

Contribution to the knowledge of the caddisfly fauna (Trichoptera) of Iran: description of new species and new distributional data

Pavel CHVOJKA

Department of Entomology, National Museum, Kunratice 1, CZ-148 00 Praha 4, Czech Republic;
e-mail: pavel_chvojka@nm.cz

Abstract. *Hydroptila hodkovae* sp. nov. (Hydroptilidae), *Tinodes voriseki* sp. nov., *T. hajeki* sp. nov. (Psychomyiidae), and *Hydropsyche lundaki* sp. nov. (Hydropsychidae) from Iran are described and figured. A list of species collected by the Czech Biological Expeditions 1997-2000 in Iran is presented, including first Iranian records of *Hydroptila aegyptia* Ulmer, 1963 (Hydroptilidae), *Hydropsyche perelin* Malicky, 1987 (Hydropsychidae), and *Setodes alala* Mosely, 1948 (Leptoceridae). New distributional data and notes on further 27 caddisfly species are also given.

Key words. Trichoptera, taxonomy, faunistics, new species, new records, Iran

Introduction

The caddisfly fauna of Iran was studied in detail for the first time by SCHMID (1959) and subsequently by MALICKY (1986). More papers appeared only recently. MIRMOAYEDI & MALICKY (2002) published new records, based on collections from the provinces of Fars, Hamadan, Kermanshah, Khorasan, Kordestan, and Mazandaran, and compiled an updated list of species. MEY (2004) described new species and provided additional distributional records from several provinces (Boyer Ahmad va Kohgiluyeh, Chaharmahal va Bakhtiyari, Esfahan, Fars, Hormozgan, and Kerman). Another new species was described from the Bushehr Province by MALICKY (2004). Nevertheless, the Iranian caddisfly fauna is still insufficiently known and data are lacking from many regions.

Three Czech Biological Expeditions made new collections of caddisflies in May 1997, October 1998 and April 2000. This paper summarizes the results, including descriptions of new species and new state records. Holotypes and paratypes are deposited in the collection of the Department of Entomology, National Museum, Praha (NMPC), and some paratypes are also housed in the collection of Hans Malicky, Lunz am See, Austria (HM).

Taxonomy

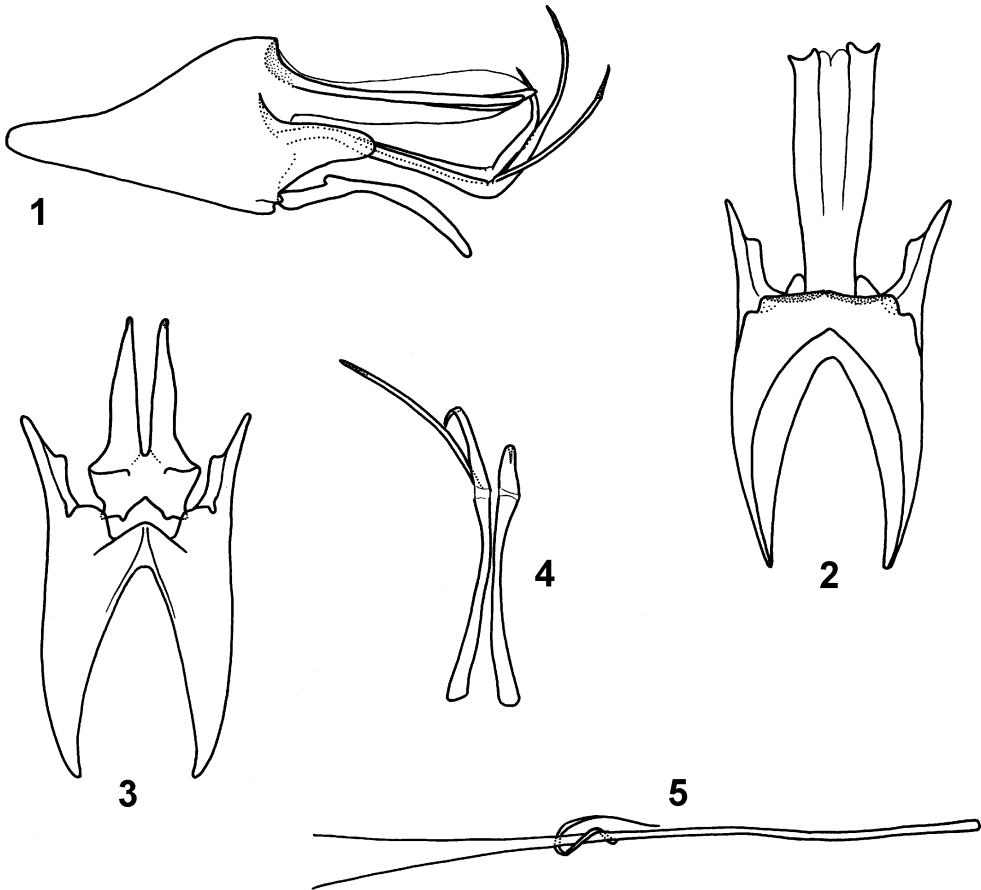
Hydroptila hodkovae sp. nov.

(Figs. 1-5)

Type material. HOLOTYPE: ♂, **IRAN:** KHUZESTAN prov., 10 km SW Izeh (at light), 31°45'N 49°48'E, 880 m a.s.l., 12.x.1998, P. Chvojka leg. (NMPC). PARATYPES: **IRAN:** LORESTAN prov., stream 10 km SE Bavineh, 33°36'N 47°12'E, 1100 m a.s.l., 16.x.1998, P. Chvojka leg., 1 ♂ (HM); FARS prov., 10 km N Firuz Abad, 28°55'N 52°31'E, 1450 m a.s.l., 20.iv.2000, J. Hájek & M. Mikát leg., 1 ♂ (NMPC).

Description. Male. Length of forewing 2.1 mm. Colour (in alcohol): brownish.

Male genitalia. Segment IX long, with deep dorsal and ventral excisions; antero-lateral lobes elongated with rounded apex in lateral view; posterior margin with long triangular



Figs. 1-5. *Hydroptila hodkovae* sp. nov., male genitalia. 1 – lateral view; 2 – dorsal view; 3 – ventral view; 4 – lateral projections of segment X, ventral view; 5 – phallus, lateral view.

postero-lateral projection rounded apically in lateral view. Segment X long, sclerotized along lateral margins, membranous in middle; in dorsal view narrow basally and broadened distally with acute apico-lateral tips and rounded mesal lobes. Lateral projections of segment X asymmetrical, long, their distal halves bent upwards; right branch shorter, simple; left branch longer, bifurcated in middle, outer additional long bristle-like branch arising from the fold of main branch and directed upwards and outwards. Inferior appendages long, narrow, slightly broadened in middle; curved downwards in lateral view; straight, tapered to acute apex in ventral view. Phallus tubular, long and thin, with short spiral paramere in middle.

Differential diagnosis. *Hydroptila hodkovae* sp. nov. belongs to the *occulta* species group. It differs from other similar species in this group, such as *H. fonsorontina* Botosaneanu & Moubayed, 1985, and *H. ernstreichli* Malicky, 1998, mainly by the shape and arrangement of the asymmetrical lateral projections of segment X and the inferior appendages.

Etymology. This species is dedicated to Zdenka Hodková, Praha, who organized the Czech Biological Expeditions to Iran in 1997-2000.

Tinodes voriseki sp. nov.

(Figs. 6-13)

Type material. HOLOTYPE: ♂, IRAN: AZARBAIJAN GHARBI prov., springfed brooks, Rud-e Saruq River valley 10 km SE Chuplu, 36°28'N 47°02'E, 1700 m a.s.l., 2.x.1998, P. Chvojka leg. (NMPC). PARATYPES: the same data, 2 ♂♂ (NMPC), 1 ♂ (HM); the same data except 10.v.2006, 1 ♂ (NMPC).

Additional material examined. IRAN: HAMADAN prov., springfed brook nr. Alanje 15 km W Asadabad, 34°45'N 47°58'E, 1680 m a.s.l., 5.-6.x.1998, P. Chvojka leg., 1 ♂ (NMPC).

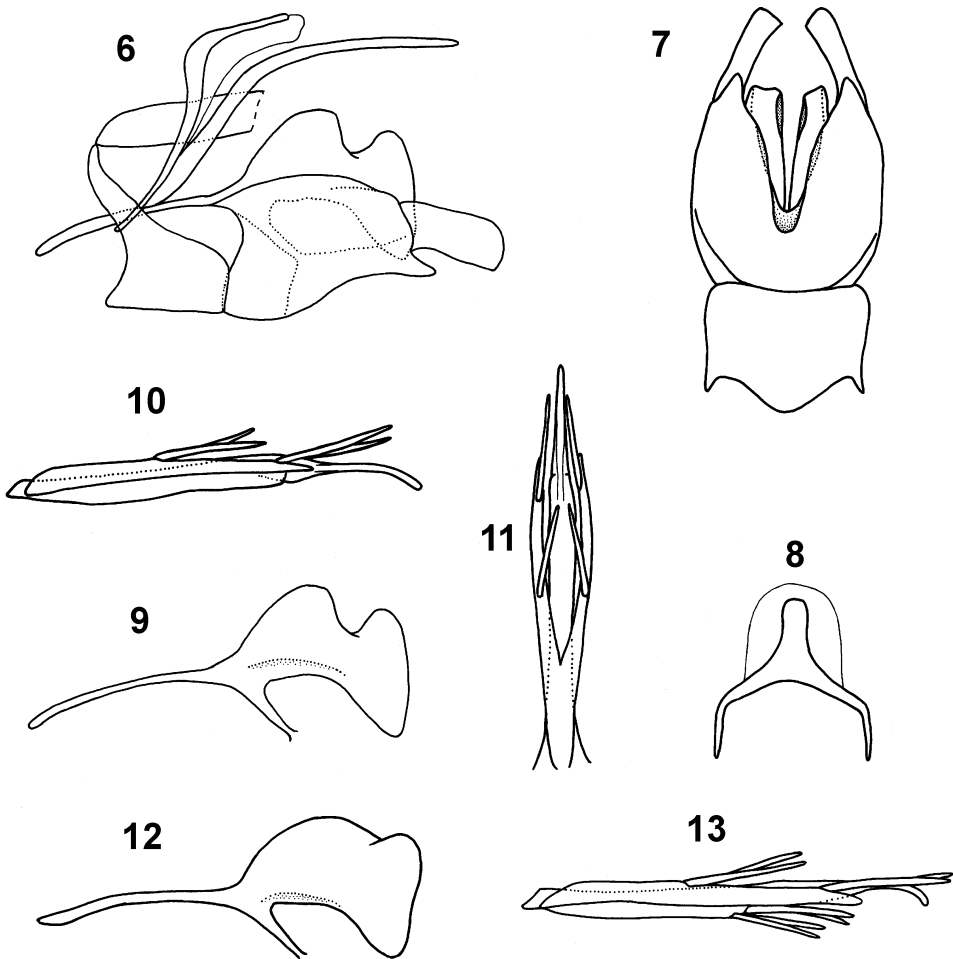
Description. Male. Length of forewing 4.8-5.0 mm. Colour (in alcohol): Body, wings, and legs yellowish brown.

Male genitalia. Ventral part of segment IX, in lateral view with straight ventral margin, antero-ventral process triangular, posterior end truncated. Segment X with sclerotized tongue-like dorsal plate, membranous ventrally. Paraproctal processes rod-like, slightly tapered to apex, jointed basally, with two pairs of strong, long spurs placed on dorsal side subapically and in middle. Superior appendage long and thin, curved. Coxopodite broad with apico-ventral triangular projection; harpago simple, apex obliquely truncated with acute ventro-mesal tip in ventral view. Basal plate of inferior appendages with long proximal apodeme and large paired distal process, the latter bearing two dorsal lobes and one ventro-apical lobe, rounded dorsal lobes separated by broad U-shaped excision (lateral view). Phallus rod-like, distal tubular part curved ventrally.

Variability. The specimen from Alanje is slightly different from the type specimens from Chuplu. It has almost fused dorsal lobes of the distal process of the basal plate of inferior appendages (lateral view, Fig. 12), and the phallus bears a ventral cluster of five additional spines in the middle (Fig. 13).

Differential diagnosis. This species is similar to *T. amadai* Schmid, 1959, and *T. tohmei* Botosaneanu & Dia, 1983, but can be easily distinguished by the shape of the process of the basal plate of inferior appendages and by the paraproctal processes.

Etymology. This species is named after Martin Voříšek, Praha, an excellent expedition driver.



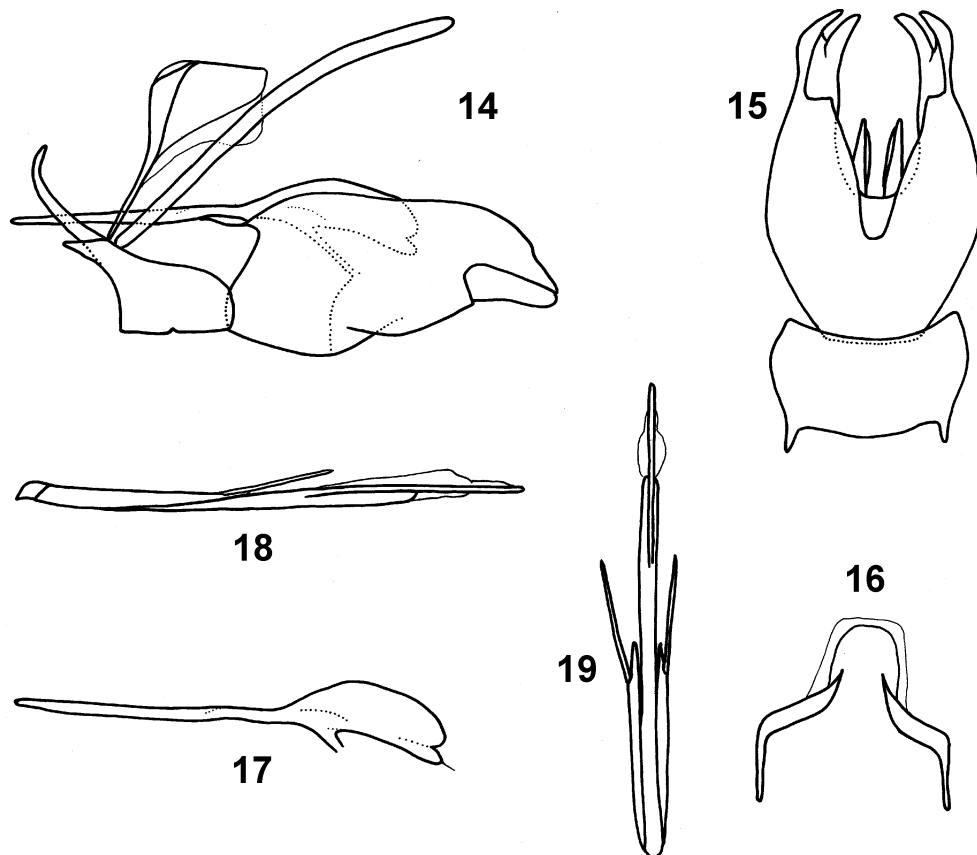
Figs. 6-13. *Tinodes voriseki* sp. nov., male genitalia. 6-11. Holotype from Chuplu. 6 – lateral view; 7 – ventral view; 8 – segment X, dorsal view; 9 – process of basal plate, lateral view; 10 – phallus and paraproctal processes, lateral view; 11 – phallus and paraproctal processes, dorsal view. 12-13. Specimen from Alanje. 12 – process of basal plate, lateral view; 13 – phallus and paraproctal processes, lateral view.

***Tinodes hajeki* sp. nov.**

(Figs. 14-19)

Type material. HOLOTYPE: ♂, IRAN: KERMAN prov., 5 km NE Deh Bakri, 29°05'N 57°55'E, 1925 m a.s.l., 7.iv.2000, J. Hájek & M. Mikát leg. (NMPC). PARATYPE: the same data, 1 ♂ (NMPC).

Description. Male. Length of forewing 5.8 mm. Colour (in alcohol): Body, wings, and legs yellowish brown.

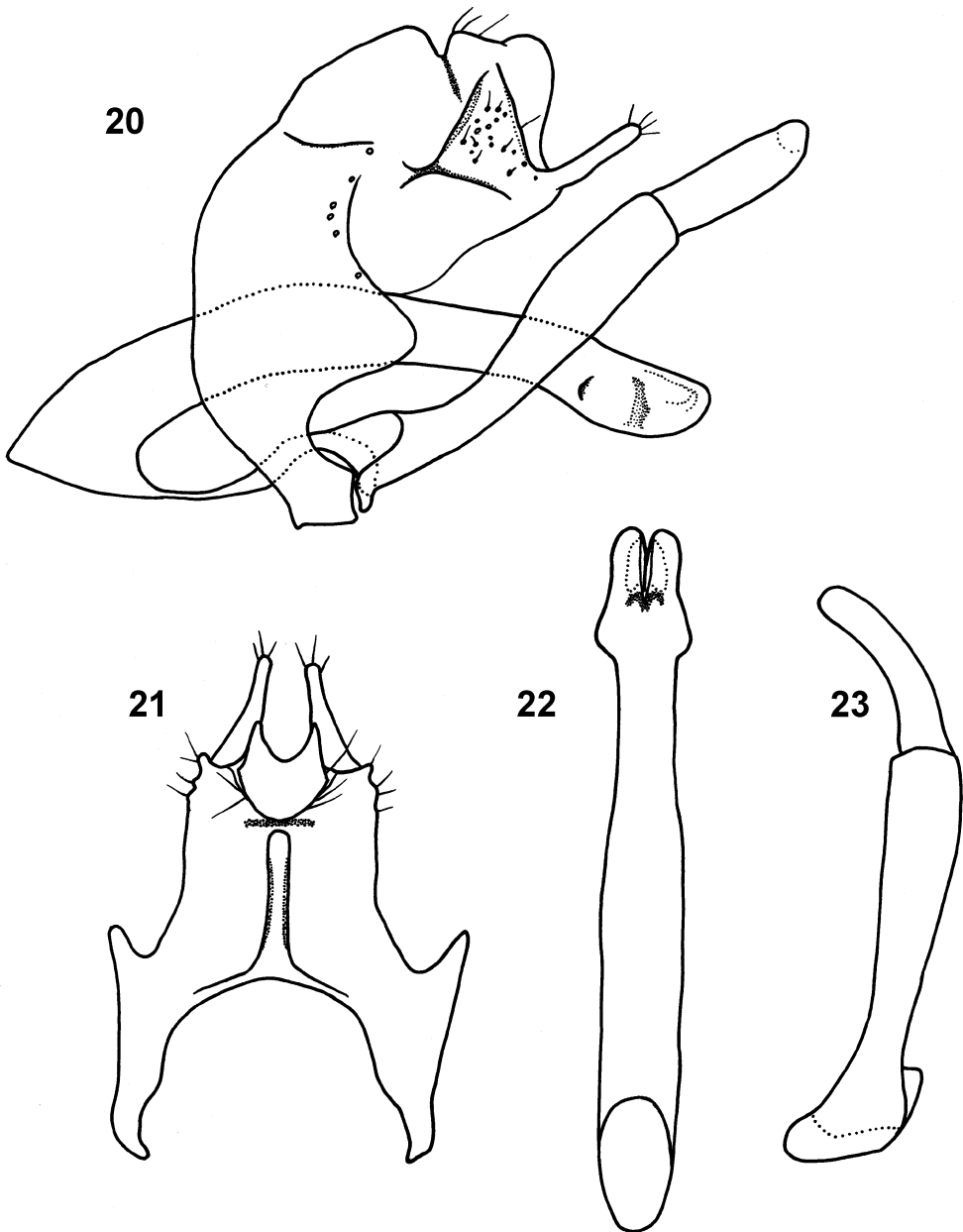


Figs. 14-19. *Tinodes hajeki* sp. nov., male genitalia. 14 – lateral view; 15 – ventral view; 16 – segment X, dorsal view; 17 – process of basal plate, lateral view; 18 – phallus and paraproctal processes, lateral view; 19 – phallus and paraproctal processes, dorsal view.

Male genitalia. Ventral part of segment IX with straight ventral margin and transverse groove, antero-ventral process rectangular, distal end rounded, all in lateral view. Segment X slightly sclerotized dorsally, membranous ventrally. Paraproctal processes short, rod-like, tapered to apex, with a pair of subapical spines. Superior appendage long and thin, slightly curved. Coxopodite expanded into dorso-apical process; harpago finger-like, curved mesally. Basal plate of inferior appendages with long proximal apodeme and paired distal process with bilobed apex, dorsal lobe larger, ventral one smaller with minute spine. Phallus rod-like, straight with parallel margins, distal part tubular.

Differential diagnosis. This species, a member of the *reisseri* group, is similar to *T. karadere* Malicky & Sipahiler, 1993, but differs in the shape of the distal process of basal plate.

Etymology. This species is named in honour of its collector Jiří Hájek, Praha.



Figs. 20-23. *Hydropsyche lundaki* sp. nov., male genitalia. 20 – lateral view; 21 – dorsal view; 22 – phallus, ventral view; 23 – right inferior appendage, ventro-caudal view.

***Hydropsyche lundaki* sp. nov.**

(Figs. 20-23)

Type material. HOLOTYPE: ♂, **IRAN:** HAMADAN prov., springfed brook nr. Alanje 15 km W Asadabad, 34°45'N 47°58'E, 1680 m a.s.l., 5.-6.x.1998, P. Chvojka leg. (NMPC). PARATYPES: springfed brooks and streamlets nr. Alanje 15 km W Asadabad, the same data, 43 ♂♂ (NMPC), 5 ♂♂ (HM).

Description. Male. Length of forewing 6.3-8.3 mm. Colour (in alcohol): Body, wings, legs antennae, and palpi yellowish brown.

Male genitalia. Dorsal keel of segment IX long and very narrow, with almost straight parallel sides in dorsal view, its dorsal edge straight, directed dorso-caudally; dorsal cavity of segment IX large and deep. Segment X shorter than dorsal keel of segment IX, dorsal edge of segment X in lateral view with shallow excision dividing anterior rectangular part with setae and posterior broadly rounded part, caudal edge sinuate; dorsal cavity of segment X moderately deep; digitiform appendages of segment X long and thin, almost equally broad in lateral view, directed slightly upwards. Inferior appendage: coxopodite narrowed in proximal third, broader in distal third; harpago relatively long (almost 0.5 times as long as coxopodite), equally wide, only apex slightly dorso-ventrally depressed. Phallus moderately bent with dorsal hump in middle, with broad rounded apex in lateral view; apical part of phallus in ventral view with large, rounded lateral projections, slightly narrowed subapically and with rounded apical lobes.

Differential diagnosis. This species differs from all other known species of the *instabilis* group by its small size, pale coloration and the following combination of characters in the male genitalia: dorsal keel long and narrow; digitiform appendages long, thin and directed slightly upwards; apical part of phallus short and broad with large obtuse lateral projections.

Etymology. This species is dedicated to Tomáš Lundák, Praha, an excellent expedition driver.

Faunistic part**List of localities**

The following list provides complete data for localities no. 1-28 (see also Fig. 24).

AZARBAIJAN GHARBI PROVINCE:

- 1 – Rud-e Saruq River 10 km SE Chuplu, 36°28'N 47°02'E, ca 1700 m a.s.l., 2.x.1998, P. Chvojka leg.
- 2 – springfed brooks, Rud-e Saruq River valley 10 km SE Chuplu, 36°28'N 47°02'E, ca 1700 m a.s.l., 2.x.1998, P. Chvojka leg.
- 3 – streams nr. Takht Soleyman, 36°36'N 47°14'E, ca 2190 m a.s.l., 3.x.1998, P. Chvojka leg.
- 4 – spring 30 km NNW Mahabad, 36°57'N 45°37'E, ca 1370 m a.s.l., 18.x.1998, P. Chvojka leg.
- 5 – springs and streamlets 10 km NW Faruraq, 38°38'N 44°46'E, ca 1660 m a.s.l., 19.-20.x.1998, P. Chvojka leg.

AZARBAIJAN SHARQI PROVINCE:

- 6 – stream, Kandovan 20 km SE Osku, 37°48'N 46°14'E, ca 2100 m a.s.l. (at light), 1.x.1998, P. Chvojka leg.

ESFAHAN PROVINCE:

- 7 – wadi 10 km W Kashan, 33°59'N 51°17'E, ca 1150 m a.s.l. (at light), 1.v.1997, I. Hrdý jr. leg.

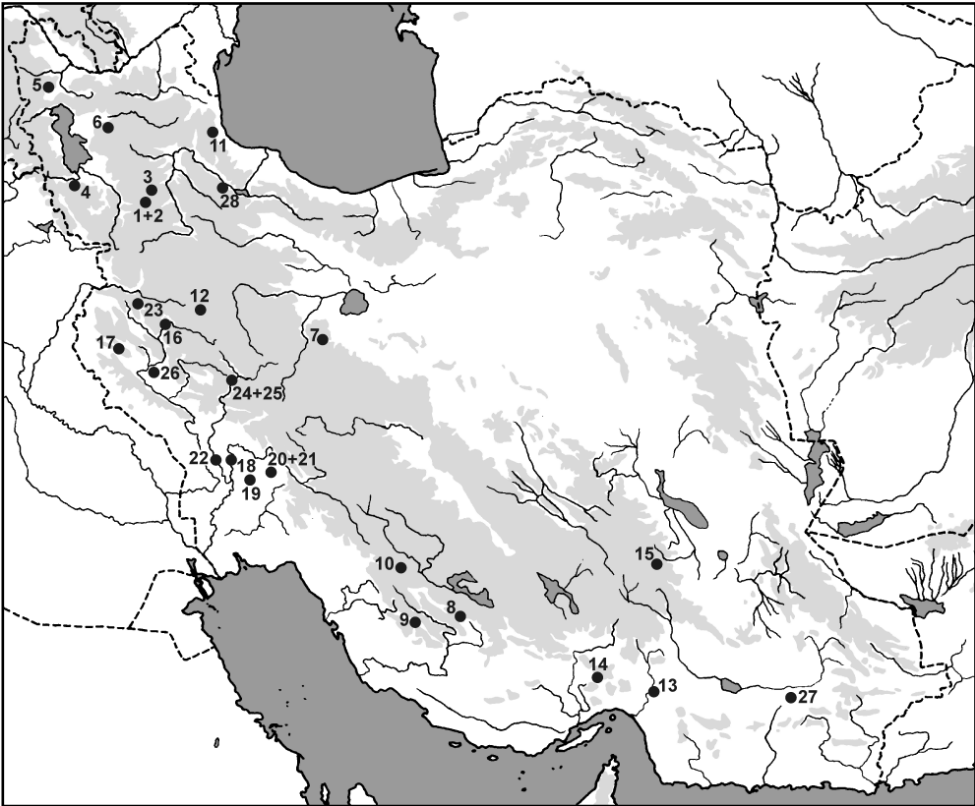


Fig. 24. Map of Iran with indicated localities no. 1-28 (see text for details).

FARS PROVINCE:

- 8 – Posht Chenar, 29°12'N 53°20'E, ca 1690 m a.s.l. (at light), 19.-20.iv.2000, J. Hájek & M. Mikát leg.
 9 – 10 km N Firuz Abad, 28°55'N 52°31'E, ca 1450 m a.s.l. (at light), 20.-21.iv.2000, J. Hájek & M. Mikát leg.
 10 – 2 km W Kholllar, 29°59'N 52°12'E, ca 2200 m a.s.l. (at light), 22.-23.iv.2000, J. Hájek & M. Mikát leg.

GILAN PROVINCE:

- 11 – Gichob 5 km SW Asalem, 37°41'N 48°51'E, ca 275 m a.s.l. (at light), 16.v.1997, I. Hrdý jr. leg.

HAMADAN PROVINCE:

- 12 – springfed brooks and streamlets nr. Alanje 15 km W Asadabad, 34°45'N 47°58'E, ca 1680 m a.s.l., 5.-6.x.1998, P. Chvojka leg.

HORMOZGAN PROVINCE:

- 13– 10 km E Dehbarez, 27°27'N 57°19'E, ca 350 m a.s.l., 16.iv.2000, J. Hájek & M. Mikát leg.
 14 – 5 km SE Khoshangan, 27°38'N 56°13'E, ca 415 m a.s.l. (at light), 18.-19.iv.2000, J. Hájek & M. Mikát leg.

KERMAN PROVINCE:

- 15 – 5 km NE Deh Bakri, 29°05'N 57°55'E, ca 1925 m a.s.l., 7.iv.2000, J. Hájek & M. Mikát leg.

KERMANSHAH PROVINCE:

- 16 – Bisotun, 34°23'N 47°26'E, ca 1320 m a.s.l. (at light), 6.x.1998, P. Chvojka leg.
 17 – Khosrow Abad, 34°10'N 46°22'E, ca 1290 m a.s.l. (at light), 17.x.1998, P. Chvojka leg.

KHUZESTAN PROVINCE:

- 18 – Rud-e Karun River, Shushtar, 32°03'N 48°51'E, ca 150 m a.s.l., 11.x.1998, P. Chvojka leg.
 19 – river nr. Si Mili, 31°42'N 49°24'E, ca 360 m a.s.l. (at light), 11.x.1998, P. Chvojka leg.
 20 – spring 10 km SW Izeh, 31°45'N 49°48'E, ca 850 m a.s.l., 12.x.1998, P. Chvojka leg.
 21 – 10 km SW Izeh, 31°45'N 49°48'E, ca 880 m a.s.l. (at light), 12.x.1998, P. Chvojka leg.
 22 – Choqazanbil SE Shush, 32°01'N 48°32'E, ca 70 m a.s.l. (at light), 15.x.1998, P. Chvojka leg.

KORDESTAN PROVINCE:

- 23 – stream 10 km S Faqih Soleyman, 34°56'N 46°57'E, ca 1460 m a.s.l., 18.x.1998, P. Chvojka leg.

LORESTAN PROVINCE:

- 24 – Ab-e Dez River, Lenje Abad 10 km SW Dorud, 33°27'N 49°01'E, ca 690 m a.s.l. (at light), 8.-9.x.1998, P. Chvojka leg.
 25 – spring, Lenje Abad 10 km SW Dorud, 33°27'N 49°01'E, ca 750 m a.s.l., 9.x.1998, P. Chvojka leg.
 26 – stream 10 km SE Bavineh, 33°36'N 47°12'E, ca 1100 m a.s.l., 16.x.1998, P. Chvojka leg.

SISTAN VA BALUCHESTAN PROVINCE:

- 27 – 2 km S Espakeh, 26°48'N 60°10'E, ca 690 m a.s.l., 9.iv.2000, J. Hájek & M. Mikát leg.

ZANJAN PROVINCE:

- 28 – 3 km W Sorkkeh Dizaj, 36°49'N 48°56'E, ca 760 m a.s.l., 17.v.1997, I. Hrdý jr. leg.

List of species

Unless stated otherwise, I have identified all specimens and they are deposited in NMPC.

Rhyacophila nubila (Zetterstedt, 1840). ZANJAN: Sorkkeh Dizaj, 1 ♂.

Agapetus caucasicus Martynov, 1913. AZARBAIJAN GHARBI: Faruraq, 14 ♂♂ 2 ♀♀.

Hydroptila adana Mosely, 1948. KHUZESTAN: Si Mili, 3 ♂♂ 6 ♀♀.

Hydroptila aegyptia Ulmer, 1963. KERMANSHAH: Bisotun, 50 ♂♂.

This species, known from Egypt, Tunisia, southern Europe, Turkey, and the Levant (BOTOSANEANU 1992, SIPAHILER 2005), is reported herein for the first time from Iran.

Hydroptila angustata Mosely, 1939. AZARBAIJAN GHARBI: Chuplu (Rud-e Saruq River), 3 ♂♂; Takht Soleyman (stream E of), 1 ♂; KERMANSHAH: Bisotun, 2 ♂♂ 13 ♀♀; Khosrow Abad, 1 ♂ 3 ♀♀; KHUZESTAN: Shushtar, 4 ♂♂ 7 ♀♀; Si Mili, 32 ♂♂ 268 ♀♀; Choqazanbil, 6 ♂♂ 27 ♀♀; KORDESTAN: Faqih Soleyman, 2 ♂♂; LORESTAN: Bavineh (at light), 34 ♂♂ 81 ♀♀.

Hydroptila hodkoveae sp. nov. FARARS: Firuz Abad, 1 ♂; KHUZESTAN: Izeh (at light), 1 ♂; LORESTAN: Bavineh, 1 ♂ (HM).

Hydroptila taurica Martynov, 1934. HAMADAN: Alanje, 4 ♂♂ 1 ♀.

Oxyethira falcata Morton, 1893. AZARBAIJAN GHARBI: Chuplu (Rud-e Saruq River), 1 ♂; Takht Soleyman, 36 ♂♂ 8 ♀♀; Mahabad, 3 ♂♂ 2 ♀♀; Faruraq, 12 ♂♂ 3 ♀♀; KERMANSHAH: Bisotun, 1 ♂ 1 ♀; KORDESTAN: Faqih Soleyman, 1 ♀; LORESTAN: Bavineh (streamlet), 3 ♂♂.

Stactobia marlieri Schmid, 1959. AZARBAIJAN GHARBI: Faruraq, 1 ♂ 1 ♀, H. Malicky det.

Dolophilodes ornata Ulmer, 1909. AZARBAIJAN GHARBI: Faruraq, 1 ♂.

Chimarra zagrosensis Chvojka, 1995. KHUZESTAN: Si Mili, 2 ♂♂ 1 ♀; Izeh (at light), 36 ♂♂ 42 ♀♀ (NMPC), 4 ♂♂ 4 ♀♀ (HM).

Psychomyia pusilla (Fabricius, 1781). AZARBAIJAN GHARBI: Chuplu (Rud-e Saruq River), 4 ♂♂; FARS: Firuz Abad, 3 ♂♂ 1 ♀; LORESTAN: Bavineh (at light), 1 ♂ 1 ♀.

Tinodes hajeki sp. nov. KERMAN: Deh Bakri, 2 ♂♂.

Tinodes voriseki sp. nov. AZARBAIJAN GHARBI: Chuplu (springfed brooks), 2.x.1998 and 10.v.2006, 4 ♂♂ (NMPC), 1 ♂ (HM); HAMADAN: Alanje (springfed brook), 1 ♂.

Cheumatopsyche capitella (Martynov, 1927). HORMOZGAN: Khoshangan, 2 ♂♂ 2 ♀♀; KHUZESTAN: Si Mili, 53 ♂♂ 38 ♀♀.

Cheumatopsyche flavellata Mey, 2004. FARS: Firuz Abad, 56 ♂♂ 45 ♀♀; Kholllar, 2 ♂♂ 1 ♀; KHUZESTAN: Izeh (at light), 2 ♂♂ 1 ♀.

Specimens from 'Eyn Varzan (Tehran Province) listed under *C. lepida* (Pictet, 1834) by CHVOJKA (1995) also belong to this recently described species.

Cheumatopsyche persica Mey, 2004. AZARBAIJAN GHARBI: Chuplu (springfed brooks), 1 ♂; KERMANSHAH: Khosfow Abad, 5 ♂♂ 1 ♀; FARS: Posht Chenar, 15 ♂♂ 10 ♀♀; Firuz Abad, 41 ♂♂ 23 ♀♀; KHUZESTAN: Si Mili, 1 ♂ 2 ♀♀; Izeh (at light), 13 ♂♂ 20 ♀♀; LORESTAN: Bavineh (at light), 8 ♂♂ 5 ♀♀; ZANJAN: Sorkheh Dizaj, 5 ♂♂ 10 ♀♀.

This species, recently described by MEY (2004) from the provinces of Chaharmahal va Bakhtiyari and Kerman, is rather common in Iran. The specimen from Chashmeh-ye Sargaz (Kerman Province), originally identified as *C. lepida* by CHVOJKA (1995), also belongs to this species.

Hydropsyche consanguinea McLachlan, 1884. AZARBAIJAN GHARBI: Takht Soleyman (stream SE of), 1 ♂; LORESTAN: Lenje Abad (spring), 10 ♂♂ 5 ♀♀.

Hydropsyche djabai Schmid, 1959. AZARBAIJAN GHARBI: Takht Soleyman (stream E of), 1 ♂.

Hydropsyche kinzelbachi Malicky, 1980. KHUZESTAN: Si Mili, 1 ♂.

Hydropsyche lundaki sp. nov. HAMADAN: Alanje (springfed brooks and streamlets), 44 ♂♂ 5 ♀♀ (NMPC), 5 ♂♂ (HM).

Hydropsyche perelin Malicky, 1987. LORESTAN: Lenje Abad (Ab-e Dez River), 1 ♂.

New species for Iran. This species has been known only from East Anatolia so far (SIPAHILER 2005).

Hydropsyche supersonica Malicky, 1981. GILAN: Gichob, 1 ♂.

Hydropsyche tigrata Malicky, 1974. ESFAHAN: Kashan, 1 ♂; FARS: Firuz Abad, 14 ♂♂ 19 ♀♀ (NMPC), 2 ♂♂ (HM), H. Malicky det.; KHUZESTAN: Izeh (at light), 1 ♂; LORESTAN: Lenje Abad (Ab-e Dez River), 6 ♂♂ (NMPC), 1 ♂ (HM), H. Malicky det.

Potamyia psamathe Malicky, 2004. FARS: Firuz Abad, 1 ♂, H. Malicky revid.

Dinarthrum chaldyrense (Martynov, 1909). AZARBAIJAN GHARBI: Faruraq, 2 ♂♂ 6 ♀♀.

Halesus digitatus caucasicus Oláh, 1985. AZARBAIJAN SHARQI: Kandovan, 2 ♂♂.

Micropterna solotarewi Martynov, 1913. GILAN: Gichob, 1 ♀.

Adicella hakkariensis Malicky, 1987. HAMADAN: Alanje, 3 ♂♂ 5 ♀♀.

Athripsodes angriamani Schmid, 1959. FARS: Firuz Abad, 1 ♂.

Setodes alala Mosely, 1948. KHUZESTAN: Izeh (spring), 1 ♂ 3 ♀♀.

New species for Iran. This species described from the Arabian Peninsula was later found also in the Levant (BOTOSANEANU 1992). This finding extends the range of *S. alala* to SW

slopes of the Zagros Mts., while the eastern part of Iran is populated by the closely related *S. drangianicus* (MALICKY 1986, CHVOJKA 1995).

Setodes drangianicus Schmid, 1959. HORMOZGAN: Dehbarez, 14 ♂♂ 12 ♀♀; SISTAN VA BALUCHESTAN: Espakeh, 2 ♂♂.

Setodes punctatus (Fabricius, 1793). KHUZESTAN: Shushtar, 1 ♂.

Ylodes zarudnyi (Martynov, 1928). KHUZESTAN: Choqazanbil, 8 ♂♂ 1 ♀.

Acknowledgements

I am grateful to Jiří Hájek (Praha), Ivan Hrdý jr. (Praha) and Miroslav Mikát (Hradec Králové, Czech Republic) for providing me with very interesting specimens of Trichoptera from Iran. I am much obliged to Hans Malicky (Lunz am See, Austria) for important comments on the new species as well as for identification of some specimens. I thank Petr Kment (Brno, Czech Republic) and Wolfram Mey (Berlin, Germany) for improvements of an earlier draft of the manuscript and David S. Boukal (Bergen, Norway) for linguistic comments. This study was supported by the Ministry of Culture of the Czech Republic (project No. MK00002327201).

References

- BOTOSANEANU L. 1992: *Fauna Palaestina. Insecta VI. Trichoptera of the Levant. Imagines*. The Israel Academy of Sciences and Humanities, Jerusalem, 293 pp.
- CHVOJKA P. 1995: Results of the Czechoslovak-Iranian Entomological expeditions to Iran. Trichoptera. *Časopis Národního Muzea, Řada Přírodovědná* **164**: 101-105.
- MALICKY H. 1986: Die Köcherfliegen (Trichoptera) des Iran und Afghanistans. *Zeitschrift der Arbeitsgemeinschaft Österreichischer Entomologen* **38**: 1-16.
- MALICKY H. 2004: Neue Köcherfliegen aus Europa und Asien. *Braueria* **31**: 36-42.
- MEY W. 2004: Beitrag zur Trichoptera-Fauna Armeniens und des Iran (Trichoptera). *Entomologische Nachrichten und Berichte* **48**: 81-87.
- MIRMOAYEDI A. & MALICKY H. 2002: An updated check-list of caddisflies (Insecta, Trichoptera) from Iran, with new records. *Zoology in the Middle East* **26**: 163-168.
- SCHMID F. 1959: Trichoptères d'Iran. *Beiträge zur Entomologie* **9**: 200-219, 376-412, 683-698, 760-799.
- SIPAHILER F. 2005: A checklist of the caddisflies of Turkey (Trichoptera). Pp. 393-405. In: TANIDA K. & ROSSITER A. (eds.): *Proceedings of the 11th International Symposium on Trichoptera*. Tokai University Press, Kanagawa, 474 pp.