

## A new species of *Dictyonota* Curtis, 1827 from Turkey (Heteroptera, Tingidae)

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### Summary

This paper deals the original description of *Dictyonota astragali* n.sp. which have been collected on *Astragalus* grown on the bank of the crater lake of Nemrut Mountain (Bitlis).

Holotype (♂) and 2 paratypes (1 ♂, 1 ♀) are deposited at the University of Agriculture, Department of Animal Physiology and Zoology, Praha, Czechoslovakia and 3 paratypes (2♂♂, 1♀) are also deposited at the University of Ege, Faculty of Agriculture, Department of Entomology and Agricultural Zoology, Izmir, Turkey.

### Introduction

Up to date only three species of *Dictyonota* Curtis, namely *D. tricornis* (Schr.), *D. aridula* Jak. and *D. fuliginosa* C., have been recorded in Turkey (Hoberlandt, 1955; Stichel, 1960). Besides these, during the junior author's expeditions in Turkey it has been found two more species of *Dictyonota*. One of which, *D. strichnocera* Fieb. is a new record for Turkey and the other is *D. astragali* n.sp. which its description is given below.

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*Dictyonota astragali* sp.n.

(Figs. 1-7)

**Description**

Macropterous form. Elongate, about 2.8 times longer than wide, general colour dark brown to blackish, with whitish areolae and with pale some portions of reticular ribs. A wide, transverse stripe running across proximal portion of discoidal area and anterior half of posterior pronotal corner is especially surprising (in region between posterior margin of convex pronotal disc-just behind level of ends of paranota - and between ending of pronotal lateral carinae).

Head punctured, approximately 1.19 times longer than wide, blackish brown, anterior frontal processes, occipital processes, tips of antenniferous tubercles and bucculae yellowish brown. Anterior margin of anteclypeus reaching level of apices of second antennal segments. Spiniform processes of head not erected but pressed to the surface of head. The pair of anterior frontal processes small, about as long as width of anterior tibia. Occipital processes only indistinctly longer, hardly reaching level of middle of eyes. Antennal tubercles with pointed, inwardly curved apices, tubercles being much smaller than second antennal segment. Vertex rather convex between eyes. Synthlipsis 1.8 times wider than width of an eye in male, 2.8 times in female. Antennae blackish brown, covered with tiny tubercles bearing very short dark hairs. Third antennal segment much wider than anterior tibia (Figs. 4-6) (about twice at its apex, more than twice at base) being widest of all antennal segments. Bucculae low, about as wide as tibia, mostly with two rows of small areolae. Rostrum very long reaching anterior margin of fifth (fourth visible) sternite. Relation of labial segments in mm: I:II:III:IV= 0.53:0.61:0.20:0.39.

Pronotum 0.9 times wider than its median length. Anterior margin of pronotum moderately arch-like concave, vesicula not forwardly produced. Paranota rather narrow, lateral margin of paranotum only very little convex (almost straight). Anterior half of paranotum biseriate, posterior half with only one row of areolae. Vesicula very short, with only two rows of areolae in length medially, and with one row of areolae laterally, expressively lower than pronotal median carina, i.e. not reaching level of height of median carina on highest place of pronotal disc (Fig. 1). Posterior margin of vesicula with a transverse row of rather long (about as long as anterior frontal processes of head), light, bristle-like hairs situated almost horizontally in caudal direction. Pronotal disc considerably convex, blackish and moderately shiny, sculptured with large punctures. Three longitudinal carinae equal in height and width

running on pronotum, each carina with one row of well developed areolae (Fig. 3). Median carina beginning at the anterior pronotal margin and ending at the apex of posterior pronotal corner, it is clearly distinct also in the median line of vesicula in shape of raised rib. Lateral carinae beginning behind the lowest place of pronotum, i.e. behind a transverse sulcus at the region of callosities. They run almost parallel with the median carina but they are slightly sinuate. Posterior pronotal corner rather short, not totally covering clavus. Anterior half of posterior pronotal corner (in front of ending of lateral pronotal carinae) with small white areolae and whitish reticular ribs, posterior half (behind level of ending of lateral carinae) dark, with greyish areolae and blackish brown reticular ribs. Posterior halves of lateral margins of posterior pronotal corner (behind ends of lateral carinae) moderately convex, apex of posterior pronotal corner not rounded but evidently angulate.

Hemelytra reaching beyond abdomen about  $1/5$  of their length in both sexes. Clavus well separated, areolated, its distal portion visible dorsally as it is uncovered by short posterior pronotal corner. Costal area about as wide as third antennal segment at its base, with one row of large, longitudinally oval areolae alternating always with several (two to six) small areolae arranged in two rows (Fig. 2). Reticular ribs surrounding the small areolae always blackish, costal rib near by the large areolae always yellowish white. Subcostal area wider than costal area, its anterior, its anterior half usually with three rows, posterior half (from the middle of discoidal area) with two rows of areolae. The areolae near by subcosto-discoidal rib larger than remaining areolae of subcostal area. Proximal portion of discoidal area whitish, remaining portion dark brown. Discoidal area with several (two to three) large areolae near by bordering subcosto-discoidal and discoido-sutural ribs, and with much smaller remaining areolae. Discoidal area with about 3 - 5 rows of areolae in its widest portion. Sutural area also with large and small areolae, small areolae predominating in its proximal portion (especially near the discoido-sutural rib) and large areolae in its distal portion. Sutural area with 5-6 rows of areolae in its widest portion. Hypocostal lamina about as wide as tibia with one row of only moderately elongate areolae reaching almost end of hemelytra.

Lateral and ventral portions of thorax and abdomen blackish brown, only narrow anterior bordering of prothorax, narrow bordering of supracoxal lobes and rostral lamina yellowish white. Rostral lamina low, almost rib-like on prosternum and mesosternum, with one row of very small, hardly distinct areolae on mesosternum and much higher with one row of larger, clearly distinct areolae on metasternum.

Legs dark brown to blackish, only distal halves of tibiae lighter brown.

Measurements in mm: (6 specimens measured; first value holotype, values in parentheses smallest and largest specimens of the paratypes): Length of body: 3.11 (2.97-3.28); maximal width of body: 1.09 (1.08-1.24); length of head: 0.53 (0.46-0.56); width of head: 0.44 (0.42-0.48); length of antenna: 1.21 (0.89-1.27) (I:II:III:IV=0.13:0.10:0.73:0.25) (0.11:0.07:0.56:0.15-0.14:0.10:0.76:0.27); length of pronotum: 1.02 (0.95-1.14); width of pronotum: 0.94 (0.85-1.00); length of hemelytron: 1.96 (1.90-2.13); width of hemelytron: 1.09 (1.08-1.24); length of posterior tibia: 0.71 (0.68-0.76); length of posterior tarsus: 0.14 (0.12-0.15).

Holotype ♂ : Turkey-Bitlis (Nemrut Mountain, 2.300 m), on *Astragalus* sp. grown on the bank of the crater lake. leg., F. Önder, deposited at the University of Agriculture, Department of Animal Physiology and Zoology, Praha, Czechoslovakia.

Paratypes: 3 ♂♂ and 2 ♀♀ same data as holotype. 1 ♂ and 1 ♀ paratypes deposited in the same Institution and 2 ♂♂, 1 ♀ paratypes also deposited at the University of Ege, Faculty of Agriculture, Department of Entomology and Agricultural Zoology, İzmir, Turkey.

### Discussion and Distinguishing Notes

A revision and summarization of our recent knowledge of species of the genus *Dictyonota* CURTIS, 1927, occurring in the U.S.S.R. and Mongolian fauna, was given by Golub (1975) who also described seven new species from this area. He also ascertained that the division of the genus into the subgenera, as it had been used e.g. by Horvath (1906), could not be valid henceforth, as some of the studied species bear intermediate morphological characters. For the same reasons he also synonymized the genus *Biskria* Puton, 1874 with the subgenus *Dictyonota* CURTIS, 1827. A bit larger genus *Dictyonota* CURTIS, including recently about 52 species, was divided by Golub (1975) into two subgenera only: subgenus *Dictyonota* CURTIS, 1827 (incl. *Biskria* PUT.) and subgenus *Kalama* PUTON, 1876 (incl. *Elina* FERRARI, 1878 and *Alcletha* KIRKALDY, 1900). More detailed data on synonymy are given in his paper.

Recently, Pericart (1979) published an important paper on the genus *Dictyonota* in which he gave a revision of west palaeartic species, new synonymies and descriptions of three new species of the subgenus *Kalama*.

*Dictyonota astragali* sp.n. belongs to the subgenus *Dictyonota* CURT. quite evidently. This subgenus has been characterized by Golub (1975) by

having long occipital processes of head reaching beyond posterior margin of eyes and by having the base of its discoidal area light with usually whitish ribs proximally.

Including the new one, 27 described species belong to this subgenus **recently**.

The new species differs very considerably from *D. fuliginosa* COSTA, 1855, *D. phoenicea* SEID., 1963, *D. strichnocera* FIEB., 1844, *D. teydensis* LINDB., 1936, *D. bishareenica* (LINNAV., 1965) (Sudan), *D. opaca* (LINNAV., 1965), *D. opaca josifovi* (SEID., 1968), *D. halimodendri* GOL., 1975, *D. gracilicornis* PUT., 1874 and *D. pakistana* DR. and CAPR., 1959 in having its paranota narrow, only biseriate anteriorly, and in having lateral margins of paranota almost straight, while paranota are wide, at least three-four seriate anteriorly and lateral margins of paranota strongly convex in the above mentioned species. It differs from *D. atraphraxius* GOL., 1975 in having wider paranota with well developed areolae while there are the paranota very narrow and rib-like only, without areolae in *D. atraphraxius*. The new species can be easily distinguished from *D. gobica* GOL., 1975, *D. rectipilis* (ASAN., 1970) and *D. nigricosta* KERZH. and JOS., 1966 by a quite bald pronotal disc while that one is covered with long hairs in the mentioned species.

*D. astragali* sp. n. differs from *D. salsolae* GOL., 1975 in an absence of a cone-shaped spine on vesicula (Fig. 1), and from *D. ephedrae* (KERZH., 1964) and *D. kerzhneri* GOL., 1975, e.g., in presence of high areolated pronotal carinae (Fig. 1), while there are very low ones without areolae in *D. ephedrae* and *D. kerzhneri*.

The new species is distinguishable from *D. dlabolai* HOB., 1974, *D. marmorea* BAER., 1858, *D. albipennis* BAER., 1858 by its different body shape and lateral pronotal margins almost straight, and especially by its costal area, where always a large oval areola alternates with several small ones confined in the blackish ribs (Fig. 2). On the contrary, in the above mentioned species there are the lateral margins of paranota much more convex and the costal area is regularly uniseriate, with several areolae doubled, at maximum.

The new species differs from *D. mitoris* DR. and HSIUNG, 1936 (described from China) in blackish antennae and a pronotal disc, in the shape of vesicula which is not forwardly produced, in pronotal carinae which are subequally high, in wider (triseriate) subcostal area and in a pointed apex of the posterior pronotal corner.

It is the most similar (in a general appearance and especially in an alternation of large and small areolae in the discoidal area) to the species

which were previously put into the synonymic genus *Biskria* PUT., i.e. *D. gracilicornis* PUT., 1874, *D. lepida* (HORV., 1905), *D. sareptana* JAK., 1876, *D. horvathi* (KIR., 1913), *D. pulchricornis* KERZH. and JOS., 1966, *D. pakistana* DR. and MALD., 1959, and especially to *D. hispanica* (GOM.-MEN., 1955), majority of which was keyed by Kerzhner and Josifov (1966).

It is, however, clearly distinguishable from all these species, except *D. hispanica*, according to its third antennal segment which is much wider than its anterior tibia in the new species (Figs. 4-6). Moreover, it differs from *D. gracilicornis* and *D. pakistana* in narrow paranotum. It can be distinguished from *D. hispanica*, in which third antennal segment is also very wide and head as well as pronotum of which are haired, by different body shape (especially in not having lateral margins of paranota strongly convex) and by head and pronotum totally bald.

### Özet

Türkiye'den Dictyonota Curtis, 1827 cinsine ait yeni bir tür (Heteroptera, Tingidae)

Bu çalışmada, türce zengin bir cins olan Dictyonota Curtis'ya bağlı Türkiye'den bulunmuş yeni bir tür, Dictyonota astragali sp. n.'nin orijinal deskripsiyonu verilmektedir. Yeni türe ait örnekler Nemrut Dağı (Bitlis)'nin krater gölünün kenarında yetişen Astragalus'lar üzerinde bulunmuştur.

Yeni türe ait Holotype (♂) ve 2 paratype (♂, ♀), University of Agriculture, Department of Animal Physiology and Zoology, Prag, Çekoslovakya'da; 2 ♂♂ ve 1 ♀ paratype da E.Ü. Ziraat Fakültesi, Entomoloji ve Zirai Zooloji Kürsüsü koleksiyonlarında bulunmaktadır.

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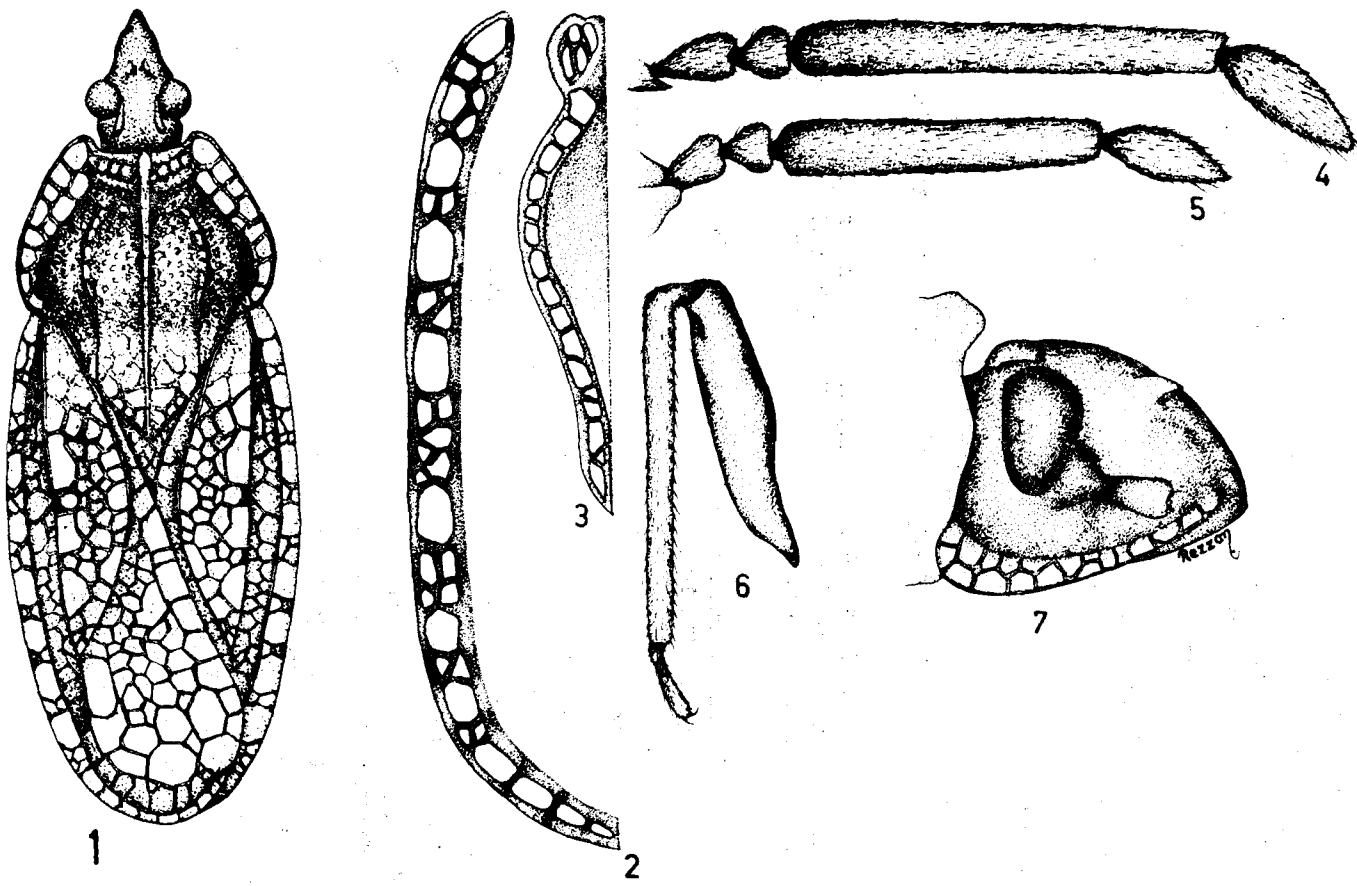


Fig. 1. *D. astragali* sp.n., holotype/total figure/

Fig. 2. costal area

Fig. 3. median pronotal carina/lateral view/

Fig. 6. anterior tibia/to be evident the difference in width between 3. antennal segment and tibia

Fig. 7. head, lateral view

Fig. 4. antenna of male

Fig. 5. antenna of female