration as in male, tegmina less infuscate and abdomen brown.



Figs. 3-16, *Stenobothrus (Stenobothrodes) clavatus* sp.n.: (3-4) antennae of two males; (5-6) antennae of two females; (7) pronotum of male; (8) pronotum of female; (9) tip of male abdomen; (10) ovipositor; (11-12) left elytron of two males; (13-14) left elytron of two females; (15) anterior part of male hind wing; (16) anterior part of female hind wing

Measurements (length in mm): body ♂ 19.5-20.2, ♀ 24.0-30.5; pronotum ♂ 4.0-4.1, ♀ 4.7-5.0; elytron ♂ 12.8-13.7, ♀ 12.1-14.0; hind femur ♂ 11.2-12.1, ♀ 13.1-15.1; antenna ♂ 7.5-9.5, ♀ 6.5-7.3.

Distribution and habitat: — Only known from the type-locality, Mt. Tómaros, South of Ioánnina, northwestern Greece. This mountain has been visited from Varyiádhēs, a village located on its southern slopes at 700 m altitude. The first few kilometers are rather steep but about after an hour a small plateau is reached at 1100 m altitude. Between this plateau and the summit of the mountain (1974 m) there is a small valley almost entirely covered by stones. The

species lives on the sunny slopes bordering this valley from 1200 up tot 1600 m altitude. The habitat is dry and stony ground with sparse vegetation. The song of the sitting male is quite distinctive, wing-stridulation during the flight has not been observed. The new species has been found together with *Stenobothrus* (s.str.) *fischeri* (Eversman), *Chorthippus* (*Glyptobothrus*) *willemsei* Harz, *Arcyptera labiata* (Brullé), *Celes variabilis* (Pallas), *Peripodisma tymphii* Willemse and some more common orthopterous species. The occurrence of the last named species is quite interesting because hitherto it was known from only the type-locality, Mt. Timfi.

Discussion. — The species is well defined by its conspicuously club-shaped antennae. This character is quite distinct from all other members of *Stenobothrus* (s.l.), also from those with slight widening of the apical antennal segments, e.g. *S.* (s.str.) *grammicus* Cazorro, *S.* (s.str.) *posthumus* Ramme, *S.* (*Stenobothrodes*) *eurasius* Zubowski, *S.* (*Crotalacris*) *croaticus* Ramme. According to the venation of the hind wing the species may belong either to the subgenus *Stenobothrodes* Tarbinsky or *Crotalacris* Chopard. These subgenera have been considered synonyms until recently Harz (1975: 771, 774) re-instated their subgeneric state. The slight darkening of the tegmina, the little incrassate radial vein of the hind wing and the absence of wing-stridulation in flight of the new species are in favour of its allocation under *Stenobothrodes*. The species resembles *S.* (*Stenobothrodes*) *eurasius* and *S.* (*Crotalacris*) *croaticus*. The latter two species differ from the new one, apart from the quite distinct antennae, in the more slender tegmina and the clearly narrower medial area of the hind wing.

REFERENCE

Harz, K., 1975. Die Orthopteren Europas. Vol. 2. — *Series ent.* 11: 1-939, figs.

Laurastraat 67, 6471 JH Eygelshoven, the Netherlands.

NIEUWE AANWINSTEN VOOR DE BIBLIOTHEEK

ANIMALIA fennica, 1931. A. Pulkkinen, Sphecidae.

DIPTERIST'S, a, handbook, 1978 (A. Stubbs & P. Chandler, eds.; Amat. Ent. 15).

DOLIN, V. G., 1978. Classification key of the larvae of click beetles (Elateridae) of the USSR (Russisch).

FORSTSCHÄDLINGE, die, Europas, 1-3, 1972/8.

KANELLIS, A. & Ch. Hatzissarantos, 1950. Bibliographia faunae Graecae (1800-1950).

LECLERCQ, J., 1954. Monographie systématique, phylogénétique et zoogéographique des Hyménoptères Crabroniens. Diss. Liège.

MAGRETTI, P., 1882. Sugli imenotteri della Lombardia Memoria 2a.

MERIAN, M. S., 1976. Schmetterlinge, Käfer und andere Insekten. Leningrader Studienbuch (W. D. Beer ed.).

PEARCE, E. K., 1921/8. Typical flies: a photographic atlas of Diptera including Aphaniptera, 1-3.

SOUTHCOTT, R. V., 1978. Australian harmful arachnids and their allies.

THIJSSE, J. P., 1947. De levende natuur; het levenswerk van Dr. Jac. P. Thijsse weerspiegeld in een bloemlezing.

TOWNES, H. & M. Townes, 1978. Ichneumon-flies of America North of Mexico: 7. subfamily Banchinae, tribes Lissonotini and Banchini. (Mem. am. ent. Inst. 26).

WOODS, R. S., 1944/7. The naturalist's lexicon, with addendum.

NIEUWE TIJDSCHRIFTEN

Aquatic insects, vanaf vol. 1.1979.

The Papua and New Guinea agricultural Journal, vanaf vol. 9.1954.

Parazitologiceskij Sbornik. Leningrad — enkele entomologische delen vanaf 1960.

Protection ecology, vanaf vol. 1.1978.