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On the Synonymies of Chorthippus fallax ZUBOWSKY (Orthoptera, Acrididae)

by
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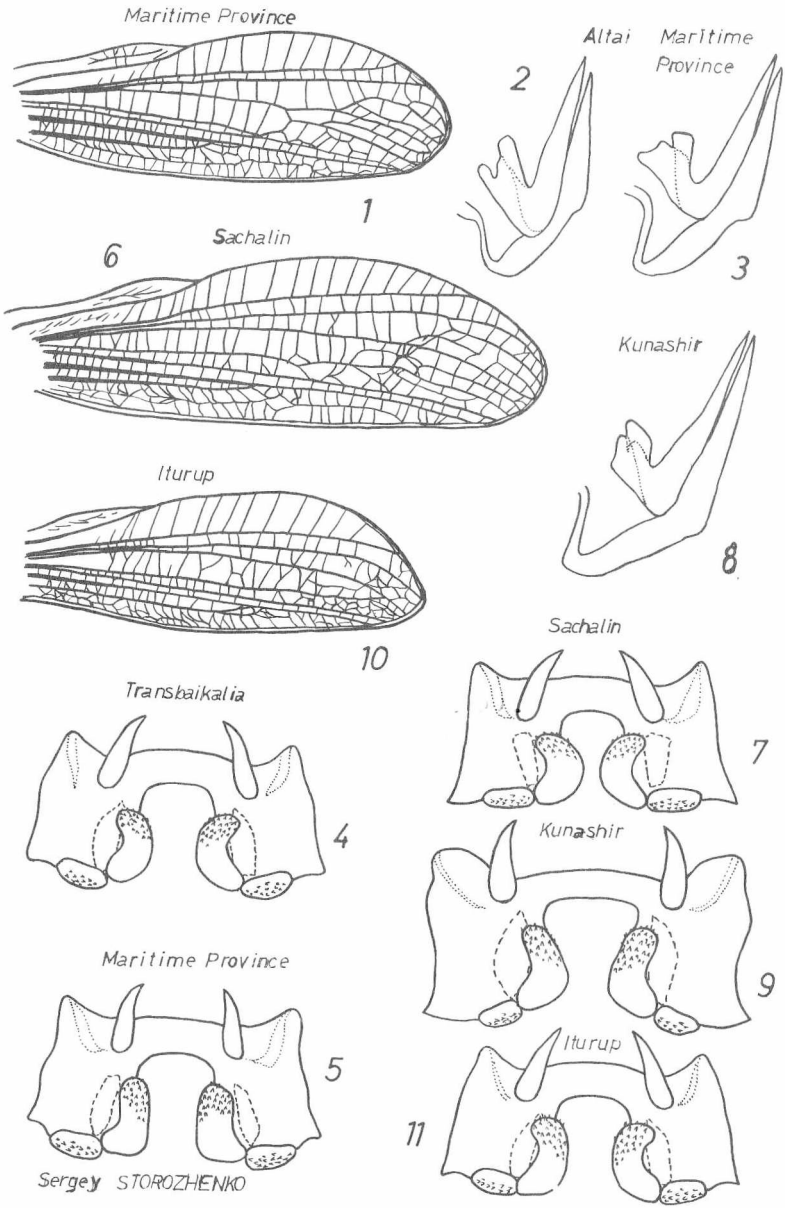
Abstract: *Chorthippus fallax* is a polytypic species and it is divided into 4 subspecies. *Ch. fallax fallax* (ZUB.) is known from continental parts of Eastern Asia; *Ch. fallax strelkovi* B.-BIEN. stat. n. lives on Sachalin Island; *Ch. fallax kurilensis* B.-BIEN. stat. n. and *Ch. fallax saltator* B.-BIEN. stat. n. are known from Kurile Islands (at first from Iturup and Shikotan and secondly from Kunashir respectively).

N. ZUBOWSKY (1899) described *fallax* as a variety of *Stenobothrus cognatus* FIEB. (= *Chorthippus macrocerus* F.-W.) from Lake Zaisan and Altai. E. MIRAM (1906) described *Stauroderus ehnbergi* from Siberia. S. TARBINSKY (1925) pointed out that *fallax* was a distinct species and established its synonymy. B. UVAROV (1927) placed *fallax* to the genus *Chorthippus* FIEB. G. BEY-BIENKO (1948; 1949) described *Chorthippus kurilensis, Ch. strelkovi strelkovi* and *Ch. strelkovi saltator*, but later he considered they as a single specie (*Ch. kurilensis*), divided into 3 subspecies (BEY-BIENKO, 1966).

After examination of types of *Ch. kurilensis strelkovi, Ch. kurilensis saltator,* topotypes of *Ch. kurilensis kurilensis* and *Ch. fallax* and many other specismens from Siberia, it seems that the characters used to separate *Ch. fallax* and *Ch. kurilensis*, i.e. respectively ratio of width M-area and Cu-area of tegmen, presents or absens of black dark on inner side of postfemora and others, are variable and the later species must be regarded as subspecies of the former.



Zur Synonomie von *Chorthippus fallax* ZUB.

In order to determinante subspecies of *Ch. fallax* the following key are proposed.

♂♂

1(4). Width of M-area of tegmen is 2.75-3.42 times more then width of Cu-area (fig. 1); if only 2.0 time (some species mentioned from Magadan Region), then the mean density of peds of stridulatory file is 27.8-30.6 per 1 mm. *F. macroptera* little known.

2(3). Epiphallus with broad bridge (fig. 4, 5). Apical valvae of penis stout (fig. 2, 3): *Chorthippus fallax fallax* (ZUB.).

3(2). Epiphallus with narrow bridge (fig. 9). Apical valvae of penis narrow (fig. 8): *Chorthippus fallax saltator* B.-BIEN.

4(1). Width of M-area of tegmen is 2.10-2.70 times more then width of Cu-area (figs. 6, 10). Mean density of pegs of stridulatory file is 25.5-27.0 per 1 mm. About 50 % of all specimens are *f. macroptera*.

5(6). Apex of tegmen pointed (fig. 10). Ratio length antennae: Pronotum is 2.3-2.5: *Chorthippus fallax kurilensis* B.-BIEN.

6(5). Apex of tegmen broadly rounded (fig. 6). Ratio length antennae: Pronotum is 3.2-3.3: *Chorthippus fallax strelkovi* B.-BIEN.

♀♀

1(2). Tegmina touch one another dorsally. About 50 % of all specimens are *f. macroptera*: *Chorthippus fallax strelkovi* B.-BIEN.

2(1). Tegmina lateral, not touch one another (except *f. macroptera*).

3(4). Length of body 15.5-18.9 mm; if 19-21 mm (Magadan Region), then ratio length antennae: Pronotum is 1.70-1.75; in Maritime Province 19-21.9 mm, but length of tegmina is 1.5-1.65 times more then length of pronotum. *F. macroptera* little known: *Chorthippus fallax fallax* (ZUB.).

4(3). Length of body 19.7-24 mm. Ratio length antennae: Pronotum is 2.08-2.2. Length of tegmina is 1.23-1.3 times more then length of pronotum (except *f. macroptera*).

5(6). Length of body 19.7-21 mm. Postfemur 4.75-5.0 times as long as

Fig. 1-11. *Chorthippus fallax* ssp.

1-5 *fallax fallax*: 1 - tegmen, 2, 3 - apical valvae of penis, 4, 5 - epiphallus;
6-7 *fallax strelkovi*: 6 - tegmen, 7 - epiphallus;
8-9 *fallax saltator*: 8 - apical valvae of penis, 9 - epiphallus;
10-11 *fallax kurilensis*: 10 - tegmen, 11 - epiphallus.

high. About 50 % of all specimens *are f. macroptera: Chorthippus fallax kurilensis* B.-BIEN.

6(5). Length of body 21.5-24 mm. Postfemur 4.5-4.65 times as long as high. *F. macroptera* unknown: *Chorthippus fallax saltator* B.-BIEN.

Chorthippus fallax fallax (ZUBOWSKY) 1899, stat. n.
Stenobothrus cognatus var. *fallax* ZUBOWSKY, 1899: 7; JACOBSON, 1902: 230.
Stauroderus ehnbergi MIRAM, 1906: 5; TARBINSKY, 1925: 186 (syn.).
Stauroderus cognatus var. *amurensis* IKONNIKOV, 1911: 253 (partim); TARBINSKY, 1925: 186 (syn.).
Stauroderus fallax; TARBINSKY, 1925: 186; BEY-BIENKO, 1929: 69.
Chorthippus fallax; UVAROV, 1927: 79, 83; MIRAM, 1933: 26, 28; MISTSHENKO, 1951: 536; BEY-BIENKO, 1964: 271; MISTSHENKO, 1971: 581; MISTSHENKO, 1972: 98.

Considerable variability of these subspecies throughout their areal was found in length of body, antennae and tegmia, ratio of width of M-area and Cu-area, density of pegs on stridulatory file; but the forms of epiphallus and apical valvae of penis of male are constant.

Length (mm): body ♂ 11-14.5, ♀ 15-21.9, pronotum ♂ 2.4-3.2, ♀ 3.4-4,2, tegmen ♂ 7.1-10.0, ♀ 4,4-6.6, postfemur ♂ 8.1-10.1, ♀ 11.0-13.1. Density of pegs of stridulatory file is 27.8-32.9 per 1 mm.

Material. 421 species were studied from Maritime Province, Amur, Magadan Region, Transbaicalia, Jakutia and Altai.

Distribution. USSR: continental parts of all Siberia from N-W Kasachstan and Altai to Magadan Region and Maritime Province; N Mongolei, N China (Mandzhurei).

Chorthippus fallax strelkovi BEY-BIENKO 1949, stat. n.
Chorthippus strelkovi strelkovi BEY-BIENKO, 1949: 314; MISTSHENKO, 1951: 522.
Chorthippus kurilensis strelkovi; BEY-BIENKO, 1966: 6; STOROZHENKO, 1981: 24.

Length (mm): body ♂ 14.9-16.5, ♀ 19-23.5, pronotum ♂ 3-3.3, ♀ 3.9-4,3, tegmen ♂ 8.5-11.4, ♀ 6.0-7.8 (*f. macroptera* ♂ 15.7-17, ♀ 17.5-19.8), postfemur ♂ 10.5-11, ♀ 11.5-13.5. Density of pegs of stridulatory file is 25.5-26.9 per 1 mm.

Material. 264 species were studied from Sachalin Island.

Distribution. USSR: South Sachalin.

Chorthippus fallax kurilensis BEY-BIENKO 1948, stat. n. *Chorthippus kurilensis* BEY-BIENKO, 1948: 136, 138; BEY-BIENKO, 1949: 316; MISTSHENKO, 1951: 522.

Chorthippus kurilensis kurilensis; BEY-BIENKO, 1966: 6; KUWAYAMA, 1967: 48; KRYVOLUTSKAJA, 1973: 23, 26.

Length (mm): body ♂ 14,5-15,1, ♀ 19.7-21, pronotum ♂ 3.1-3.2, ♀ 3,5-4.0, tegmen ♂ 8,5-9.5, ♀ 4,3-6.0, postfemur ♂ 9.5-10.5, ♀ 11.9-12.1. Density of pegs of stridulatory file is 26.5-27.0 per 1 mm.

Material. 4 ♂♂, 9 ♀♀ were studied from Iturup and Shikotan.

Distribution. USSR: Kurile Islands (Iturup and Shikotan).

Chorthippus fallax saltator BEY-BIENKO 1949, stat. n.
Chorthippus strelkovi saltator BEY-BIENKO, 1949: 315; MISTHENKO, 1951: 522.

Chorthippus kurilensis saltator; BEY-BIENKO, 1966: 6; KUWAJAMA, 1967: 48; KRYVOLUTSKAJA, 1973: 23, 26.

Length (mm): body ♂ 15-17; 7, ♀ 21.5-24, pronotum ♂ 3.1-3.7, ♀ 4,2-4,5, tegmen ♂ 8.0-10.5, ♀ 5.3-7.0, postfemur ♂ 10-11.8, ♀ 12.3-13.5. Density of pegs of stridulatory file is 27.6-29.5 per 1 mm. *F. macroptera* unknown.

Material. 6 ♂♂, 9 ♀♀ were studied from Kunashir.

Distribution. USSR: Kurile Islands (Kunashir).

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