

Conocephalus (Xiphidion) concolor peneri Harz, 1970 (Orthoptera: Tettigoniidae), a new record for Turkey

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Summary

In this study, the ***Conocephalus (Xiphidion) concolor peneri*** Harz is a new record for Turkey. A short account of its taxonomy and distribution was given and necessary illustrations are provided.

Key words: Orthoptera, ***Conocephalus (Xiphidion) concolor peneri***, new record, Turkey

Anahtar sözcükler: Orthoptera, ***Conocephalus (Xiphidion) concolor peneri***, yeni kayıt, Türkiye

Introduction

The genus ***Conocephalus*** Thunberg (Ort.: Tettigoniidae) was erected by Thunberg in 1815 to include 24 species (Pitkin, 1980). It includes over 150 species world wide (Pitkin, 1980), six of which were reported from Turkey (Karabağ, 1958; Harz, 1969a, b; Salman, 1978; Naskrecki and Ünal, 1995). These are;

C. (s.str.) ***conocephalus*** (Linnaeus, 1767) known from Adana, Mersin, Hatay (Karabağ, 1958); European part of Turkey (Heller et al., 1998); **C. (Xiphidion) dorsalis** (Latreille, 1804) from Samsun (Karabağ, 1958) and European part of Turkey (Heller et al., 1998); **C. (X.) hastatus** (Charpentier, 1825) recorded from İstanbul, Bursa, Adana and Kahramanmaraş (Karabağ, 1958); Hatay (Naskrecki and Ünal, 1995); Edirne (Heller, 1988); **C. (X.) discolor** Thunberg, 1815 known from İzmir, İstanbul, Bursa, Ankara, Antalya, Kahramanmaraş and Tunceli (Karabağ, 1958); Manisa, Eskişehir and Rize (Karabağ et al., 1980); Erzurum (Demirsoy, 1975); Artvin, Kars and Van (Salman, 1978); Çorum (Heller, 1988);

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European part of Turkey (Heller et al., 1998); *C. (X.) discolor turanicus* (Semenov, 1915) from Şanlıurfa and Diyarbakır (Karabağ, 1958); Hatay (Naskrecki and Ünal, 1995) and *C. (X.) kisi gaukleri* Harz, 1969 reported from Hatay (Naskrecki and Ünal, 1995).

C. (Xiphidion) concolor is a polytypic species including four species (Otte and Naskrecki, 1997). The nominate subspecies *C. concolor concolor* Burmeister and *C. concolor buxtoni* Chopard were described from Egypt and Amara (Mesopotamia) respectively (Harz, 1969b). Remaining subspecies *C. concolor peneri* Harz (1970) was described from Israel and *C. concolor hispanicus* Heller from Spain. Later, some detailed information about the last subspecies was given by Heller (1988). Type series of the *C. concolor peneri* was reported from Hazeva (Israel) and Libya (Harz, 1970).

According to Harz (1970), *C. concolor peneri* differs from nominate subspecies by the shapes of the paranota, male cercus and titillator.

During field studies in 1998, some specimens belonging *C. concolor peneri* were collected from Şanlıurfa in Mesopotamian part of Turkey. The aim of this study is to state the distribution of *C. concolor peneri* in Turkey and some remarks about this new record. Also, necessary illustrations are provided.

Material and Method

The material has been collected from Euphrate Walley (Şanlıurfa) by the author in 1998. All the morphological data were taken from adult specimens. Specimens were softened before dissection and treatment of the male genitalia; titillator was then cleared in KOH in usually way (Salman, 1978; Çıplak, 1992). A camera lucida attachment to a microscope was used for all the drawings. All measurements are given in mm. Specimens examined in this study are deposited at HUZOM (Hacettepe University Zoological Museum).

Results

Family: Tettigoniidae

Genus: *Conocephalus* Thunberg, 1815

Type species: *Gryllus Tettigonia conocephalus* L., by tautonymy (Pitkin, 1980).

Conocephalus (Xiphidion) concolor peneri Harz, 1970

(*Conocephalus concolor peneri* Harz, K., 1970: Isr. J. Zool. 19: 192)

Body of moderate size, uniformly light green. Ratio maxima width of scapus: fastigium verticis 1.3:1; in lateral view, fastigium slightly raised above of vertex; in dorsal view, fastigium (Fig. 1a) projecting beyond the edges of antennal sockets; a brown or reddish-brown band extend from vertex to end of the occiput; antenna twice as long as body, or shorter; antenna uniform brownish; frons often

light greenish between fastigium and labrum; dorsal side of pronotum smooth in pro-mesozona, with small creamish spots and opaque in the middle of metazona; upper surface of anterior part of pronotum with two reddish-brown bands on each sides from prozona to end of the metazona, between each band and pronotal disc with a longitudinal creamy wide line; in lateral view, metazona raised (especially in male) (Figs. 1b, c); colour of pronotal disc light greenish with stuated

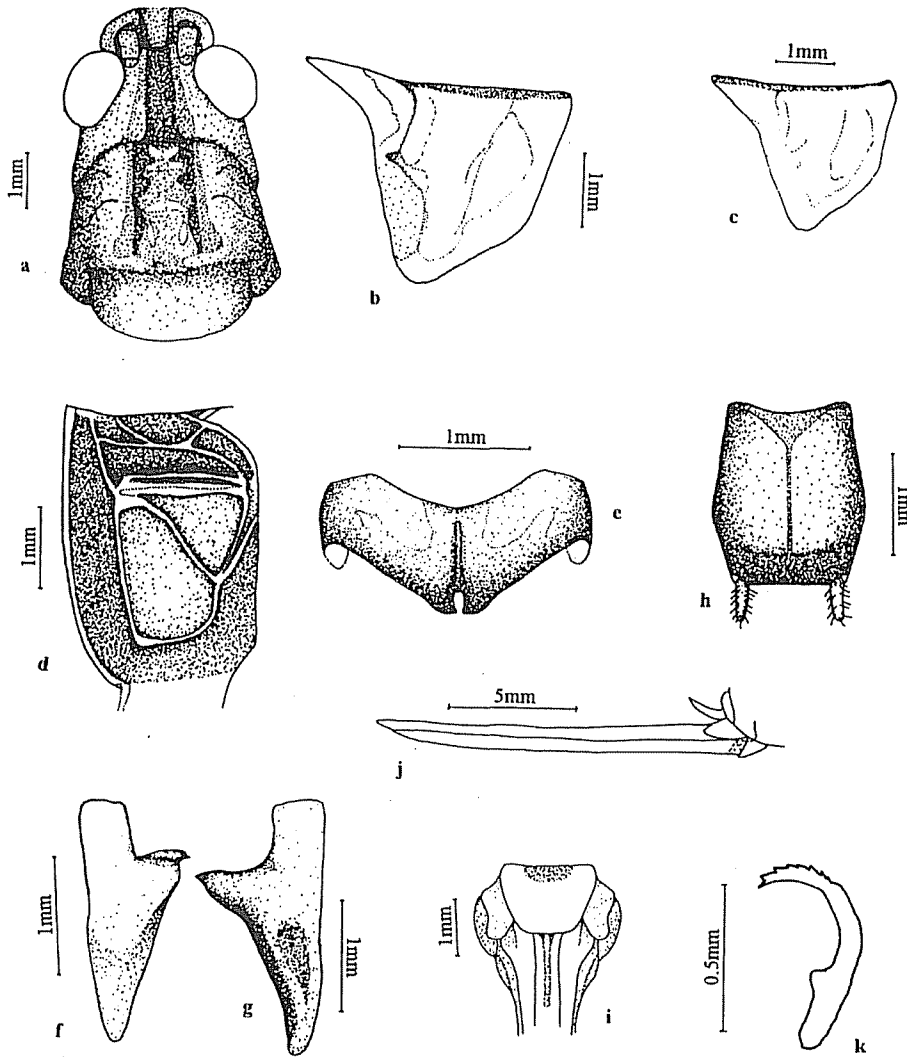


Figure 1. *Conocephalus (Xiphidion) concolor peneri*: (a) dorsal view of the male head and pronotum; (b) lateral view of the male pronotum; (c) lateral view of the female pronotum; (d) dorsal view of the male left tegmen stridulatory area; (e) dorsal view of the male tenth abdominal tergite; (f) ventral view of the male right cercus; (g) dorsal view of the male right cercus; (h) ventral view of the male subgenital plate; (i) ventral view of the female subgenital plate and ovipositor basally; (j) lateral view of the ovipositor; (k) titillator.

opaque small area at hind margin; prosternum with two spines; tegmina shorter than apex of ovipositor in female; alae 2-3 mm longer than tegmina in both sexes; male stridulatory apparatus well developed and stridulatory vein slightly swollen, stridulatory area (Fig. 1d) of left male tegmen small; postfemora about six times as long as its maximal height, without spines on ventral side, all femora light green; male tenth tergite (Fig. 1e) much wider than long and anterior margin strongly depressed downwards; posterior margin with a moderately deep and roughly ovale median excision; male cercus (Figs. 1f, g) robust, with a stout inner tooth proximally; male subgenital plate (Fig. h) slightly longer than wide, posterior margin somewhat smooth, stylus cylindrical, about 3.5 times longer than its maximal heights; female subgenital plate (Fig. 1i) small, trapezoid and smooth; ovipositor (Fig. 1j) straight and smooth, laterally pressed, light brownish; titillator as fig. 1k. General coloration is light yellowish-green.

Measurements (mm): body of lengths, male 17-17.2, female 18; pronotum, male 3.4-3.5, female 3.8; tegmina male 18.6-20, female 23.8; postfemora male 13.8-14.2, female 14; ovipositor 15.2.

Distribution: Up to date, this subspecies known from Israel and Libya.

Material examined: Şanlıurfa, Halfeti, Akçağlayan Köyü (450 m): 25.VIII.1998, 2♂, 1♀.

Discussion

Conocephalus concolor peneri can be easily recognised and separated from remaining subspecies by raised metazona of pronotum, raised fastigium above level of vertex, more stout inner tooth of male cercus proximally, male tenth abdominal tergite and trapezoid female subgenital plate. It especially differs from nominate subspecies with presence of the dorsal stripe on paranota. Additionally, smaller size of some body parts are characteristics of the newly recorded subspecies.

C. c. peneri is a typical Ethiopian element. Its distribution covers eastern part of the north Africa and Levant. According to Ayal et al. (1999), distribution of this new record is related to *Desmostachya bipinnata* (L.) (Graminae). They suggested that the temperature is main factor that limited the distribution of this subspecies rather than precipitation and vegetation.

Özet

Türkiye faunası için yeni bir kayıt: *Conocephalus (Xiphidion) concolor peneri* Harz, 1970 (Ort.: Tettigoniidae)

Bu çalışmada, *Conocephalus (Xiphidion) concolor peneri* Harz, 1970 alttürü, Şanlıurfa'dan Türkiye faunası için yeni bir kayıt olarak tespit edilmiştir. Bu alttürü ait taksonomik karakterler orijinal tanıma göre karşılaştırılmış ve çizimleri verilmiştir.

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