

## Grassflies of the family Chloropidae (Diptera) of A.P. Fedchenko's Turkestan collection with description of new taxa

### Злаковые мухи семейства Chloropidae (Diptera) из туркестанской коллекции А.П. Федченко с описанием новых таксонов

E.P. NARTSHUK

Э.П. НАРЧУК

E.P. Nartshuk, Zoological Institute, Russian Academy of Sciences, 1 Universitetskaya Emb. St Petersburg 199034, Russia. E-mail: chlorops@zin.ru

Sixteen species are found in the chloropid collection made by A.P. Fedchenko in Turkestan in 1869–1871 and three more species were identified to the generic level only. A new genus, *Alajichlorops*, and four new species, *A. fedchenkoi*, *Chlorops kirghisicus*, *Ch. olgafedchenkoae*, and *Polyodaspis palpata* are described. A key for the palaearctic species of the genus *Polyodaspis* Duda, 1933 is presented.

В коллекции Chloropidae, собранной А.П. Федченко в Туркестане в 1868–1871 гг. найдено 16 видов и три вида определены только до родового уровня. Описаны новый род *Alajichlorops* и четыре новых вида *A. fedchenkoi*, *Chlorops kirghisicus*, *Ch. olgafedchenkoae* (Chloropininae) и *Polyodaspis palpata* (Oscinellinae). Дана таблица для определения палеарктических видов рода *Polyodaspis* Duda, 1933.

**Key words:** Central Asia, A.P. Fedchenko, Diptera, Chloropidae, *Alajichlorops*, new genus, new species

**Ключевые слова:** Средняя Азия, А.П. Федченко, двукрылые, злаковые мухи, *Alajichlorops*, новый род, новые виды

## INTRODUCTION

Chloropidae from Central Asia are insufficiently studied hitherto. Rather long ago Nartshuk (1966) gave a short review that included 76 species from 39 genera recorded from Kirghizia (now Kyrgyzstan), Tajikistan, Uzbekistan and southern Kazakhstan. Later, some new species were described and some species were recorded from this territory in other papers. They are included in the Catalogue of Palaearctic Diptera (Nartshuk, 1984).

Aleksey P. Fedchenko was the first Russian explorer who collected insects in Turkestan (partly coinciding with an area now commonly called Central Asia or Middle Asia) during his expedition in 1869–1871. Some groups of insects were exam-

ined soon after the expeditions and results were published. Hermann Loew and Aleksey P. Fedchenko were responsible for Diptera from Fedchenko's expeditions (Leonov, 1972). Loew described some new species of flies, but did not include the Chloropidae. Aleksey P. Fedchenko published nothing because of his early death.

## MATERIAL

Insects from the Turkestan collection done by Fedchenko are kept in the Zoological Museum of Moscow University in Moscow, Russia. The fly specimens in this collection are on pins with labels which are very peculiar: they are square and of different colour that refers to a month of collecting (lilac – April, pink – May, bluish

green – June, yellow – July, blue – August, orange – September); the day of the month is given in figures but the year is not being “coded” in the following way: no year means 1869, a black line in the lower part of the label – 1870, and a red line in the upper part of the label – 1871. A map of the routes of Fedchenko’s expedition was published by Leonov (1972). I found 59 specimens of undetermined Chloropidae flies within the Fedchenko’s collection. Three specimens from the collection were earlier included by me into the paratypes of two described species: two females of *Xena straminea* Nartshuk, 1964 and a female of *Eutropha crocea* Nartshuk, 1973 (Nartshuk, 1964, 1973).

A list of other species and descriptions of new taxa are given in the present paper. Some specimens of *Chlorops kirghisicus* sp. nov., collected by the author in Kirghizia in 1965 were used for the description, too. Most specimens are kept in the collection of the Zoological Museum of Moscow University in Moscow (ZMUM), and a part in the Zoological Institute (formerly Zoological Museum), Russian Academy of Sciences in St Petersburg (ZIN). Places of depositon of holotypes and paratypes of new taxa are listed below for each new species.

## ANNOTATED LIST OF SPECIES AND DESCRIPTIONS OF NEW TAXA

### Order DIPTERA

#### Family CHLOROPIDAE

#### Subfamily OSCINELLINAE

#### *Aphanotrigonum* sp.

Chardara, 25 June 1871, one female.

A small specimen (sex unknown) belonging to the group of *A. cinctellum* Zetterstedt, 1848.

#### *Conioscinella* sp.

Jagnob, 21 June 1869, one male.

Dark-coloured specimen; more specimens are needed for a correct identification of the species.

#### *Dicraeus bothriochloae* Nartshuk, 1978

Osh, 6 Aug. 1871, one male.

*Distribution.* Central Asia (Tadjikistan, Turkmenia). The first record from Kyrgyzstan. Recently Deeming (2011) recorded this species for UAE: very lightly coloured specimens were collected on grasses *Penisetum* and on flowering *Saccharum griffithii*. However Deeming (2011: 789) mentioned that “the identification must remain tentative”.

Larvae develop in unripe seeds of *Botriochloa ischaemum* (L.) Kend. (Poaceae).

#### *Dicraeus ingratus* (Loew, 1866)

Jagnob, 21 June 1869, one male.

*Distribution.* The species is widely distributed, known from Europe to Kazakhstan, West Siberia, Israel and in North America.

Larvae develop in unripe seeds of *Bromopsis* sp. (Poaceae).

#### *Elachiptera rufifrons* Duda, 1932

Samarkand, 4 April 1869, one male.

*Distribution.* From South Europe and North Africa to Israel and Central Asia.

Larvae of the species are considered to be a pest of rice shoots in Spain (Sevilla) (Batella, 1978).

#### *Polyodaspis palpata* sp. nov.

(Figs 1, 2)

*Holotype*, female, [Uzbekistan] Kysylkum, 29 June 1871, coll. Fedchenko, ZMUM.

*Paratype*, female, [Uzbekistan] Kysylkum, 30 June 1871, coll. Fedchenko, ZIN.

*Description.* Body black, shining. Frons nearly square, dark brown. Ocellar triangle black, nearly reaching anterior margin of frons, greatly narrowing anteriorly, its surface not smooth. A brownish keel absolutely separates the antennal foveae, keel equals a triangle above and is linear anteriorly. The brownish postpedicel is not of a discoidal form, as usual in many spe-

cies of the family, but onion-shaped. Arista very thin, bare, longer than the frons. Gena wide, greatly protruding. Eyes bare, round. Palpi stout, brownish, expanded over the edge of the oral cavity. Proboscis long geniculate. Chaetotaxy: orbital setae small and not distinguished from interfrontal hairs. Postocellar setae longer than exterior and inner verticals. All setae and hairs of head whitish.

Scutum and scutellum evenly covered with whitish hairs. Notopleural setae 1+1, whitish. Wings clear. First basal cell narrow. Ratio of 1:2:3:4 sectors of costal vein equals 57:35:25:12. Transverse vein *r-m* is situated proximal from middle of second basal cell. Abdomen black, covered with whitish hairs. Legs black with brownish knees. Body length 2 mm.

*Etymology.* The new species is named *palpata* as it has strongly enlarged palpi.

*Comparative Remarks.* The species is similar to *P. sulcicollis* (Meigen, 1839) and *P. laevicollis* (Becker, 1913) concerning its wing venation with a narrow first basal cell and strongly protruded gena. From the widely distributed *P. ruficornis* (Macquart, 1835) the new species is distinguished by a narrow first basal cell and the absence of many lateral setae on the scutellum. The onion-shaped postpedicel, thin and long arista and thick palpi expanded from the oral cavity in female distinguish the new species from the known Palearctic species of the genus. *Lasiambia picardi* (Séguy, 1946) from Nice (France) described in the genus *Polyodaspis* Duda, 1933 (Séguy, 1946), belongs to another genus. Becker (1913) described *Siphonella laevicola* from Beludzhistan (Iran) and compared it with *Polyodaspis ruficornis* (Macquart, 1835) and *Lasiambia parallela* (Becker, 1910) [as *Siphonella parallela*], although he had two specimens of *Polyodaspis sulcicollis* (Meigen, 1838) in the same collection from Iran. Holotype, a female with a label saying "P. Beludzhistan, 13 Februar 1901 [Zarudny]" is deposited in ZIN collection. I examined it and could not distinguish it from a dark

specimens of the variable *P. sulcicollis*. Halteres of holotype of *P. laevicola* are yellow, not "braunschwarz" as Becker (1913) stated. Two specimens of *P. sulcicollis* from Iran were identified by Becker and labeled as "Chorassan [Umgeburg von Dys] 15–17 July 1901 [Zarudny]". These specimens are smaller than the holotype of *P. laevicola* and its gena and legs are slightly paler. To solve the question about the synonymy an additional material is needed, especially a dark coloured male from Iran in order to examine male genitalia. However, it is worth mentioning that the *P. laevicola* holotype was collected in Iran in February while both specimens of *P. sulcicollis* flew in July.

#### Key to Palearctic species of the genus *Polyodaspis*

1. First basal cell wide in the middle. Scutellum with many setae on lateral edge . . . . . 2
  - First basal cell not widened. Scutellum with usual lateral setae . . . . . 3
2. Surface of frons flat without of a swelling before ocellar triangle. Postocellar setae parallel. Palearctic and Oriental Regions . . . . .
  - . . . . . *P. ruficornis* (Macquart, 1835) (= *P. tarsalis* Frey, 1923; *P. flavipila* Duda, 1934; *P. endogena* de Meijere, 1938; *P. flavisetosa* Nartshuk, 1991; *P. similis* Nartshuk, 1991) (see Nartshuk, 2010)
  - Surface of frons with a swelling before ocellar triangle. Postocellar setae slightly convergent. Europa (Hungary) . . . . .
    - . . . . . *P. convexa* Ismay et Schulten, 2003 (only female known)
3. Postpedicel onion-shaped, arista longer than frons. Central Asia . . . . . *P. palpata* sp. nov.
  - Postpedicel not so thick, shorter than high . . . . . 4
4. Ocellar triangle smooth and shining. Body length 1.5 mm. Abdomen without membranous vesicae, and male genitalia as in Figs 3 and 4. Kazakhstan . . . . .
  - . . . . . *P. parva* Nartshuk, 1964
  - Ocellar triangle punctate, not smooth. Body length 2 mm. Abdomen with membranous vesicae, usually situated inside abdomen (Fig. 5). Palearctic Region . . . . .
    - . . . . . *P. sulcicollis* (Meigen, 1838)

***Trachysiphonella carinifacies***

Nartshuk, 1964

Iskander, 15 June 1871, one female.

*Distribution.* Switzerland, Kazakhstan, Tadjikistan, Mongolia, Tunisia, UAE.***Trachysiphonella ruficeps***

(Macquart, 1835)

Uch Kurgan, 14 July 1871, one male, one female.

*Distribution.* The species was recorded earlier only from Europe.*Comparative Remarks.* The examined specimens are pale coloured. There are several specific names for species of *Trachysiphonella* which are very variable in colour: *ruficeps* (Maquart, 1835), *scutellata* von Roser, 1840, *pygmaea* Meigen, 1838, *flavella* Zetterstedt, 1848, *scutellata* Zetterstedt, 1860, *diplotoxoides* Strobl, 1893, *schineri* Hendel, 1931. Attempts to distinguish some forms based on the structure of male genitalia (Karps, 1984) have not been successful as Michael von Tschinhaus confirmed (personal comm.). Resolving this complicated case is beyond the scope of this paper. I use the oldest name as probably three former names are synonyms.Subfamily **CHLOROPINAE*****Alajichlorops* gen. nov.***Diagnosis.* This new genus is founded on structure characters of the head with wide and slightly swollen gena, venation of wing with short costal vein, which ends far before the wing tip, short radial veins, enlarged end of vein  $R_1$  at its fusion with costal vein, structure of male genitalia with sclerotized surstyli, and transverse mesolobus without developed cerci.*Description.* Body yellow with black marks: 5 stripes on scutum and 5 marks on pleuron: on propleuron, anepisternum, anepimeron, katapisternum and meron. Postpedicel round, arista thin, nearly bare. Eye oval with horizontal diameter longerthan the perpendicular one. Height of gena as long as 4/5 of perpendicular diameter of eye. Proboscis short. Wing clear, costal vein ends at 2/3 of the wing length until the wing tip. Veins  $R_{2+3}$  and  $R_{4+5}$  short and curved. Break on costal vein and flexure of the  $M_{3+4}$  exist, subcostal vein presented as a very short piece in 1/3 times shorter than humeral vein. Propleural seta black. Apical bristle at the end of mid or hind tibia and hind tibial organ are lacking.

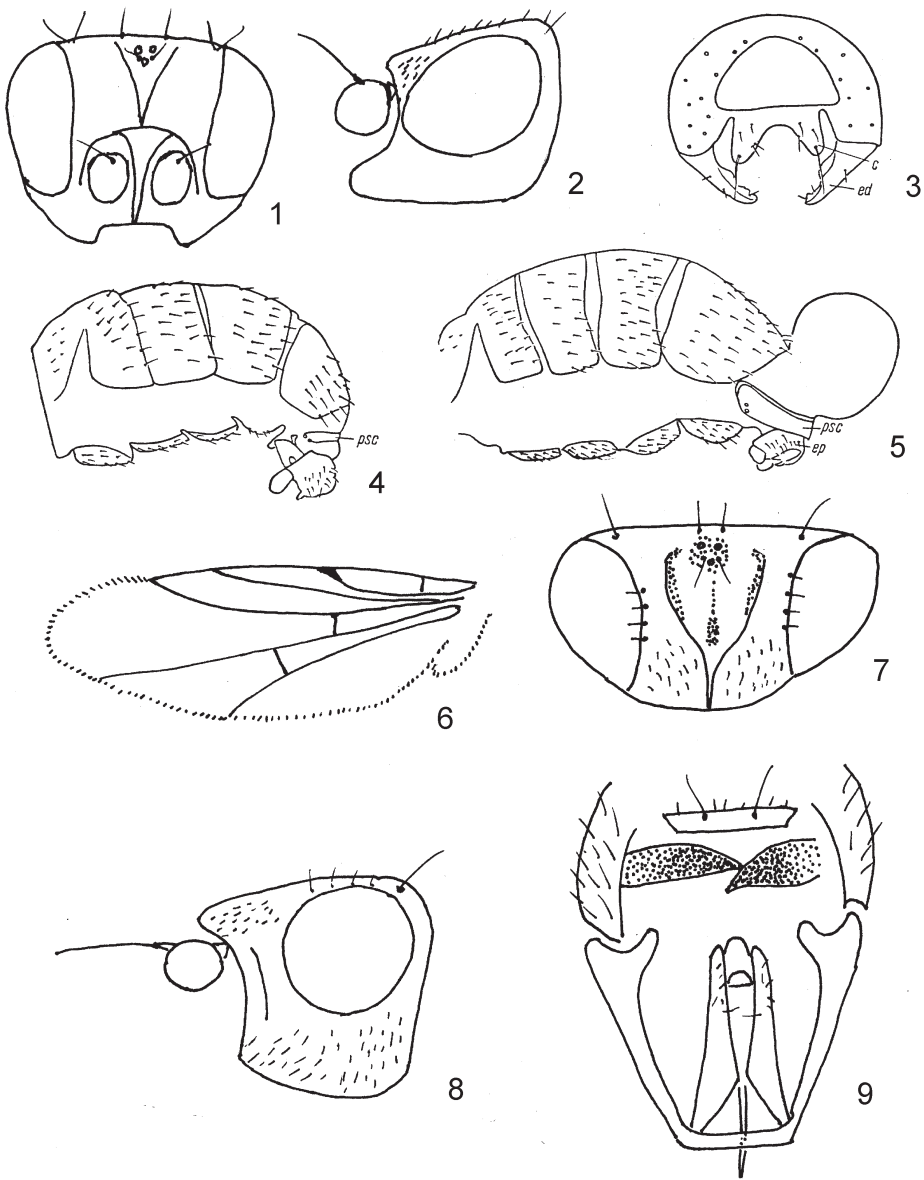
Male genitalia: anterior lobe of surstylus black, strongly sclerotized, mesolobus transverse, gonites simple. Epandrium partly damaged, probably band-shaped sclerites lateral to the anus is lacking.

Type species: *Alajichlorops fedchenkoi* Nartshuk, **sp. nov.***Etymology.* The genus name is composed from two words: Alaj Mountains, the type locality, and *Chlorops* – generic name in Chloropidae meaning “green eye”. Gender masculine.*Comparative Remarks.* The genus *Alajichlorops* may be included in the keys of Andersson (1977) and Ismay & Nartshuk (2000) in the following way: couplets 56 in Andersson and 7 in Ismay & Nartshuk must be reformulated as:

56 (in Andersson, 1977), 7 (in Ismay &amp; Nartshuk, 2000). Frons produced at last half the length of an eye. Head in lateral view more or less triangular, or anepisternum and anepimeron with setulae.

– Frons less produced or anepisternum and anepimeron without setulae.

In key of Andersson in couplet 27 *Alajichlorops* differs from *Centorisoma* Becker, 1910 by short round postpedicel with thin nearly bare arista, short costal vein, which ends on 2/3 of the wing length until the wing tip, short and curved veins  $R_{2+3}$  and  $R_{4+5}$  and transverse mesolobus in the male genitalia. In *Centorisoma* postpedicel longer than wide, arista thick pubescent, costal vein longer and veins  $R_{2+3}$  and  $R_{4+5}$  nearly straight, mesolobus longer than wide in the male genitalia. In key of Ismay & Nartshuk in couplet 87 *Alajichlorops* differs from



**Figs 1–9.** Some structures in species of Chloropidae. *Polyodaspis palpata* sp. nov.: 1, head in front, 2, head in lateral view; *P. parva*: 3, epandrium, 4, abdomen, lateral view; *P. sulcicollis*: 5, abdomen in lateral view; *Alajichlorops fedchenkoi* sp. nov.: 6, wing, 7, frons, 8, head in lateral view, 9, male genitalia. Abbreviations: *c* – cerci, *ed* – surstyli, *ep* – epandrium, *psc* – pregenital sclerite.

*Chlorops* Meigen, 1803 by short costal vein which ends on 2/3 of the wing length until the wing tip, short and curved veins  $R_{2+3}$  and  $R_{4+5}$ , transverse mesolobus, long posterior lobes of surstyli and fused pre- and

postgonites. In *Chlorops* costal vein longer, veins  $R_{2+3}$  and  $R_{4+5}$  straight, mesolobus small triangular or around, posterior lobes of surstyli small, and pre- and postgonites are separated and parallel.

***Alajichlorops fedchenkoi* sp. nov.**  
(Figs 6–9)

*Holotype*: male, [Kyrgyzstan], Alaj Mt., 23 Aug. 1871, coll. Fedchenko, ZMUM.

*Paratype*: 1 male, [Kyrgyzstan], Alaj Mt., 22 Aug. 1871, coll. Fedchenko, ZIN. The paratype is lightly damaged: one antenna, fore legs, except coxae, middle legs except femur, and a hind leg and tarsus of another hind leg are broken. Tip of both wings are broken, epandrium partly damaged.

Alaj Mountains is a mountain ridge, situated in the east of Zaravshan Mountain Ridge, on the border between Tajikistan and Kyrgyzstan.

*Description*. Body yellow. Frons nearly square, covered with blackish setulae. Ocellar triangle extends to fore margin of frons, whitish with black marks on ocellar tubercle, lateral sides, and apex. Occiput with two black vertical lines. Gena wide, slightly swollen, and with setulae on the whole surface. Parafacialia equal in height of postpedicel. Chaetotaxy of head: outer verticals, postocellars, ocellars and 4–5 orbitals. Palpi yellow. Antenna yellow, postpedicel slightly darkened in holotype and more strongly darkened in paratype. Arista black.

Scutum see description for the genus. Black marks on pleuron shining. Anepisternum bare. Scutellum convex, darkened in the middle. Chaetotaxy of thorax: small postpronotal, 1+2 notopleurals, 1 postalar and 1 hind dorsocentral seta. Metanotum black, shining. Hind femur not thickened. Tergites of abdomen brown with yellow hind margins and yellow lateral sides. Ventral side of abdomen yellow. Halteres whitish. Wing clear with strong costalisation, venation as in fig. 5. Legs yellow, fore tarsi and last segment of middle and hind tarsus darkened. Epandrium brown. Surstyli elongate and triangle shaped with acute tips, black, sclerotized. Hypandrium open, aedeagus and gonites membranous.

Body length 2.7 mm.

*Etymology*. Species is named in the memory of the collector, Aleksey Pavlovich Fedchenko.

***Chlorops kirghisicus* sp. nov.**  
(Figs. 10, 11)

*Holotype*: male, Kyrgyzstan, Akbosaga, River Gulcha, Alaj Mt., 5 Aug. 1965, coll. Nartshuk, ZIN.

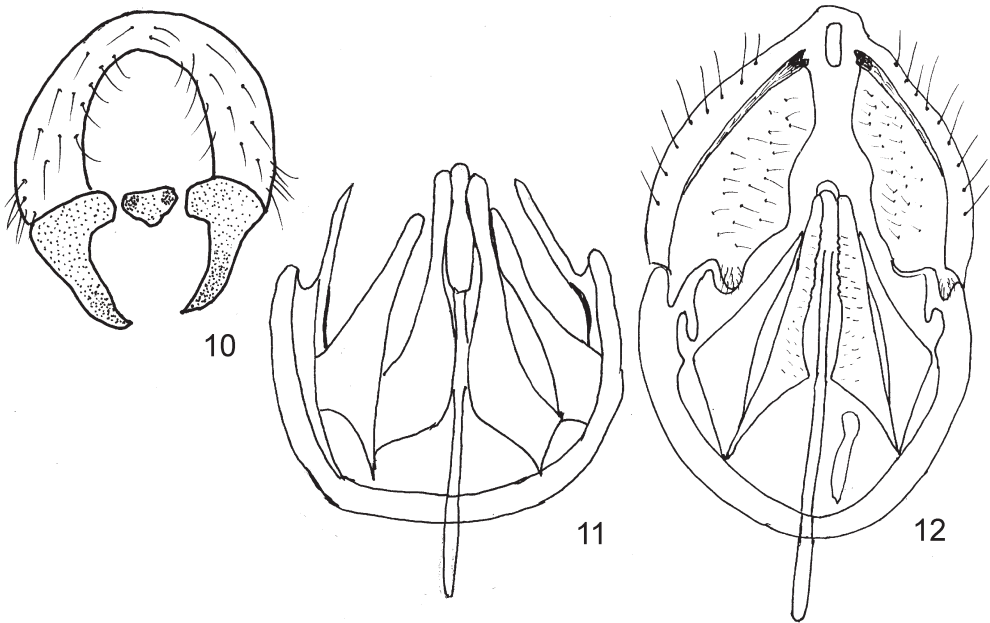
*Paratypes*: 9 males and 8 females with the same label as holotype; ZIN; 2 females, Uzbekistan, Khodzha-Chiburgan, 21 and 26 June 1871, coll. A.P. Fedchenko; 1 male, [Kyrgyzstan?] Kchi Alaj, 27 July 1871 (A.P. Fedchenko). 1 male, [Tajikistan] Iskander, 15 June 1870, A.P. Fedchenko, all in ZMUM.

*Description*. Body yellow with black stripes on scutum. Frons nearly square, yellow with black setae and setulae. Basal part of ocellar triangle extends to half of frons and continues as narrow line to front of frons, entirely black or with narrow yellow sides.

Postocellar setae convergent, as long as inner verticals, outer vertical setae a little longer. Gena wider than height of postpedicel, covered with yellow setulae. Postpedicel black, basal antennal segments yellow. Arista white with yellow base. Palpi yellow. Occiput with black central stripe.

Stripes of scutum black, dusted. Scutellum yellow. Spot on anepisternum small, black and shining, spot on katepisternum yellow in 3 specimens (holotype and 2 paratypes) and black in a female from Chiburgan. Propleura without black mark. Abdomen dark brown dorsally. Wing clear with venation typical for the genus. Halteres white. Legs yellow with darkened tarsi. Male genitalia (Figs 10, 11): epandrium with long sclerotized sursyli, hypandrium common for the genus with two parallel gonites.

*Comparative Remarks*. The new species is similar to *Ch. serenus* Loew, 1866 in appearance, with wide gena, black postpedicel and yellow basal segments of antenna, number and colour marks on pleura. It differs by a white arista, dark stripe on occiput, dark coloured abdomen and structure of male genitalia. The new species has long sclerotized surstyli. New species runs to the couplet 18 (17) in the *Chlorops*-key of the Palaearctic species by Smirnov & Fedose-



**Figs 10–12.** Male genitalia in *Chlorops* species. *Ch. kirghisicus* sp. nov.: **10**, epandrium, **11**, hypandrium; *Ch. olgafedchenkoae* sp. nov.: **12**, epandrium and hypandrium.

eva (1977), it differs from *Ch. persicus* Duda by form and darker colour of ocellar triangle and structure of male genitalia.

***Chlorops olgafedchenkoae* sp. nov.**  
(Fig. 12)

*Holotype*: male, [Kyrgyzstan ?] Alaj Mt., 22.07.1871, coll. A.P. Fedchenko, ZMUM.

*Paratypes*: 1 male, Uzbekistan, Uch-Kurgan, 15 July 1871; 1 male, Tajikistan, Iskander, 16 June 1870; 2 males, Kyrgyzstan, Taka, 8 Aug. 1871; 1 female, Kyrgyzstan, Shakhimardan, 8 July 1871; 2 females, Kyrgyzstan, Osh, 2 Aug. 1871; 1 female, Kyrgyzstan, Mody, [12 verst from Osh] 7 Aug. 1871; 1 female, [Uzbekistan] Zeravshan Valley, 25 June 1869. All collected by Fedchenko and deposited in ZMUM, except for 2 males from Taka and 1 female from Mody, which are in ZIN.

*Description*. Body yellow with black marks. Frons nearly square with black setulae. Ocellar triangle extends to front of frons only as a strongly narrowed line. Black spot occupies the ocellar tubercle and fore part of triangle, leaving hind corners yellow. The anterior black spot sometimes reduces to a

small oval mark. Occiput with black stripe, widened below. Outer and inner verticals and postocellars are equal, postocellars are situated outside of hind ocelli. Gena nearly as wide as height of postpedicel, wider than parafacialia. Postpedicel round and black, arista white with yellowish base. Basal antennal segments yellow. Palpi black on 2/3 of their length.

Scutum longer than wide with 5 black dusted stripes, middle stripe does not extend scutellum.

However, diffuse darkening in front of scutellum, extending on the scutellum as well. Postpronotum with black mark. Pleura with black marks below the anterior stigma, on anepisternum, katepisternum and meron. A female has not a black, but a dark yellow spot on the katepisternum. Metanotum black and dusted. Abdomen yellow with black transverse bands on anterior part of tergites.

Wings clear, venation typical for the genus. Legs yellow, fore tarsus slightly darkened. Male genitalia as in fig. 12.

Body length 3.5 mm.

*Etymology.* Species is named in the memory of Olga Aleksandrovna Fedchenko, a wife and a colleague of Aleksey Pavlovich Fedchenko, who also took part in the Turkestan Expedition.

*Comparative Remarks.* The new species belongs to the group of species with dark coloured palpi. The group includes some few species only. The species is similar to *Ch. zernyi* Duda, 1933 by its white arista and black palpi. It is distinguished by the form of its head which is not elongated as in *Ch. zernyi*, dark coloured katepisternal spot, black mark on propleuron below anterior stigma and structure of male genitalia. Palpi in *Ch. zernyi* are black only on tip, in the new species palpi are black on 2/3 of their length. Moreover there are some small differences in the structure of male genitalia. New species runs to the couplet 15 (16) in the *Chlorops*-key of the Palaearctic species by Smirnov & Fedoseeva (1977), differences from *Ch. zernyi* are listed above.

***Chlorops novakii* Strobl, 1902**

Kosaral, 24 June 1871, one male, one female; Katta-Kurgan, 6 Apr. 1869, one male, one female.

*Distribution.* From Europe to Russian Far East and Mongolia. In East Europe, absent in the north of Lithuania and Belorussia.

*Note.* Specimens of very light colour, postpedicel yellow with small darkened part above, ocellar triangle yellow, only ocellar tubercle and a central line are black.

***Chlorops persicus* (Duda, 1933)**

Gulcha, 9 and 10 Aug. 1871, 3 females; Alaj Mt., 21 and 22 July 1871, one male, two females; Majrakum, 4 Apr. 1871, one female.

*Distribution.* Transcaucasia, Central Asia (Uzbekistan, Tajikistan, Turkmenistan), Iran, Afghanistan.

***Chlorops* sp.**

Iskander, 15 June 1869, one male (without antennae), one female.

***Eutropha crocea* Nartshuk, 1973**

Nartshuk, 1973: 224 (Chardara, on Syr Darya River, 27 June 1871, one female paratype).

*Distribution.* South Kazakhstan, Uzbekistan, western Mongolia.

***Meromyza conifera* Fedoseeva, 1971**

Zaravshan Valley, 1 May 1869, two males.

*Distribution.* Central Asia (Uzbekistan, Tajikistan), western Mongolia.

***Meromyza nigriventris* Macquart, 1835**

Pyandzhikent, 28 June 1871, two males; Gulcha, no data, one male.

*Distribution.* Holarctic species, widely distributed in the Palaearctic from Europe to Japan, China, Iran, Mongolia. North America.

***Meromyza pluriseta* Péterfi, 1961**

Alaj Mt., 11 and 22 July 1870, two males; Fan, 23 June 1869, one male; Karasuk, 11 July 1870, one male.

*Distribution.* From Europe to East Siberia and Mongolia.

***Meromyza saltatrix* (Linnaeus, 1761)**

Iskander, 15 June 1869, one male; Varsaminor, 11 June 1869, 2 males; Fan, 19 June 1869, one male.

*Distribution.* Holarctic species, widely distributed in the Palaearctic from Europe to Russian Far East and China. Within the Nearctic it is known only in Alaska.

Larvae are phytophagous, developing in shoots of many genera of grasses (Poaceae).

***Meromyza* sp.**

Uch-Kurgan, 15 Aug. 1874, one male.

A male with black tip of palpi and black stripes on scutum. Postgonites black and not identical with postgonites of any known species, but I abstain from describing a new species for an additional material is needed.



*Xena straminea* Nartshuk, 1964

Nartshuk, 1964: 316 [Kizylkum, 29 June 1871, one female; Chardara, on Syr-Darja, 25 June 1871, one female (paratypes); additional specimens: one male and two females from Tadjikistan, Langarkisht, southern Pamir Mts., 1 Aug. 1972 (coll. Tanasjitshuk)].

*Distribution.* The species is abundant in mountain regions of Switzerland (Dely-Draskovits et al., 1993), south-eastern part of European Russia (Orenburg Region), Kazakhstan, Uzbekistan.

Female with terminalia forming a shining yellow laterally flattened cutting ovipositor. Ovipositor of such a structure is rather rare in Chloropidae and occurs in some species of the unrelated genera *Calamoncosis* Enderlein, 1911, *Opetiophora* Loew, 1872, *Dicraeus* Loew, 1873 (all Oscinellinae), *Pseudopachychaeta* Strobl, 1902, *Sacatonia* Sabrosky, 1967, and *Cetema* Hendel, 1907 (all Chloropinae).

## CONCLUSIONS

A small collection of Chloropidae brought together by Fedchenko in Central Asia contains 16 species, among which a new genus *Alajichlorops* g. nov. and four new species *A. fedchenkoi* sp. nov., *Chlorops kirghisicus* sp. nov., *Ch. olgafedchenkoe* sp. nov., and *Polyodaspis palpata* sp. nov. are described in the present paper. The genus *Xena* Nartshuk, 1964 and two species *X. straminea* Nartshuk, 1964 and *Eutropha crocea* Nartshuk, 1973 were described already in the past, and paratypes of these species from the Fedchenko's collection were designated already in that connection (Nartshuk, 1964, 1973). More than a half of the species, 9 out of 16, have a local Turanian distribution. The chloropid collection of Fedchenko contains only 59 specimens, however 8 new taxa were described from this material. This fact is an evidence of the diversity and peculiarity of the chloropid fauna of Central Asia.

## ACKNOWLEDGEMENTS

The author thanks A.L. Ozerov (Zoological museum of the Moscow University) for material from the A.P. Fedchenko's collection and the reviewer M. von Tschirnhaus (Bielefeld, Germany) for many valuable remarks and correction of my English. Financial support came from the Ministry of Education and Science of the Russian Federation, the Russian Foundation for Basic Research (grants 11-04-00185a, 11-04-10047k), Programme of the Presidium of the Russian Academy of Sciences "Origin and Evolution of the Biosphere". In the course of this work the collection of the Zoological Institute RAS (UFL ZIN No. 2-2.20, Rosnauka No. 02.518.11.7086) was used.

## REFERENCES

- Andersson H. 1977. Taxonomic and phylogenetic studies on Chloropidae (Diptera) with special reference to Old World genera. *Entomologica Scandinavica. Supplement*, **8**: 1–200.
- Batella J.A. 1978. Cloropido, nuevo enemigo del arroz en la zona de Sevilla. *Arroz (Valencia)*, **17**(62): 8–9.
- Becker Th. & Stein P. 1913. Persische Dipteren von den Expeditionen des Herrn N. Zarudny 1898 und 1901. *Ezhagodnik Zoologicheskogo museya imperatorskoy akademii nauk*, **17**(1912): 503–654, pl. XII–XIV.
- Deeming J.C. 2011. Order Diptera, family Chloropidae. *Arthropod fauna of the UAE*, **4**: 784–806.
- Dely-Draskovits Á., Bächli G. & Merz B. 1993. Zur Fauna der Chloropidae (Diptera) der Schweiz. *Mitteilungen aus der entomologischen Gesellschaft Basel (neue Folge)*, **43**: 69–84.
- Leonov N.I. 1972. Aleksey Pavlovich Fedchenko (1844–1873). Moscow: Nauka. 165 p. (In Russian).
- Ismay J.W. & Nartshuk E.P. 2000. Family Chloropidae. In: Papp L. & Darvas B. (Eds). *Contribution to a Manual of Palaearctic Diptera*. Appendix volume: 387–430. Budapest: Science Herald.
- Ismay J.W. & Schulten B. 2003. A new species of Polyodaspes Duda (Diptera: Chloropidae) from Hungary. *Folia Entomologica Hungarica*, **64**: 341–344.

- Karps A. E.** 1984. On diagnostics of closely related species of Chloropidae (Diptera). *In: O.A. Skarlato* (Ed.) *Dvukrylye fauny SSSR i ikh znachenie v ekosistemakh*. [Diptera of the fauna SSSR and their role in ecosystems]. Leningrad: 57–63. (In Russian).
- Nartshuk E.P.** 1964. A new genus and new species of grassflies (Diptera, Chloropidae) from Kazakhstan. *Trudy Zoologicheskogo Instituta, Leningrad*, **34**: 302–327. (In Russian).
- Nartshuk E.P.** 1966. A short review of the fauna of grassflies (Diptera, Chloropidae) of Middle Asia. *In: Narsikulov E.N & Luppova E.N.* (Eds). *Fauna i zoogeographia nasekomykh Sredney Asii* [Fauna and zoogeography of the Middle Asia]. Dushanbe: 166–177. (In Russian).
- Nartshuk E.P.** 1973. New species of grassflies (Diptera, Chloropidae) of the Palaearctic fauna. *Entomologicheskoye obozreniye*, **52** (1): 215–227. (In Russian).
- Nartshuk E.P.** 1978. Two new species of Chloropidae (Diptera) from Middle Asia. *Trudy Zoologicheskogo Instituta Akademii Nauk SSSR*, **71**: 83–89. (In Russian).
- Nartshuk E.P.** 1984. Family Chloropidae. *In: Soós Á. & Papp L.* (Eds), *Catalogue of Palaearctic Diptera*, **10**. Clusiidae – Chloropidae: 222–298, Budapest: Akadémiai Kiadó.
- Nartshuk E.P.** 2010. Grassflies of the genus *Polyodaspis* (Diptera, Chloropidae) in the fauna of south-east Asia. *Entomologicheskoye obozreniye*, **89** (2): 473–478. (In Russian).
- Séguy E.** 1946. Trois Chloropides nouveaux parasites d'ootheques d'Orthoptères. *Encyclopédie entomologique, Série B II, Diptera*, **10**: 5–7.
- Smirnov E.S. & Fedoseeva L.I.** 1977. Grassflies of the genus *Chlorops* (Diptera, Chloropidae) in the fauna of the USSR. A key for identification. *Zoologicheskii Zhurnal*, **55**(11) (1976): 1659–1676. (In Russian).

*Received November 18, 2010 / Accepted October 24, 2011*