

Studies on the Heteroptera of the Khorasan province in N.E.Iran. II. Cimicomorpha: Miridae

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A list of the Miridae species of the Khorasan province in N.E. Iran is published. New synonymy: *Orthotylus rudbaricus* Linnavuori 1997 = *O. turcmensorum* Puchkov, 1976, syn.n.

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1. Introduction

The present article is a continuation of Part I (Linnavuori & Modarres 1998: 237–241). It is based on material collected by the senior author from April to July 1994 and May 1996 in Khorasan. The expeditions were made in cooperation with the College of Agriculture of the Ferdowsi University in Mashhad and the Plant Pests and Diseases Research Institute in Evin, Tehran.

2. Material and methods

Collecting trips were made to the areas mentioned in Part I. The material consisted of 159 species; 84 of them new for Iran. Nine new species were already described in Linnavuori 1995, 1997a, 1997b, and 1998. A list of the findings is published below. For nomenclature and distributional data, the Catalogue of the Heteroptera of the Palaearctic Region III (Kerzhner & Josifov 1999) was consulted.

The collected material is preserved in the Linnavuori collection, the College of Agriculture of the Ferdowsi University, Mashhad, and the Plant Pests and Diseases Research Institute in Evin, Tehran. The material was collected by Rauno Linnavuori, when no other collector is mentioned.

3. Taxonomical notes

Orthotylus (Parapachylops) putshkovi Josifov, 1974

Orthotylus putshkovi Josifov 1974: 91–92
Figs. 1 C-D, 2 A-I, 3 A-E.

Type material examined. Kirgisia: Ferganski chrebet, Kysyl-Unkür, 4 paratypes (♂ ♀), 4.IX.1972, Josifov, in coll. Linnavuori.

Discussion. There are slight differences in the male genitalia between the Iranian population and the type series: The dorsal angle of the sensory lobe of the left style is sharply triangular (rounded in the type series) and the subapical process of the median band of the vesica is somewhat dissimilar. But in lack of material between Middle Asia and Iran both populations are regarded as conspecific.

Orthotylus (Melanotrichus) eleagni Jakovlev, 1881, and *O. (Melanotrichus) problematicus* Linnavuori, 1953

Orthotylus eleagni Jakovlev, 1881: 200.

Orthotylus problematicus Linnavuori 1953: 107.

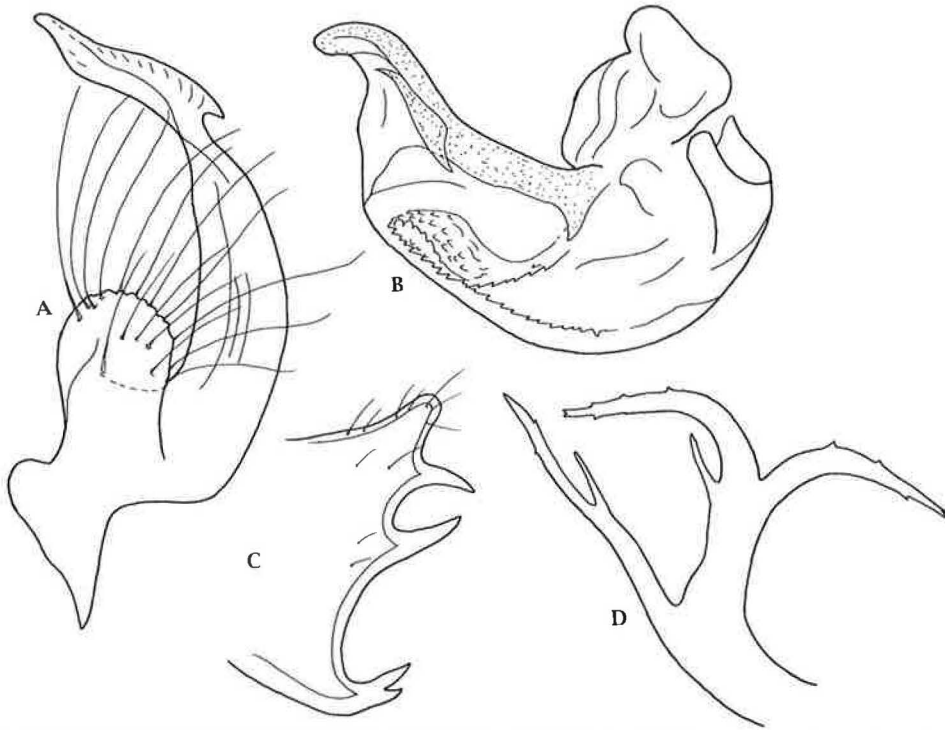


Fig. 1. *Dicyphus testaceus* Reuter (ex from Anbaran): A. left style; B. aedeagus in lateral view in slide mount. — *Orthotylus putshkovi* Josifov (paratype); C. sensory lobe of left style; D. subapical process of vesica.

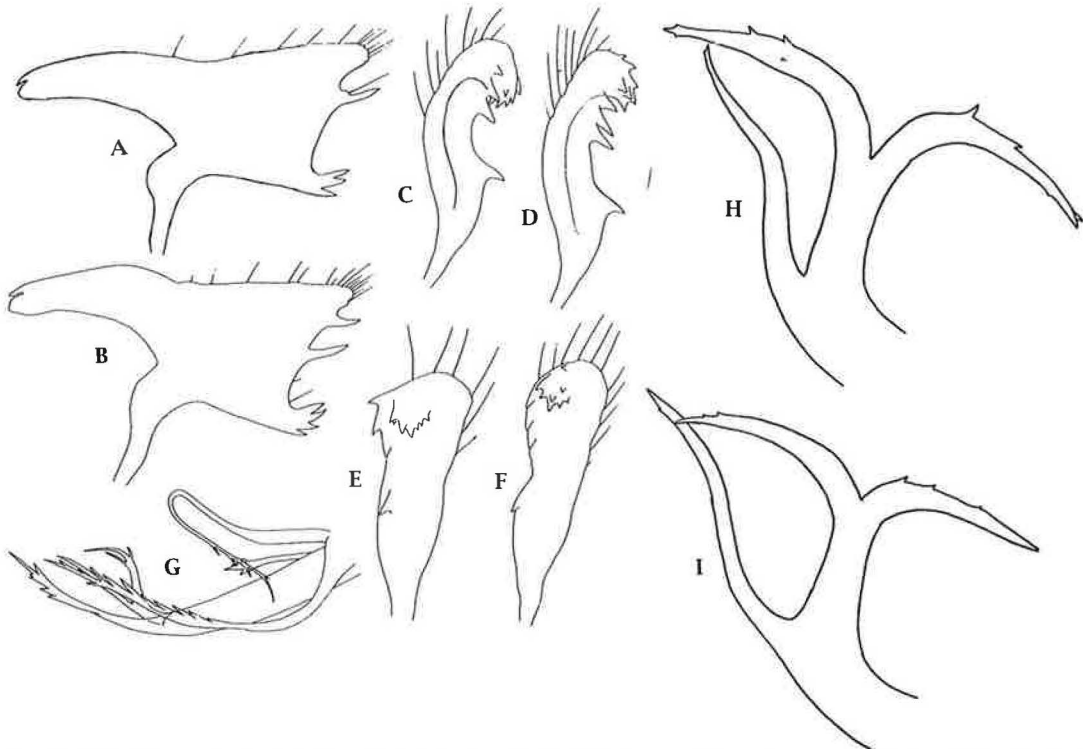


Fig. 2. *Orthotylus putshkovi* Josifov: A-B. left style; C-F. right style in different views; G. Vesica; H-I. subapical process of vesica (exx from Zard and Evin, respectively). — A-G. after Josifov 1979.

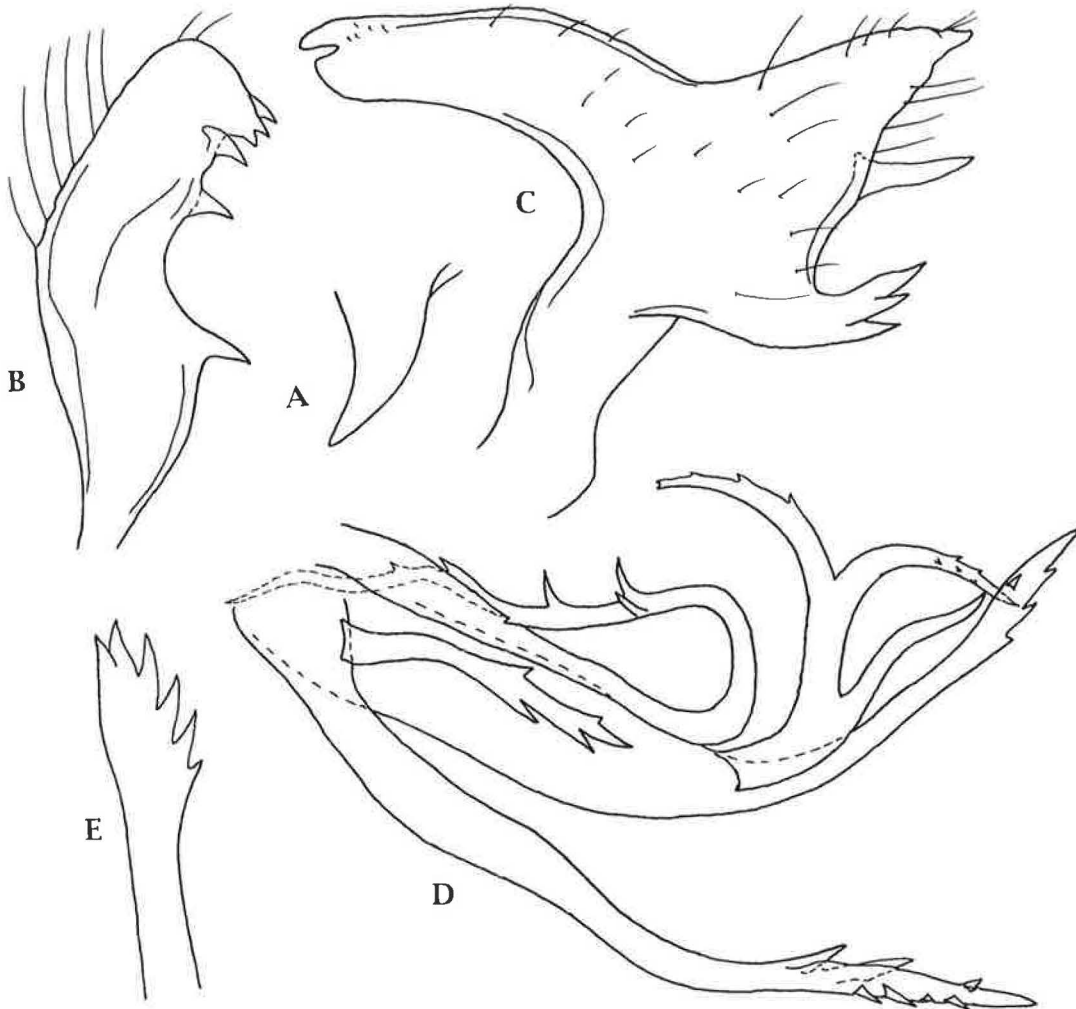


Fig. 3. *Orthotylus putshkovi* Josifov (ex from Zard): A. process of pygofer; B. right style; C. left style; D. vesica; E. basal process by vesica.

Fig. 4 A-K.

Type material examined. Turkmenistan: Fl. Tschu, ♂ holotype of *O. problematicus*, J.Sahlberg, in coll.Linnavuori.

Discussion. Both species are closely related, but can be distinguished by the following characters:

In *O. eleagni* the hair covering on the upper surface is shorter and pale, the antennae are more slender with the 1st segment considerably shorter, 0.42-0.43 (♂) or 0.38 (♀) x as long as diatone, and the apical process of the right style being simple. In *O. problematicus* the hair covering on the upper surface is long and dark brown, the antennae are more incrassate with the 1st segment (♂)

0.60 x as long as diatone and the apical process of the right style is coarsely dentate.

Orthotylus (Melanotrichus) rudbaricus Linnavuori, 1997, = *O. (Melanotrichus) turcmenorum* Puchkov, 1976, syn.n.

Orthotylus (Melanotrichus) turcmenorum Puchkov 1976: 756.

Orthotylus (Melanotrichus) rudbaricus Linnavuori 1997 a: 307-309.

Type material of O. rudbaricus. Iran: Gilan, Tutkabar-Rudbar, male holotype, 4 ♀ paratypes, 29.V-28.VI.1995; Manjil, ♂ paratype, 16.V-14.VI.1995, Linnavuori, in coll. Linnavuori.

Discussion. *O. rudbaricus* was described from

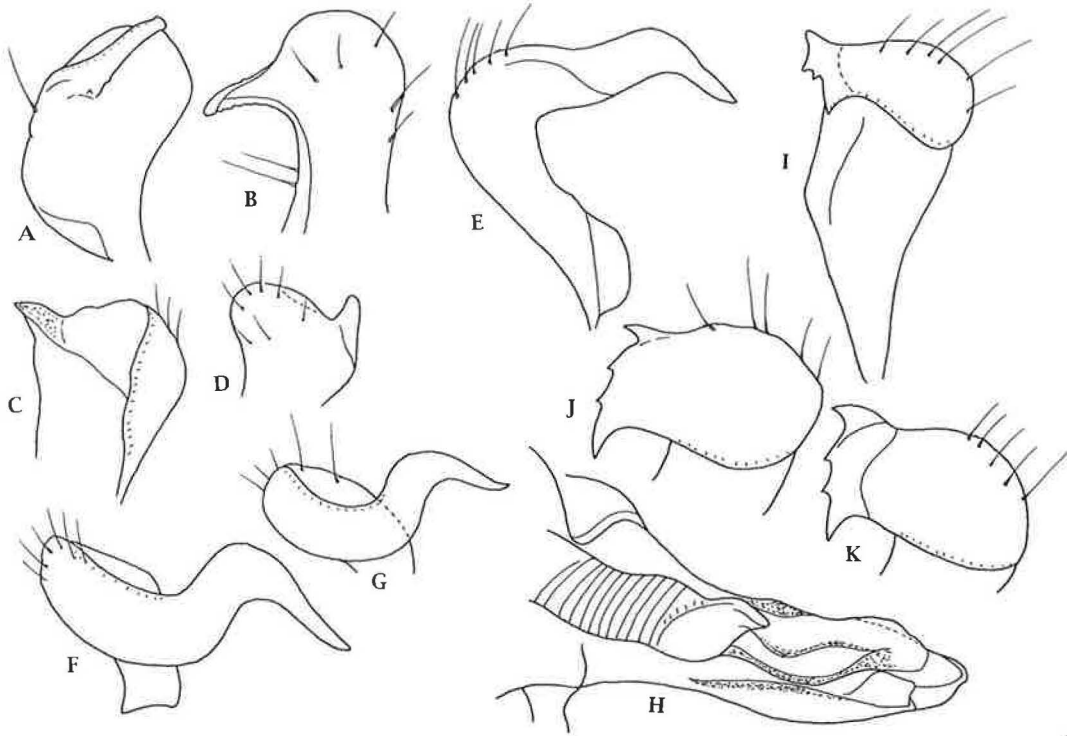


Fig. 4. *Orthotylus eleagni* Jakovlev: A-D. right style (ex from Kazakhstan, Nodeh, and two exx from Tabas, respectively); E-G. left style in different views (ex from Tabas); H. vesica. — *O. problematicus* Linnavuori (holotype); I-K. right style in different views.

an isolated area in Gilan on the basis of a robust body, larger eyes in the male, somewhat shorter antennae, and broader right style. Examination of a large amount of material collected in 1996 from Parvand revealed numerous intermediates between *O. rudbaricus* and Middle Asia specimens of *O. turmenorum*. Consequently both taxa are regarded as conspecific.

Hallodapus (Plagiorhamma) concolor Reuter, 1890, and *H. (Plagiorhamma) pseudoconcolor* Linnavuori, 1984

Plagiorhamma concolor Reuter 1890: 246.

Plagiorhamma pseudoconcolor Linnavuori 1984: 40.

Fig. 5 A-D.

Type material: *H. concolor*: Turkmenistan: Bekljär—bek, 1 ♂ and 1 ♀, J.Sahlberg, in the Zoological Museum of Helsinki University.

H. pseudoconcolor: Iraq: Dahuk, Sarsang, male holotype, several paratypes, 26-28.VIII. 1980; Ninawa, Al Qosh, several paratypes, 25. VIII.1980; Baghdad, several paratypes, IV-VI. 1980, Linnavuori. Holotype and paratypes in the

American Museum of Natural History, paratypes in coll. Linnavuori.

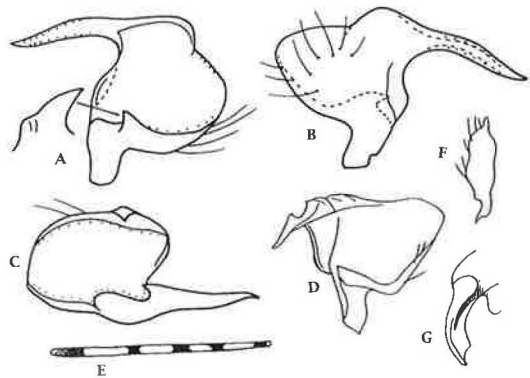


Fig. 5. *Hallodapus pseudoconcolor* Linnavuori: A-C. left style in different views. — *H. concolor* (Reuter); D. left style. — *Camptotylus gracilis* Wagner; E. 2nd antennal segment; F. right style; G. *theca*. — After Linnavuori 1975 and 1984 and Wagner 1957.

Discussion. Both species are easily distinguished by the shape of the hypophysis of the left style, which in *H. concolor* is short and obliquely T-shaped, but in *H. pseudoconcolor* long and needle-like. Puchkov & Puchkov (1983: 17-18) incorrectly recorded the latter species as *H. concolor* from Turkmenistan.

4. List of species

Deraeocorinae

Deraeocorini

Deraeocoris (Camptobrochis) punctulatus (Fallén, 1807). — Numerous exx. from Darreh Gaz, 14.VI.1994; 70 km W of Darreh Gaz, 14.VI.1994; Deh Shor 25 km N of Tabas, 17.IV.1994; Feyzabad, 16.V.1996; Khalkanlod 30 km E of Quchan, 7.VI.1994; Lotfabad, 15.VI.1994; Nodeh 30-40 km ESE of Bojnurd, 11.VII.1994; Mashhad, V-VII.1994; Sabzevar, 31.V-1.VI.1994; Zaman Soofi 65 km W of Bojnurd, 12-13.VII.1994; Tabas, 16-17.IV.1994. — Common in fields, steppes and hilly meadows. — Euro—Siberian.

Deraeocoris (Camptobrochis) serenus Douglas & Scott, 1868. — Numerous exx. from 15 km E of Bojnurd, 15.VII.1994; Darreh Gaz, 15.VI.1994; Golmakan 35 km NW of Mashhad, 10.V.1994; Kashmar, 22-23.VI.1994; Khalkanlod 30 km E of Quchan, 7.VI.1994; Khargh 30 km SW of Quchan, 8-9.VI.1994; Lotfabad, 15.VI.1994; Nodeh 30 km ESE of Bojnurd, 11.VII.1994; Mashhad, V-VII.1994; Parvand 70 km W of Sabzevar, 4.VII.1994; Sabzevar, 14-15.V.1996; Tabas, 17.V.1996. — Common in gardens, steppes and hilly meadows. — Holomediterranean.

Deraeocoris (Knightocapsus) lutescens (Schilling, 1836). — Golestan Park 150 km W of Bojnurd, 1 ex, 14.VII.1994. — On *Ulmus* sp. — Holomediterranean.

Deraeocoris (Phaeocapsus) pilipes Reuter, 1904. — Many exx. from Darreh Gaz, 15.VI.1994; Feyzabad, 16.V.1996; Kashmar, 22-23.VI.1994; Lotfabad, 15.VI.1994; Mashhad, V-VII.1994; Parvand 70-80 km W of Sabzevar, 4.VII.1994; Sabzevar, 31.V-1.VI.1994. On *Salix* sp. — Irano—Turanian.

Bryocorinae

Dicyphini

Macrolophus pygmaeus (Rambur, 1839) — Several exx. from Anbaran, 19.VII.1994; 15 km E of Bojnurd, 15.VII.1994; Darreh Gaz, 15.VI.1994; Golmakan 35 km NW of Mashhad, 10.V.1994; Khalkanlod 30 km E of Quchan, 7.VI.1994; Kashmar, 22-23.VI.1994; Mashhad, V-VII.1994; Nodeh 30-40 km ESE of Bojnurd, 12-13.VII.1994; Parvand 70-80 km W of Sabzevar, 31.V-1.VI.1994; Sabzevar, 31.V-1.VI.1994; Sorond and Modar 70 km S of Tabas, 16.V.1994; Zaman Soofi 65 km W of Bojnurd, 12-13.VII.1994; Zoshk W of Shandiz, 24.V.1994. — On herbs such as *Stachys* in meadows. — Westpalaearctic.

Macrolophus melanotoma (A. Costa, 1853). — Kashmar, 1 ex, 22-23.VI.1994; Nodeh 30-40 km ESE of Bojnurd, 1 ex, 11.VII.1994. — On undergrowth in deciduous forests. — Holomediterranean. New for Iran.

Macrolophus epilobii Puchkov, 1978. — Golmakan 35 km NW of Mashhad, 4 exx., 10.V.1994. — On *Epilobium hirsutum*. — Previously known from Azerbaijan. New for Iran.

Dicyphus (Mesodicyphus) testaceus Reuter, 1879. — Left style and aedeagus in Fig. 1 A-B. — Anbaran 30 km W of Mashhad, several exx., 19.VII.1994. — On *Mentha* sp. in a river valley. — Known from Turkmenistan. New for Iran.

Mirinae

Stenodemini

Leptopterna inopinata Vinokurov, 1982. — 70 km W of Darreh Dasht, 1 ex, 14.VI.1994. — In a mountain meadow. — Known from Transcaucasia. New for Iran.

Teratocoris antennatus (Boheman, 1852). — Nodeh 30-40 km ESE of Bojnurd, 1 ex, 11.VII.1994. — Swept from *Cyperus* and *Juncus* in a moist meadow. — Holopalaearctic. New for Iran.

Stenodema (Brachystira) calcarata (Fallén, 1807). — 15 km E of Bojnurd, 1 ex, 15.VII.1994; Nodeh 30-40 km ESE of Bojnurd, 11.VII.1994; Tabas, 1 ex, 16-18.V.1994. — In meadows. — Holopalaearctic. New for Iran.

Stenodema (Brachystira) pilosa (Jakovlev,

1889). — Several exx. from Darreh Gaz, 15.VI.1994; Lotfabad, 15.VI.1994; Nodeh 30-40 km ESE of Bojnurd, 11.VII.1994; Parvand 70 km W of Sabzevar, 4.VII.1994; Sabzevar, 31.V-1.VI.1994. — In meadows. — Middle Asia. — New for Iran.

Stenodema (Stenodema) turanica Reuter, 1904. — Many exx. from 15 km E of Bojnurd, 15.VII.1994; Khargh 70 km SW of Quchan, 8-9.VI.1994; Nodeh 30-40 km ESE of Bojnurd, 11.VII.1994; Mashhad, V-VII.1994; Zaman Soofi 65 km W of Bojnurd, 12-13.VII.1994; Zoshk near Shandiz, 24.V.1994; Tabas, 16-18.V.1994. — In meadows. — Irano—Turanian.

Notostira poppiusi Reuter, 1911. — Many exx. from Anbaran 30 km W of Mashhad, 11.VII.1994; 70 km W of Darreh Gaz, 14.VI.1994; Khargh 70 km W of Quchan, 8-9.VI.1994; Nodeh 30-40 km ESE of Bojnurd, 11.VII.1994; Zoshk near Shandiz, 24.V.1994. — In hilly meadows. — Irano—Turanian.

Megaloceroea recticornis (Geoffroy, 1785). — Golestan Park 150 km W of Bojnurd, several exx., 14.VII.1994. — On undergrowth in deciduous forests. — Holarctic. New for Iran.

Trigonotylus caelestialium (Kirkaldy, 1902). — Lotfabad, 1 ex, 15.VI.1994; Feyzabad, 1 ex, 16.V.1996. — On grasses in meadows. — Euro—Siberian.

Trigonotylus pulchellus (Hahn, 1834). — Several exx. from 15 km E of Bojnurd, 15.VII.1994; Darreh Gaz, 15.VI.1994; Khargh 70 km SW of Quchan, 8-9.VI.1994; Lake Bazangan 50 km W of Sarakhs, 30.VI.1994; Lotfabad, 15.VI.1994; Mashhad, V-VII.1994; Nodeh 30-40 km ESE of Bojnurd, 11.VII.1994. — On grasses in meadows. — Westpalaearctic.

Trigonotylus tenuis Reuter, 1893. — 15 km E of Bojnurd, 1 ex, 15.II.1994; Deh Shor 25 km N of Tabas, 1 ex, 17.IV.1994; Tabas, 1 ex, 14-15.V.1994. — On grasses in meadows. — Cosmopolitan in warm regions. New for Iran.

Mirini

Phytocoris (Exophytocoris) scitulus Reuter, 1907. — Golmakan Park 150 km W of Bojnurd, 1 ex, 14.VII.1994. — On *Cupressus*. — Pontomediter-

ranean. New for Iran.

Phytocoris (Eckerleinius) crito Linnavuori, 1972. — Deh Shor 20 km N of Tabas, 1 ex, 17.IV.1994. — On *Artemisia* sp. — Endemic for Iran.

Phytocoris (Eckerleinius) eileithyia Linnavuori, 1971. — Darreh Gaz, 1 ex, 15.VI.1994. — Originally described from Armenia. New for Iran.

Phytocoris (Eckerleinius) transcaspicus Stichel, 1958. — Darreh Gaz, 1 ex, 15.VI.1994. — On *Artemisia* sp. — Known from Middle Asia. New for Iran.

Phytocoris (Eckerleinius) undulatus Reuter, 1877. — Deh Shor 20 km N of Tabas, 1 ex, 17.IV.1994; near Parvand 70-80 km W of Sabzevar, many exx., 31.V-1.VI.1994, 14-15.V.1996. — On *Haloxylon* sp. — Irano—Turanian.

Creontiades pallidus (Rambur, 1845). — Several exx. from Deh Shor 25 km N of Tabas, 17.IV.1994; Kashmar, 22-23.VI.1994; Sabzevar, 31.V-1.VI.1994; near Tabas, 14-18.V.1994. — In fields and steppes. An important pest on cotton in Khorasan (a personal communication from Mr.S.M.Hosseini, Agricultural Research Center in Mashhad). — Holomediterranean, widely distributed in the Middle East and the Ethiopian Region.

Megacoelum brevirostre Reuter, 1879. — Many exx. from Feyzabad, 16.V.1996; Kashmar, 22-23.VI.1994; Lotfabad, 15.VI.1994; near Parvand 70-80 km W of Sabzevar, 31.V-1.VI.1994; Sabzevar, 3.VII.1994. — On plants in steppe and desert habitats. — Irano—Turanian, extending from Cyprus to Turkmenistan.

Adelphocoris lineolatus (Goetze, 1778). — Numerous exx. from 15 km E of Bojnurd, 15.VII.1994; Darreh Gaz, 15.VI.1994; Feyzabad, 16.V.1996; Golestan Park 150 km W of Bojnurd, 14.VII.1994; Kashmar, 22-23.VI.1994; Khalkanlod 30 km E of Quchan, 7.VI.1994; Khargh 70 km SW of Quchan, 8-9.VI.1994; Lotfabad, 15.VI.1994; Lake Bazangan, 30.VI.1994; Mashhad, V-VII.1994; Nodeh 30-40 km ESE of Bojnurd, 11.VII.1994; Sabzevar, 31.V-1.VI.1994; Sarakhs, 29-30.IV.1994; Tabas, 14-15.V.1994. — Common in gardens, fields, steppes, and on undergrowth in deciduous forests. — Holopalaeartic.

Closterotomus costae Reuter, 1888. — Golestan Park 150 km W of Bojnurd, 3 exx., 14.VII.1994. — On undergrowth in deciduous forests. — Syrio—Anatolian. New for Iran.

Reuterista unicolor Rosenzweig, 1997. — near Parvand 70-80 km W of Sabzevar, 2 exx., 14-15.V.1996. — Collected in light trap in a desert habitat. — Besides Khorasan known from Middle and Central Asia.

Eurystylus bellevoeyi (Reuter, 1879). — Can Chiroc 50 km S of Tabas, 6 exx., 18.V.1996; Feyzabad, 2 exx., 16.V.1996. — In steppe habitats. — Eremian with a wide range within the Sudanese and Holomediterranean subregions.

Dichroscytus persicus Josifov, 1974. — 70 km W of Darreh Gaz, several exx., 14.VI.1994. — On *Juniperus excelsa*. — Irano—Turanian.

Taylorilygus apicalis (Fieber, 1861). — Sorond and Modar 70 km S of Tabas, 1 ex, 18.V.1996. — In a hilly steppe. — Cosmopolitan in tropical and subtropical regions.

Lygus rugulipennis Poppius, 1911. — Several exx. from Lake Bazangan, 30.VI.1994; Khalkanlod 30 km E of Quchan, 7.VI.1994; Lotfabad, 15.VI.1994; Nodeh 30-40 km ESE of Bojnurd, 11.VII.1994; Mashhad, V-VII.1994; Sarakhs, 28-30.IV.1994; Zoshk near Shandiz, 24.V.1994. — In fields and hilly meadows. A pest on wheat. — Holopalaeartic.

Lygus pratensis pratensis (Linnaeus, 1758). — Golestan Park 150 km W of Bojnurd, 3 exx., 14.VII.1994. — On undergrowth in deciduous forests. — Holopalaeartic.

Lygus gemellatus gemellatus (Herrich—Schaeffer, 1835). — Numerous exx. from Anbaran 30 km W of Mashhad, 11.VII.1994; 15 km E of Bojnurd, 15.VII.1994; Darreh Gaz, 15.VI.1994; 70 km W of Darreh Gaz, 14.VI.1994; Feyzabad, 16.V.1996; Golestan Park 150 km W of Bojnurd, 14.VII.1994; Kashmar, 22-23.VI.1994; Khalkanlod 30 km E of Quchan, 7.VI.1994; Khargh 75 km SW of Quchan, 8-9.VI.1994; Lake Bazangan 50 km W of Sarakhs, 30.VI.1994; Lotfabad, 15.VI.1994; Mashhad, V-VII.1994; Nodeh 30-40 km ESE of Bojnurd, 11.VII.1994; near Parvand 70-80 km W of Sabzevar, 31.V-1.VI.1994; Sabzevar, 31.V-1.VI.1994; Tabas, 16-18.V.1996; Zaman Soofi 65 km W of Bojnurd, 12-13.VII.1994; Zosk near Shandiz, 24.V.1994. — On *Artemisia* spp. in steppes and hilly meadows. — Holopalaeartic.

Orthops (Orthops) kalmi (Linnaeus, 1758). — Several exx. from Golestan Park 150 km W of Bojnurd, 14.VII.1994; Khargh 70 km SW of

Quchan, 8-9.VI.1994; Lotfabad, 15.VI.1994; Mashhad, V-VII.1994; Nodeh 30-40 km ESE of Bojnurd, 11.VII.1994; Zaman Soofi 65 km W of Bojnurd, 12-13.VII.1994. — On undergrowth in deciduous forests and gardens. — Holopalaeartic.

Orthops (Orthops) frenatus (Horváth, 1894). — 70 km W of Darreh Gaz, 1 ex, 14.VI.1994; Khalkanlod 30 km E of Quchan, 1 ex, 7.VI.1994; Khargh 70 km SW of Quchan, 1 ex, 8-9.VI.1994; Mashhad, 1 ex, V-VII.1994. — In mountain meadows. — Recorded from Armenia, Iran (Täbriz), Afghanistan, and Middle Asia.

Orthops (Montanorthops) pilosulus (Jakovlev, 1877). — Several exx. from Chan Chiroc 50 km S of Tabas, 17.V.1994; Deh Shor 25 km N of Tabas, 17.IV.1994; Parvand 70-80 km W of Sabzevar, 14-15.V.1996; Sorond and Modar 70 km S of Tabas, 18.V.1994; Tabas, 16-17.IV.1994. — On *Pteropyrum aucheri* in hilly steppes. — Irano—Turanian.

Liocoris tripustulatus (Fabricius, 1781). — Several exx. from Anbaran 30 km W of Mashhad, 11.VII.1994; Golestan Park 150 km W of Bojnurd, 14.VII.1994; Golmakan 35 km NW of Mashhad, 10.V.1994; Nodeh 30-40 km ESE of Bojnurd, 11.VII.1994; Zoshk near Shandiz, 11.IV.1994. — On *Urtica* sp. in gardens and deciduous forests. — Euro—Siberian. New for Iran.

Charagochilus gyllenhali (Fallén, 1807). — Many exx. from Anbaran 30 km W of Mashhad, 11.VII.1994; 70 km W of Darreh Gaz, 14.VI.1994; Golestan Park 150 km W of Bojnurd, 14.VII.1994; Lotfabad, 15.VI.1994; Mashhad, V-VII.1994; Nodeh 30-40 km ESE of Bojnurd, 11.VII.1994. — On *Galium* spp. — Holopalaeartic. New for Iran.

Polymerus (Poeciloscytus) vulneratus (Panzer, 1806). — Darreh Gaz, 1 ex, 15.VI.1994; Lotfabad, 4 exx., 15.VI.1994; Mashhad, 1 ex, V-VII.1994; Sarakhs, 1 ex, 29-30.IV.1994. — On Chenopodiaceae plants. Holopalaeartic.

Polymerus (Poeciloscytus) cognatus (Fieber, 1858). — Nodeh 30-40 km ESE Bojnurd, 2 exx., 11.VII.1994; Parvand 70-80 km W of Sabzevar, 1 ex, 4.VII.1994. — On Chenopodiaceae plants. — Holopalaeartic. New for Iran.

Polymerus (Poeciloscytus) brevicornis Reuter, 1878. — Several exx. from Golestan Park 150 km

W of Bojnurd, 14.VII.1994; Lotfabad, 15.VI.1994; Mashhad, V-VII.1994. — On *Galium* spp.— Widely distributed from Central and South Europe to Middle and Central Asia. New for Iran.

Polymerus (Poeciloscytus) lammesi Rinne, 1989. — 70 km W of Darreh Gaz, 3 exx., 14.VI.1994. — On *Galium* sp. in a mountain slope. — Distributed from southern Finland to Central Europe and the Balkan Peninsula. New for Iran.

Horistus turcomanus (Horváth, 1889). — Zoshk near Shandix, 2 exx., 24.V.1994. — On *Eremurus stenophyllus* in a hilly meadow. — Syrio—Anatolian. New for Iran.

Orthotylinae

Halticini

Myrmecophyes alacer Horváth, 1927. — 70 km W of Darreh Gaz, 3 exx., 14.VI.1994; Khargh 70 km W of Quchan, 1 ex, 8-9.VI.1994; Shourlough, several exx., 30.IV.1994. — In mountain meadows. — Also known from Caucasia and Transcaucasia.

Myrmecophyes variabilis Drapolyuk, 1989. — Khargh 70 km SW of Quchan, several exx., 8-9.VI.1994. — In mountain meadows. — Also known from Caucasia.

Orthocephalus modarresi Linnavuori, 1997. — 70 km W of Darreh Gaz, male holotype, female paratype, 14.VI.1994; Khargh 70 km SW of Quchan, female paratype, 8-9.VI.1994 in coll. Linnavuori. — In mountain meadows with *Asragalus*, *Phlomis*, *Thymus*, *Verbascum*, and *Euphorbia*. — Endemic for Iran.

Orthocephalus bivittatus Fieber, 1864. — Several exx. from Roubat Sharaf 25 km SW from Sarakhs, 30.IV.1994; Shourlough 25 km W of Sarakhs, 30.IV.1994. — In hilly meadows with grasses, Apiaceae and Asteraceae such as *Artemisia* sp. — Northmediterranean. New for Iran.

Anapus kirschbaumi Stål, 1858. — Sarakhs, 1 ex, 8-9.VI.1994. — Swept from a steppe with *Hordeum* sp., *Matricaria* sp., Apiaceae, and halophytes. — Caspian, extending from Ukraine to Central Asia. New for Iran.

Orthotylini

Hyoidea notaticeps Reuter, 1876. — Shourlough 25 km W of Sarakhs, 1 ex, 30.IV.1994. — On *Ephedra* sp.— Caspian, extending from Slovakia to Middle Asia. New for Iran.

Brachynotocoris puncticornis Reuter, 1880. — Numerous exx. from Darreh Gaz, 15.VI.1994; Lotfabad, 15.VI.1994; Mashhad, V-VII.1994. — On *Fraxinus rotundifolia*. — Northmediterranean. New for Iran.

Reuteria kiritshenkoi Muminov, 1964. — Golestan Park 150 km W of Bojnurd, 2 exx., 14.VII.1994. — On *Ulmus* sp. — Known from Caucasia. New for Iran.

Malacocoris chlorizans (Panzer, 1794) — Anbaran, 7 exx., 19.VII.1994; Zaman Soofi, 1 ex, 12-13.VII.1994, 1 ex, 12-13.VII.1994. — On *Fraxinus* sp. — Westpalaearctic. New for Iran.

Pseudoloxops iranicus Kerzhner, 1962. — Darreh Gaz, 1 ex, 15.VI.1994; Lotfabad, 2 exx., 15.VI.1994; Mashhad, 6 exx., V-VII.1994. — On *Fraxinus* sp. — Endemic for Iran.

Orthotylus (Orthotylus) prunicola Linnavuori, 1984. — Deh Shor 25 km N of Tabas, 5 exx., 17. IV.1994; Parvand 80 km W of Sarakhs, 1 ex, 14-15.V.1996. — On *Amygdalus lycioides*. — Previously known from Iraq. New for Iran.

Orthotylus (Parapachylops) putshkovi Josifov, 1979. — Golmakan Park 150 km W of Bojnurd, 1 ex, 14.VII.1994; Zard 105 km WNW of Bojnurd, 7 exx., 13.VII.1994. — On *Juniperus excelsa*. — Known from Kirgizia. New for Iran.

Orthotylus (Melanotrichus) eleagni Jakovlev, 1881. — Many exx. from Darreh Gaz, 16.VI.1994; Feyzabad, 16.V.1996; Kashmar, 22-23.VI.1994; Khalkanlod 30 km E of Quchan, 7.VI.1994; Nodeh 40 km ESE of Bojnurd; 11.VII.1994; Parvand 70-80 km W of Sabzevar, 31.V-1.VI.1994; Sabzevar, 31.V-1.VI.1994; Tabas, 16-17.IV.1994. — On *Elaeagnus angustifolia*. — Middle Asia. New for Iran.

Orthotylus (Melanotrichus) fieberi fieberi (Frey-Gessner, 1864). — Many exx. from Feyzabad, 16.V.1996; Nodeh 40 km ESE of Bojnurd, 11.VII.1994; Parvand 70-80 km W of Sabzevar, 12-15.V.1996; Shourlough 35 km SW Sarakhs, 30.IV.1994. — On *Chenopodium* sp. — Ponto-mediterranean.

Orthotylus (Melanotrichus) nymphias Linnavuori, 1974. — Feyzabad, several exx., 16.V.1996. — Collected in light trap. — Originally described from Turkmenistan. New for Iran.

Orthotylus (Melanotrichus) hirtulus Wagner, 1951. — Several exx. from Deh Shor 25 km N of Tabas, 17.IV.1994; Tabas, 15-17.IV.1994, 16-18.V.1994. — On *Anabasis* in salt steppes. — Eremian.

Orthotylus (Melanotrichus) flavosparsus (C.R. Sahlberg, 1841). — Many exx. from 15 km E of Bojnurd, 15.VII.1994; Darreh Gaz, 15.VI.1994; Feyzabad, 16.V.1996; Lotfabad, 15.VI.1994; Mashhad, V-VII.1994; Nodeh 30-40 km ESE of Bojnurd, 11.VII.1994; Sarakhs, 29-30.IV.1994. — On *Chenopodium* sp. — Holarctic.

Orthotylus (Melanotrichus) viridissimus Linnavuori, 1961. — Lotfabad, several exx., 15.VI.1994. — Collected in a light trap. — Previously known from Turkmenistan.

Orthotylus (Melanotrichus) turcmenorum Puchkov, 1967. — Near Parvand 70-80 km W of Sabzevar, numerous exx., 14-15.V.1996. — On *Dendrostellera lesserti*. — Irano—Turanian.

Orthotylus (Melanotrichus) pusillus Reuter, 1883. — Deh Shor 25 km N of Tabas, 3 exx., 17.IV.1994; Tabas, 3 exx., 16-18.V.1994. — On *Suaeda dendroides*. — Eremian. New for Iran.

Orthotylus (Melanotrichus) minutus Jakovlev, 1877. — Many exx. from 15 km E of Bojnurd, 15.VII.1994; Lotfabad, 15.VI.1994; Mashhad, V-VII.1994; Nodeh 30-40 km ESE of Bojnurd, 11.VII.1994; Parvand 70-80 km W of Sabzevar, 4.VII.1994; Sabzevar, 31.V-1.VI.1994; Sarakhs, 29-30.IV.1994; Zaman Soofi 65 km W of Bojnurd, 12-13.VII.1994. — On *Chenopodiaceae*. — Pontomediterranean. New for Iran.

Orthotylus (Melanotrichus) rubidus (Puton, 1874). — Sarakhs, 2 exx., 29-30.IV.1994. — On *Chenopodiaceae*. — Holomediterranean. New for Iran.

Blepharidopterus diaphanus (Kirschbaum, 1856). — Anbaran, 1 ex, 19.VII.1994; Darreh Gaz, 1 ex, 15.VI.1994; Mashhad, 1 ex, V-VII.1994; Nodeh 30-40 km ESE of Bojnurd, 6 exx., 11.VII.1994. — On *Salix* sp. — Euro—Siberian. New for Iran.

Cyrtorhinus caricis (Fallén, 1807). — 15 km E of Bojnurd, 1 ex, 15.VII.1994; Nodeh 30-40

km ESE of Bojnurd, several exx., 11.VII.1994; Zaman Soofi 65 km W of Bojnurd, 1 ex, 13.VII.1994. — In moist meadows with *Juncus* sp. and *Phragmites* sp. — Holarctic. New for Iran.

Phylinae

Pilophorini

Pilophorus confusus (Kirschbaum, 1856). — Anbaran, 5 exx., 11.VII.1994. — On *Salix* sp. — Holopalaeartic. New for Iran.

Hallodapini

Alloeomimus kurdus Hoberlandt, 1953. — Several exx. from Darreh Gaz, 15.VI.1994; Lake Bazangan, 30.VI.1994; Nodeh 30-40 km ESE of Bojnurd; Sabzevar, 31.V-1.VI.1994. — Myrmecophilous. On *Prosopis farcta* together with *Camponotus* sp. — Also known from Iraq. New for Iran.

Hallodapus pseudoconcolor Linnavuori, 1984. — Feyzabad, 6 exx., 16.V.1996; Kashmar, 1 ex, 22-23.VI.1994; Lotfabad, 1 ex, 15.VI.1994. — In light trap. — Eremian, extending from Iraq to Turkmenistan. New for Iran.

Hallodapus suturalis (Herrich—Schaeffer, 1839). Feyzabad, 7 exx., 16.V.1996; Lotfabad, 1 ex, 15.VI.1994; Mashhad, 4 exx., V-VII.1994; Sabzevar, 1 ex, 31.V-1.VI.1994. — In light trap. — Northmediterranean, extending to Middle Asia. New for Iran.

Hallodapus costae (Reuter, 1890). — Several exx. from Deh Shor 25 km N of Tabas, 17.IV.1994; Tabas, 14-18.V.1994. — In light trap. — Eremian. New for Iran.

Laemocoris reuteri (Jakovlev, 1879). — Deh Shor 25 km N of Tabas, several exx., 15.V.1994; Lotfabad, 1 ex, 15.VI.1994; Tabas, 2 exx., 16-18.V.1994. — In light trap. — Irano—Turanian.

Phylini

Macrotylus (Alloeonycha) paykullii (Fallén, 1807). — Khargh 70 km SW of Quchan, many exx., 8-9.VI.1994. — In meadows on banks of a mountain brook. — Westpalaeartic. New for Iran.

Nasocoris argyrotrichus Reuter, 1879. — Numerous exx. from Darreh Gaz, 15.VI.1994; Golestan Park 150 km W of Bojnurd, 14.VII.1994; Zaman Soofi 65 km W of Bojnurd, 12-13.VII.1994. — On *Ephedra procera*. — Irano-Turanian.

Nasocoris albipennis Lindberg, 1939. — Near Parvand 70-80 km W of Sabzevar, 1 ex, 31.V-1.VI.1994. — On *Ephedra* sp. — Eremian, previously known from Egypt. New for Iran.

Boopidocoris nahidae Linnavuori, 1995. — Near Parvand 70-80 km W of Sabzevar, ♀ holotype, many paratypes (♂♀), 31.V-1.VI.1994, in coll. Linnavuori. — On *Salsola richteri*. — Endemic for Iran.

Plagiognathus bipunctatus Reuter 1883. — Numerous exx. from 15 km E of Bojnurd, 16.VII.1994; Darreh Gaz, 15.VI.1994; Feyzabad, 16.V.1996; Khargh 70 km SW of Quchan, 5-6.VI.1994; Lotfabad, 15.VI.1994; Mashhad, V-VII.1994; Nodeh 30 km ESE of Bojnurd, 16.VII.1994; near Parvand, 70-80 km W of Sabzevar, 14-15.V.1996; Roubat Sharaf, 30.IV.1994; near Sabzevar, 31.V-1.VI.1994; Sarakhs, 29-30.IV.1994; Shourlogh, 30.IV.1994. — In steppes and meadows. — Pontomediterranean.

Europiella decolor (Uhler, 1893). — Lotfabad, 1 ex, 15.VI.1994; near Parvand 70-80 km W of Sabzevar, 5 exx., 14-15.V.1996; Shourlogh, 1 ex, 30.IV.1994. — On *Artemisia* sp. Also collected in light traps. — Holarctic. New for Iran.

Atomoscelis onusta (Fieber, 1861). — Many exx. from 15 km E of Bojnurd, 15.VI.1994; Darreh Gaz, 15.VI.1994; Deh Shor 25 km N of Tabas, 17.IV.1994; Feyzabad, 16.V.1996; Lake Bazangan 50 km W of Sarakhs, 30.VI.1994; Lotfabad, 15.VI.1994; Mashhad, V-VII.1994; Nodeh 30 km ESE of Bojnurd, 11.VII.1994; near parvand 70-80 km W of Sabzevar, 4.VII.1994; near Sabzevar, 31.V-1.VI.1994; Zaman Soofi 65 km W of Bojnurd, 12-13.VII.1994. — On *Atriplex* sp. — Holomediterranean. New for Iran.

Badezorus ferdowsii Linnavuori, 1997. — Mashhad, ♀ holotype and 7♀ paratypes, V-VII.1994, in coll. Linnavuori. — On *Fraxinus* sp. Also collected in light trap in a garden. — Endemic for Iran.

Badezorus tomentosus (Reuter, 1904). — 15-20 km N of Tabas, 1 ex, 14-15.V.1994. — On

halophytes in a salt steppe. — Eremian.

Badezorus immaculatus Linnavuori, 1997. — Deh Shor 25 km N of Tabas, ♂ holotype, 17.IV.1994; Parvand 70-80 km W of Sabzevar, 2♂ and 4♀ paratypes, 4.VII.1994, in coll. Linnavuori. — Swept from desert vegetation. — Irano-Turanian.

Badezorus annulicornis (Reuter, 1879). — Feyzabad, 3 exx., 16.V.1996. — In light trap. — Irano-Turanian.

Camptozorus linnavuorii Kerzhner, 1996. — Near Kashmar, ♂ holotype, 22-23.VI.1994; near Parvand 70-80 km W of Sabzevar, ♀ paratype, 31.V-1.VI.1994, in coll. Linnavuori. — Swept from desert vegetation. — Endemic.

Campylomma diversicorne Reuter, 1878. — Many exx. from Chan Chiroc 50 km S of Tabas, 17.V.1994; Deh Shor 25 km N of Tabas, 18.IV.1994; Feyzabad, 16.V.1996; Lotfabad, 15.VI.1994; Mashhad, VI-VII.1994; near Parvand 70-80 km W of Sabzevar, 14-15.VI.1996; near Sabzevar, 31.V-1.VI.1994; Sarakhs, 29-30.IV.1994; Tabas, 16-17.IV.1994. — In steppes on plants such as *Artemisia* sp. and *Astragalus* sp. — Irano-Turanian.

Campylomma simillima Jakovlev, 1882. — Vesica in Fig. 6 A. — Mashhad, 2 exx., V-VII.1994. — In light trap. — Known from Middle Asia. — New for Iran.

Campylomma lindbergi Hoberlandt, 1952. — Vesica in Fig. 6 B. — Sarakhs, 1 ex, 27.IV.1994. — On *Pistacia vera*. — Known from Cyprus, Iraq and Turkmenistan. New for Iran.

Campylomma nigronasuta Reuter, 1878. — Vesica in Fig. 6 C. — Lotfabad, 1 ex, 15.VI.1994; near Parvand 70-80 km W of Sabzevar, 4.VII.1994. — In light trap. — Irano-Turanian.

Campylomma verbasci (Meyer-Dür, 1843). — Many exx. from 15 km E of Bojnurd, 15.VII.1994; Feyzabad, 16.V.1996; Khalkanlod 30 km E of Quchan, 7.VI.1994; Lotfabad, 15.VI.1994; Mashhad, V-VII.1994; Nodeh 40 km ESE of Bojnurd, 11.VII.1994; Tabas, 16-17.IV.1994; Zaman Soofi 65 km W of Bojnurd, 12-15.VII.1994; Zard 100 km WNW of Bojnurd, 13.VII.1994. — In steppes and mountain meadows on herbs such as *Verbascum* sp. Also found on *Salix* sp. — Holarctic.

Chlamydatus (Attus) eurotia Kerzhner, 1962.

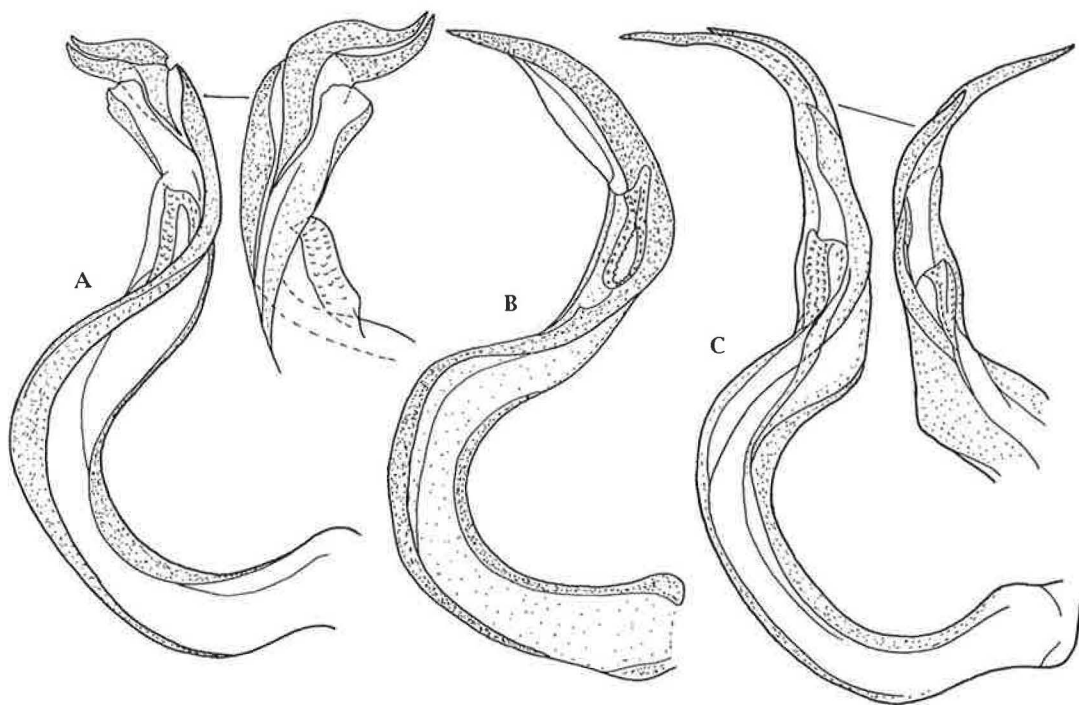


Fig. 6. Vesica of A. *Campylomma simillima* Jakovlev (ex from Mashhad); B. *C. lindbergi* Hoberlandt (ex from Badkhyeskii z-k, Turkmenistan); C. *C. nigronasuta* Reuter (ex from Lottfabad).

— Near Parvand 80 km W of Sabzevar, 1 ex, 14-15.V.1996. — In light trap in a dune and steppe area. Originally found on *Eurotia ceratoides* in Kazakhstan.

Sthenaropsis obscurus Poppius, 1912. — Vesica in Fig. 7 A, that of the related species *S. schachrudicus* Linnavuori, 1964 (Irano-Turanian) in Fig. 7 B-C. — Near Parvand 70-80 km W of Sabzevar, many exx., 31.V-1.VI.1994. — On *Convolvulus erinaceus* in dune habitats. — Known from Middle Asia. New for Iran.

Sthenaropsis piperatus Linnavuori, 1964. — Near Sabzevar, several exx., 31.V-1.VI.1994. — On *Lycium depressum*. — Known from Middle Asia. New for Iran.

Compsidolon (Compsidolon) elegantulum Reuter, 1899. — 70 km W of Darreh Gaz, 2 exx., 14.VI.1994. — On *Parietaria* sp. in a steep mountain slope. — Syrio-Anatolian. New for Iran.

Compsidolon (Compsidolon) nebulosum (Reuter, 1878). — Many exx. from Anbaran 30 km W of Mashhad, 19.VII.1994; 15 km E of Bojnurd, 15.VII.1994; Lotfabad, 15.VI.1994;

Mashhad, V-VII.1994; Tabas, 16-18.V.1994. — On undergrowth in gardens and deciduous forests. — Irano-Turanian.

Compsidolon (Apsinthophylus) pumilum (Jakovlev, 1876). — Numerous exx. from Deh Shor 25 km N of Tabas, 17.IV.1994; Parvand 70-80 km W of Sabzevar, 14-15.V.1996; Tabas, 16-17.IV and 16-18.V.1994. — On *Artemisia* sp. in steppes. — Pontomediterranean, extending to Middle and Central Asia. New for Iran.

Compsidolon (Apsinthophylus) bipunctatum eremita Puchkov, 1977. — Numerous exx. from Deh Shor 25 km N of Tabas, 14-15.V.1994; Parvand 70-80 km W of Sabzevar, 31.V-1.VI.1994, 14-15.V.1996; Tabas, 14-15.V.1994. — On *Artemisia* sp. in steppes. — Irano-Turanian. New for Iran.

Lepidargyrus instabilis (Reuter, 1878). — Feyzabad, 1 ex, 16.V.1996. — Collected in light trap. — Known from Middle Asia. New for Iran.

Oncotylus (Cylindromelus) setulosus (Herrich-Schaeffer, 1837). — Darreh Gaz, 4 exx., 15.VI.1994; Golestan National Park 150 km W of Bo-

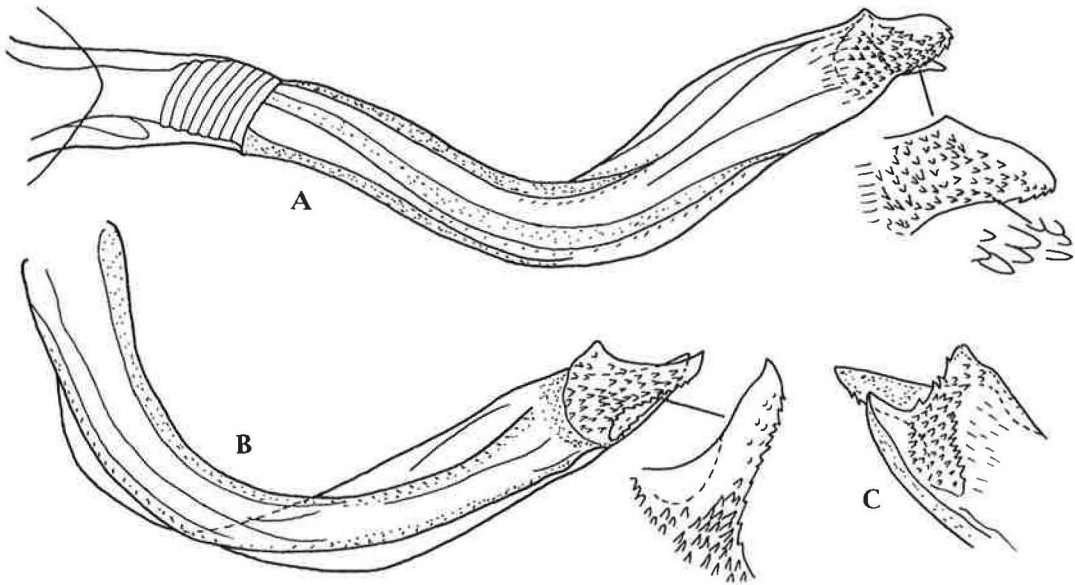


Fig. 7. *Sthenaropsis obscurus* Poppius (ex from Parvand): A. vesica. — *S. schachrudicus* Linnavuori (paratype); B. vesica; C. apex of vesica.

jnurd, 1 ex, 14.VII.1994; Mashhad, 1 ex, V-VII.1994; Nodeh 30-40 km ESE of Bojnurd, 3 exx., 11.VII.1994. — On *Centaurea* sp. in steppes. — Pontomediterranean, extending to Middle Asia. New for Iran.

Oncotylus (Oncotylus) vitticeps Reuter, 1879. — Several exx. from Feyzabad, 16.V.1996; Khalcanlod 30 km E of Quchan, 7.VI.1994; Mashhad, V-VII.1994; Nodeh 30-40 km ESE of Bojnurd, 11.VII.1994. — On Asteraceae in mountain steppes. — Known from Middle Asia. New for Iran.

Oncotylus (Oncotylus) affinis Jakovlev, 1882. — Claw, styles, theca, and vesica in Fig. 8 A-F. — Sarakhs, 1 ex, 29-30.IV.1994. — In a hilly steppe. — Known from Middle Asia. New for Iran.

Tytthus parviceps (Reuter, 1890). — Deh Shor 25 km N of Tabas, 1 ex, 17.IV.1994; near Tabas, 1 ex, 14-15.V.1994. — On grasses in moist localities. — Intertropical. New for Iran.

Stiophylus aristidae Wagner, 1965. — Tabas, 4♀ probably of this species, 16-18.V.1994. — On grasses in a steppe. — Eremian. New for Iran.

Amblytylus peitho Linnavuori, 1997. — Sarakhs, male holotype, 3♂ and 2♀ paratypes, 29-30.IV.1994; Roubat Sharaf, ♀ paratype, 30.IV.1994; Shourlogh 35 km SW of Sarakhs, 2♀ paratypes, 30.IV.1994, in coll. Linnavuori. — On *Hordeum* sp. and other grasses in steppes. — Endemic for Iran.

Amblytylus concolor Jakovlev, 1877. — Numerous exx. from Roubat Sharaf, 30.IV.1994; Sarakhs, 29-30.IV.1994; Shourlogh 35 km SW of Sarakhs, 30.IV.1994. — Together with the preceding species. — Pontomediterranean.

Megalocoleus molliculus (Fallén, 1807). — Several exx. from Khalcanlod 30 km E of Quchan, 7.VI.1994; Khargh 70 km SW of Quchan, 8-9.VI.1994. — On Asteraceae in hilly meadows. — Holopalaeartic. New for Iran.

Pronototropis punctipennis (Fieber, 1864). — Shourlogh 35 km SW of Sarakhs, 1 ex, 30.IV.1994. — In a hilly meadow. — Caspian. New for Iran.

Pleuroxonotus nasutus Reuter, 1903. — Parvand 70-80 km W of Sabzevar, 3 exx., 14-15.V.1996. — In light trap in a dune area. — Formerly

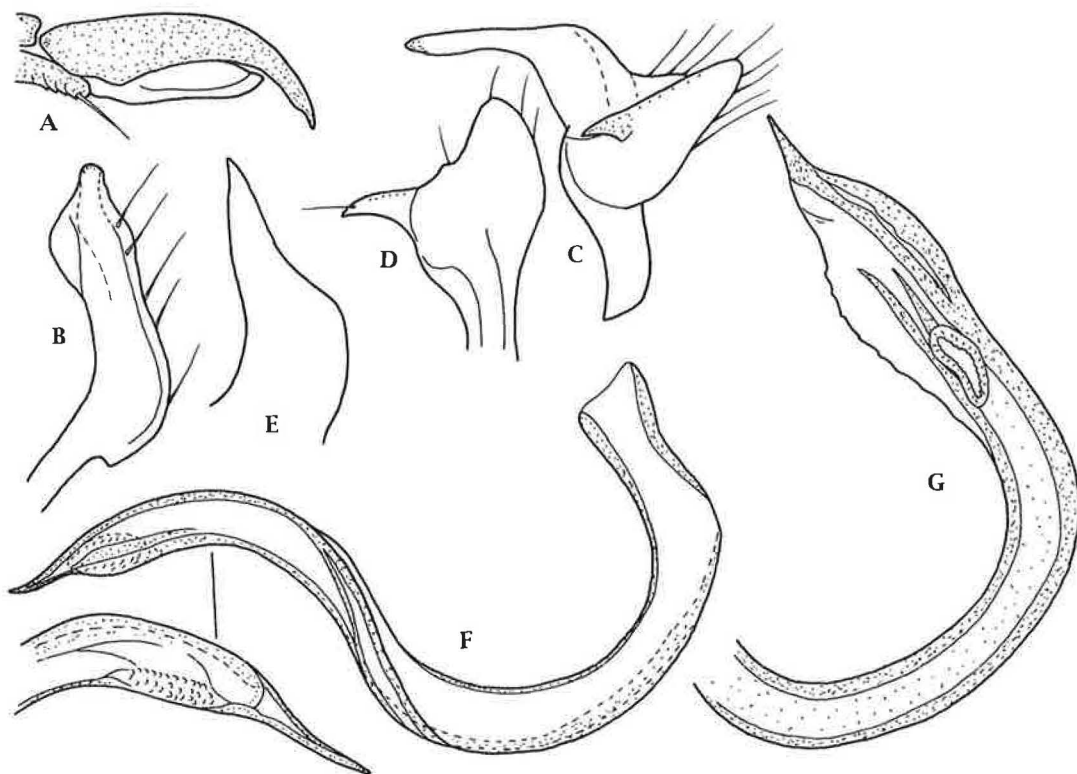


Fig. 8. *Oncotylus affinis* Jakovlev: A. claw; B. right style; C—D. left style; E. theca; F. vesica. — *Conostethus cf. hungaricus* Wagner; G. vesica.

known from Turkmenistan. New for Iran.

Glaucopeterum kareli Wagner, 1963. — Many exx. from Khalkanlod 30 km E of Quchan, 7.VI.1994; Khargh 70 km SW of Quchan, 8-9.VI.1994; Tabas, 16-17.IV.1994. — On *Eleagnus angustifolia*. — Irano—Turanian. New for Iran.

Glaucopeterum deserticola (Wagner, 1952). — Parvand 70-80 km W of Sabzevar, 6 exx., 14-15.V.1996. — On *Haloxylon* sp. — Eremian. New for Iran.

Glaucopeterum pteropyri Linnavuori, 1998. — Can Chiroc 50 km S of Tabas, ♂ holotype, 1♀ paratype, 17.V.1994, 1♂ and 1♀ paratype, 18.V.1996; Sorond and Modar 70 km S of Tabas, 1♀ paratype, 18.V.1994, in coll.Linnavuori, a paratype in Plant Pests and Diseases Research Institute, Tehran. — On *Pteropyrum aucheri*. — Endemic.

Conostethus cf. hungaricus Wagner, 1941. — Vesica in Fig. 8 G. — Roubat Sharaf 25 km SW of Sarakhs, several exx., 30.IV.1994. — In a hilly

meadow. — Pontomediterranean. New for Iran.

Monocris griseolus Puchkov, 1974. — Esfideh, 1 ex, 20.IV.1994; Parvand 70-80 km W of Sabzevar, several exx., 31.V-1.VI.1994, 14-15.V.1996; Sabzevar, 1 ex, 31.V-1.VI.1994. — On halophytes in sandy habitats. — Known from Middle Asia. New for Iran.

Leucopteryx candidatum Reuter, 1879. — Lake Bazangan 50 km W of Sarakhs, several exx., 30.VI.1994; Sarakhs, 1 ex, 29-30.IV.1994. — On *Suaeda microphylla*. — Caspian.

Voruchia vittigera Reuter, 1879. — Yazd: Ashkazar, 1 ex, 18-24.V.1996. — In light trap in a garden. — Known from Middle Asia. New for Iran.

Solenoxyphus punctipennis (Reuter, 1879). — Many exx. from Darreh Gaz, 15.VI.1994; Feyzabad, 16.V.1996; Lotfabad, 15.VI.1994; Mashhad, V-VII.1994; Parvand 70-80 km W of Sabzevar, 4.VII.1994; Sabzevar, 31.V-1.VI.1994; Sarakhs, 29-30.IV.1994; Tabas, 14-15.V.1994; Zaman

Soofi 65 km W of Bojnurd, 12-13.VII.1994. — In steppes with grasses, Asteraceae and *Astragalus* sp. — Irano-Turanian.

Psallopsis haloxyli Puchkov, 1976. — Parvand 70-80 km W of Sabzevar, 5 exx., 31.V-1.VI and 4.VII.1994. — On *Haloxylon aphyllum*. — Known from Middle Asia. New for Iran.

Psallopsis kirgicus (Becker, 1864). — Sabzevar, 2 exx., 31.V-1.VI.1994. — On halophytes such as *Salsola* sp. — Pontomediterranean extending to Middle Asia.

Psallopsis similis Wagner, 1958. — Many exx. from 15 km E of Bojnurd, 15.VII.1994; Feyzabad, 16.V.1996; Nodeh 30-40 km ESE of Bojnurd, 11.VII.1994; Parvand 70-80 km W of Sabzevar, 4.VII.1994; Sarakhs, 29-30.IV.1994. — On *Suaeda* sp. Eremian, extending from Saudi Arabia and Palestine to South Russia, Caucasus and Middle Asia.

Psallopsis kaliidicola Konstantinov, 1997. — Lotfabad, 1 ex, 15.VI.1994; Sarakhs, 1 ex, 29-30.IV.1994. — Recorded from *Kalidium* sp. in Middle and Central Asia. New for Iran.

Psallopsis caspia Konstantinov, 1997. — Lotfabad, 3 exx., 15.VI.1994. — Recorded from *Salsola laricina* and *Kochia?* sp. — Caspian.

Psallopsis halostachydis Puchkov, 1976. — Lotfabad, 3 exx., 15.VI.1994; Sabzevar, 1 ex, 31.V-1.VI.1994. — Recorded from *Halostachys belangeriana*. — Extending from Dagestan to Inner Mongolia. New for Iran.

Psallopsis bisulcis Linnavuori, 1961. — Parvand 70-80 km W of Sabzevar, 8 exx., 31.V-1.VI.1994; Sabzevar, 1 ex, 3.VII.1994. — On *Aellenia subaphylla*. — Eremian, extending from Palestine to Middle Asia.

Psallopsis basalis Reuter, 1904. — Numerous exx. from Deh Shor, 25 km N of Tabas, 17.IV and 16.V.1994; Kahe 30-60 km W of Kashmar, 21-22.VI.1994; Parvand 70-80 km W of Sabzevar, 31.V-1.VI.1994; Sabzevar, 31.V-1.VI and 3.VII.1994; Sorond and Modar 70 km S of Tabas, 18.V.1994, Tabas, 16-18.V.1994. — On *Seidlitzia rosmarinus*. — Eremian, extending from Saudi Arabia and Palestine to Iraq and Iran.

Atomophora pentheus Linnavuori, 1971. — Many exx. from Chan Chiroc 50 km S of Tabas, 17.V.1994; Parvand 70-80 km W of Sabzevar, 31.V-1.VI and 4.VII.1994, 14-15.V.1996. — On

Calligonum. — Endemic for Iran.

Atomophora atripes Linnavuori, 1997. — Parvand 70-80 km W of Sabzevar, ♂ holotype, 2♂ and 4♀ paratypes, 31.V-1.VI.1994, in coll. Linnavuori, numerous exx. 14-15.V.1996. — On *Calligonum* sp. in dunes. — Endemic for Iran.

Atomophora maculosa maculosa Reuter, 1903. — Parvand 70-80 km W of Sabzevar, several exx., 14-15.V.1996. — On *Calligonum* sp. — Known from Middle Asia. New for Iran.

Atomophora astraea Linnavuori, 1997. — Tabas, ♂ holotype, 1♂ paratype, 16-18.V.1994, in coll. Linnavuori. — Collected in light trap in a salt marsh. The main vegetation consisted of *Calligonum* sp., *Haloxylon persicum* and *Suaeda dendroides*. — Endemic.

Camptotylidea lineata (Reuter, 1901). — Parvand 70-80 km W of Sabzevar, 6 exx., 14-15.V.1996. — At lamp in a dune area. — Recorded from *Tournefortia sogdiana* and *Heliotropium* sp. in Middle Asia. New for Iran.

Camptotylidea albovittata (Reuter, 1903). — Parvand 70-80 km W of Sabzevar, numerous exx., 14-15.V.1996. — On *Astragalus* sp. — Known from Middle Asia. New for Iran.

Camptotylidea flavescens (Puchkov, 1976). — Numerous exx. from Kahe 35-60 km W of Kashmar, 21-22.VI.1994; Kashmar, 22-23.VI.1994; Parvand 70-80 km W of Sabzevar, 31.V-1.VI.1994 and 14-15.V.1996; Sabzevar, 31.V-1.VI.1994. — On *Haloxylon aphyllum*. — Known from Turkmenistan. New for Iran.

Camptotylidea suturalis (Reuter, 1903). — Numerous exx. from Deh Shor 25 km N of Tabas, 17.IV.1994; Kashmar, 22-23.VI.1994; Parvand 70-80 km W of Sabzevar, 31.V-1.VI.1994, 14-15.V.1996; Sabzevar, 3.VII.1994; Sarakhs, 29-30.IV.1994; Tabas, 16-18.V.1994. — On *Haloxylon* sp. — Irano-Turanian.

Camptotylidea persica Wagner, 1957. — Parvand 70-80 km W of Sabzevar, 4 exx., 14-15.V.1996. — In light trap in a dune area. — Endemic for Iran.

Maurodactylus albidus (Kolenati, 1845). — Shourlogh 35 km SW of Sarakhs, 6 exx., 30.IV.1994. — In a hilly steppe. — Holomediterranean, extending to Middle Asia.

Maurodactylus nigrigenis (Reuter, 1890). — Feyzabad, 2 exx., 16.V.1996; Mashhad, 1 ex, V-

VII.1994. — On *Artemisia* sp. in steppes. — Eremian, extending from North Africa to Central Asia. New for Iran.

Auchenocrepis reuteri Jakovlev, 1876. — Golestan National Park 150 km W of Bojnurd, 1 ex, 14.VII.1994. — On *Tamarix* sp. — Ponto-mediterranean.

Auchenocrepis alboscuteolata Puton, 1874. — Many exx. from 15 km E of Bojnurd, 15.VII.1994; Darreh Gaz, 15.VI.1994; Deh Shor 25 km N of Tabas, 16.V.1994; Lotfabad, 15.VI.1994; Parvand 70-80 km W of Sabzevar, 4.VII.1994; Shams Abad 30 km SE of Kashmar, 23.VI.1994; Tabas, 16-17.IV and 14-15.V.1994. — On *Tamarix* sp. — Eremian, extending from North Africa to Iran.

Voruchiella pallida (Reuter, 1878). — Parvand 70-80 km W of Sabzevar, numerous exx., 14-15.V.1996. — On *Haloxylon* sp. and *Calligonum* sp. — Known from Middle Asia. New for Iran.

Voruchiella plagiata Poppius, 1912. — Claw and male genitalia in Fig. 9 A-E. — Tabas, several exx., 16-17.IV.1994. — On *Haloxylon aphyllum*. — Known from Middle Asia. New for Iran.

Voruchiella haloxyli Puchkov, 1984. — Many exx. from Deh Shor 25 km N of Tabas, 17.IV.1994; Esfideh, 20.IV.1994; Parvand 70-80 km W of Sabzevar, 14-15.V.1996; Tabas, 16-17.IV.1994. —

On *Haloxylon persicum*. — Known from Middle Asia. New for Iran.

Voruchiella tincta (Jakovlev, 1903). — Parvand 70-80 km W of Sabzevar, 14-15.V.1996. — On *Calligonum* sp. — Irano-Turanian.

Tuponia (Tuptionia) persica Wagner, 1957. — Several exx. from Deh Shor 25 km N of Tabas, 16-17.IV and 16.V.1994; Lake Bazangan 50 km W of Sarakhs, 30.VI.1994; Lotfabad, 15.VI.1994; Parvand 70-80 km W of Sabzevar, 31.V-1.VI.1994; Tabas, 14-15.V.1994, 17.V.1996. — On *Tamarix* sp. — Eremian, extending from Yemen and Saudi Arabia to Middle Asia.

Tuponia (Tuptionia) mixticolor (A. Costa, 1862). — Many exx. from Deh Shor 25 km N of Tabas, 17.IV.1994; Feyzabad, 16.V.1996; Lake Bazangan, 30.VI.1994; Tabas, 14-15.V.1994. — On *Tamarix* sp. — Holomediterranean.

Tuponia (Tuptionia) ninlil Linnavuori, 1984. — Deh Shor 25 km N of Tabas, 1 ex, 17.IV.1994; Tabas, 4 exx., 16-17.IV.1994. — On *Tamarix* sp. — Previously known from Iraq. New for Iran.

Tuponia (Tuptionia) algerica Wagner, 1965. — Sarakhs, 1 ex, 29-30.IV.1994. — On *Tamarix* sp. — Eremian, extending from North Africa to Iran. New for Iran.

Tuponia (Tuptionia) ayasensis Wagner, 1963. — Many exx. from Lake Bazangan 50 km W of Sarakhs, 30.VI.1994; Lotfabad, 15.VI.1994; Mashhad, VI-VII.1994; Sarakhs, 26-30.IV.1994. — On *Tamarix* sp. — Syrio-Anatolian. New for Iran.

Tuponia (Tuptionia) dehshorana Linnavuori, 1997. — Deh Shor 25 km N of Tabas, ♂ holotype, 16.V.1994; Darreh Gaz, 3♂ and 13♀ paratypes, 15.VI.1994, in coll. Linnavuori. — On *Tamarix* sp. — Endemic.

Tuponia (Tuptionia) subaltera Drapolyuk, 1980. — Many exx. from Feyzabad, 16.V.1996; Parvand 70-80 km W of Sabzevar, 14-15.V.1996; Tabas, 16-17.IV.1994. — On *Tamarix* sp. — Known from Middle Asia. New for Iran.

Tuponia (Tuptionia) elegans (Jakovlev, 1867). — Many exx. from 15 km E of Bojnurd, 15.VII.1994; Darreh Gaz, 15.VI.1994; Feyzabad, 16.V.1996; Lotfabad, 15.VI.1994; Mashhad, VI-VII.1994; Parvand 70-80 km W of Sabzevar, 4.VII.1994; Sabzevar, 29-30.IV.1994; Sarakhs, 29-30.IV.1994; Tabas, 16-17.IV.1994. — On *Tamarix* sp. — Irano-Turanian.

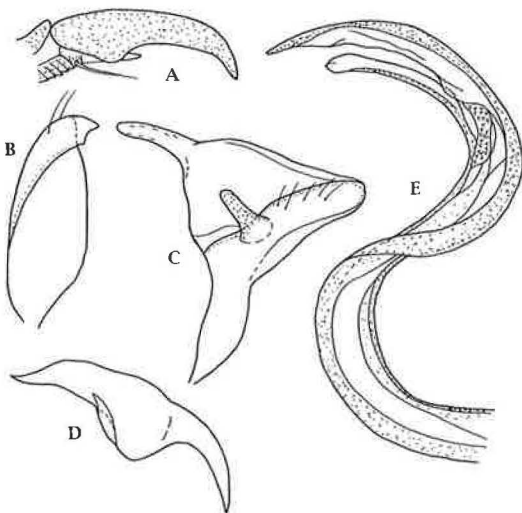


Fig. 9. *Voruchiella plagiata* Poppius (ex from Tabas): A. claw; B. right style; C. left style; D. theca; E. vesica.

Tuponia (Chlorotuponia) prasina (Fieber, 1864). — Several exx. from Darreh Gaz, 15.VI.1994; Lake Bazangan, 30.VI.1994; Lotfabad, 15.VI.1994; Mashhad, V-VII.1994; Parvand 70-80 km W of Sabzevar, 4.VII.1994; Sabzevar, 31.V-1.VI.1994. — On *Tamarix* sp. — Pontomediteranean, extending to Middle Asia. New for Iran.

Tuponia (Chlorotuponia) kiritshenkoi Drapolyuk, 1982. — Many exx. from Kahe 30-60 km W of Kashmar, 21-22.VI.1994; Sabzevar, 3.VII.1994; Shams Abad 45 km SE of Kashmar, 21-22.VI.1994. — On *Tamarix* sp. — Known from Middle Asia. New for Iran.

Tuponia (Chlorotuponia) concinna Reuter, 1875. — Numerous exx. from Deh Shor 25 km N of Tabas, 17.IV.1994; Kahe 30-50 km W of Kashmar, 21-22.VI.1994; Parvand 70-80 km W of Sabzevar, 4.VII.1994; Sabzevar, 31.V-1.VI.1994; Tabas, 16-17.IV and 16-18.V.1994. — On *Tamarix* sp. — Eremian, extending from North Africa to Middle Asia.

Aphaenophyes richteri (Wagner, 1957). — Several exx. from Darreh Gaz, 15.VI.1994; Lake Bazangan 50 km W of Sarakhs, 30.VI.1994; Tabas, 16-17.IV and 14-15.V.1994. — On *Tamarix*

sp. — Eremian, extending from North Africa to Iran.

Anonychiella alhagicola alhagicola (Drapolyuk, 1982). — Numerous exx. from Deh Shor 25 km N of Tabas, 16.V.1994; Feyzabad, 16.V.1996; Kashmar, 22-23.V.1994; Lotfabad, 15.VI.1994; Mashhad, VI-VII.1994; Parvand 70-80 km W of Sabzevar, 3.VII.1994; Sabzevar, 3.VII.1994; Tabas, 14-15.IV and 15-18.V.1994. — On *Alhagi* sp. — Known from Middle Asia. New for Iran.

Anonychiella brevicornis (Reuter, 1879). — Sabzevar, 1 ex, 31.V-1.VI.1994. — Irano-Turani-an.

Camptotylus meyeri Frey—Gessner, 1863. — Numerous exx. from Sabzevar, 31.V-1.VI and 3.VII.1994; Shams Abad 45 km SE of Kashmar, 23.VI.1994; Tabas, 17.V.1994. — On *Tamarix* sp. — Caspian. New for Iran.

Camptotylus reuteri Jakovlev, 1881. — Many exx. from Kahe 30-60 km W of Kashmar, 21-22.VI.1994; Sabzevar, 31.V-1.VI.1994. — On *Tamarix* sp. — Caspian. New for Iran.

Camptotylus gracilis Wagner, 1957. — 2nd antennal segment in Fig. 5 E, male genitalia in Figs. 5 F-G and 10 A-E. — 15 km E of Bojnurd,

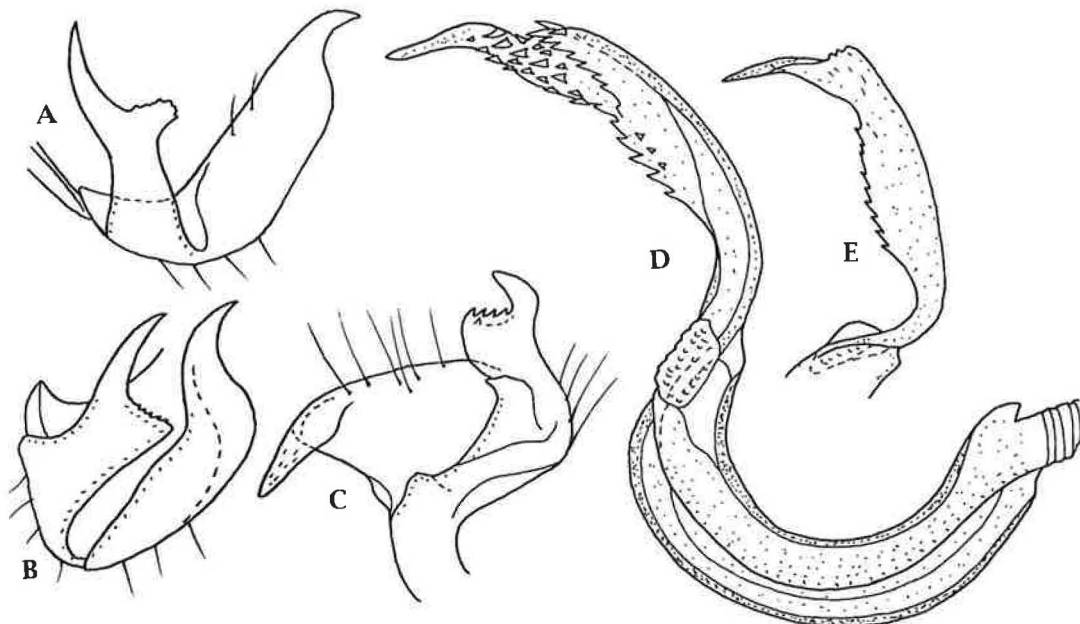


Fig. 10. *Camptotylus gracilis* Wagner (ex from Lake Bazangan): A—C. left style in different views; D. vesica in slide mount; E. apex of vesica in dry mount.

1 ex, 15.VII.1994; Golmakan Park 150 km W of Bojnurd, 5 exx., 14.VII.1994; Lake Bazangan, 2 exx., 30.VI.1994. — On *Tamarix* sp. — Endemic.

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