

Descriptions of Two *Pamphilius*, with a Checklist of the Pamphiliidae (Hymenoptera) from Caucasia

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Abstract *Pamphilius armeniacus* n. sp., belonging to the *alternans* group, is described from Armenia, and the Caucasian endemic species *P. caucasicus* GUSSAKOVSKIJ is redescribed. A checklist of the 12 pamphiliid species recorded from Caucasia is given.

The Caucasian fauna of the sawfly family Pamphiliidae is little known. New species and new localities were recorded from this region by KONOW (1897), DOVNAR-ZAPOLSKY (1931), GUSSAKOVSKIJ (1935), ZHELOCHOVTSEV (1941) and SHINOHARA (1985), and a total of 12 species in four genera of the family are now known to occur in Caucasia. The figure, however, is less than a fourth of the number of species in the European fauna and probably only a small part of the actual representation of the family in this region.

In this paper, I will describe a new species of the genus *Pamphilius* from Armenia, redescribe the poorly known Caucasian endemic species *P. caucasicus* GUSSAKOVSKIJ, both belonging to the *alternans* group, and give a checklist of the Pamphiliidae recorded from Caucasia. Two specimens representing the type series of the new species are those recorded by ZHELOCHOVTSEV (1941) from Armenia under the name of *P. aurantiacus* (GIRAUD), a species distributed in central and southern Europe. *Pamphilius aurantiacus* should be excluded from the Caucasian fauna, since ZHELOCHOVTSEV's is the only record of the latter species available from Caucasia.

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Pamphilius armeniacus n. sp.

(Figs. 1-2, 5-6)

Pamphilius aurantiacus: ZHELOCHOVTSEV, 1941, 233 (nec GIRAUD, 1857).

Female (holotype). Head black, with pale yellow areas as in Fig. 5; paraantennal field tinged with orange; malar space and gena pale yellow; mandible pale yellow, with rufous apex; antenna with scape and pedicel pale yellow (pedicel darkened apically)

and flagellum blackish brown. Thorax black, with following parts pale yellow: broad posterolateral corner of dorsal pronotum, obscure mark in posterior part of lateral pronotum, obscure spot on cervical sclerite, tegula, mesoscutellum, very small spot at anterodorsal angle of mesepisternum, and metascutellum; legs pale yellow, with coxal bases black. Wings hyaline; veins in basal 1/3 of forewing, veins C and Sc, and stigma pale yellow, and other veins dark brown. Abdomen black, with narrow posterior margin of 3rd tergum, 4th and 5th terga (except for narrow black stripe along anterior margin of each segment), and caudal part, including broad posteromedian margin of 7th sternum, broad posteromedian margin of 9th laterotergite, saw-sheath, 10th tergum (posteriorly yellowish) and cercus orange, and very broad posterior margins of 3rd to 6th sterna pale yellow.

Upper frons below ocelli rather weakly convex, very shallowly notched medially; ocellar basin in form of furrow around anterior ocellus, shallow, particularly in posterior half, with anterolateral extension nearly reaching antennal furrow; median fovea very small, lying near top of low but distinctly raised frons; antennal furrows deep; frontoclypeal crest low, rounded, with frontal tubercle indistinct, very weakly swollen; facial crest rather weakly convex, rounded. Head generally smooth, with rather sparse small punctures; clypeus and lower part of frons with rather dense, large punctures; lateral part of clypeus rugose; head before transverse and lateral transverse sutures, gena and posterior margin of upper head with dense, rather long hairs, and upper part of head behind these sutures with rather sparse short hairs. Right mandible tridentate (Fig. 6). Both antennae with 21 segments; 3rd antennal segment about 2.5 times as long as 4th. Tarsal claw with small rounded basal lobe and inner tooth distinctly shorter than outer one. Forewing with cell C densely pilose all over. Saw-sheath peg slender, setose, much like that of *P. aurantiacus*.

Measurements (in mm): Length 9.5, forewing length 9.0, head width 2.96, thorax width 3.16, scape length 0.80, pedicel length 0.33, 3rd antennal segment length 0.84, 4th antennal segment length 0.34, 5th antennal segment length 0.33, malar space 0.23, distance between proximal margins of antennal sockets 0.58, distance between antennal socket and inner orbit 0.60, vertex (length $\times$ width) 0.89×0.84 , eye (shortest diameter $\times$ longest diameter) 0.80×1.00 , hind tibia length 2.96, hind basitarsus length 0.70, length of 2nd–4th hind tarsal segments together 0.59, 5th tarsal segment length 0.45.

Male. Unknown.

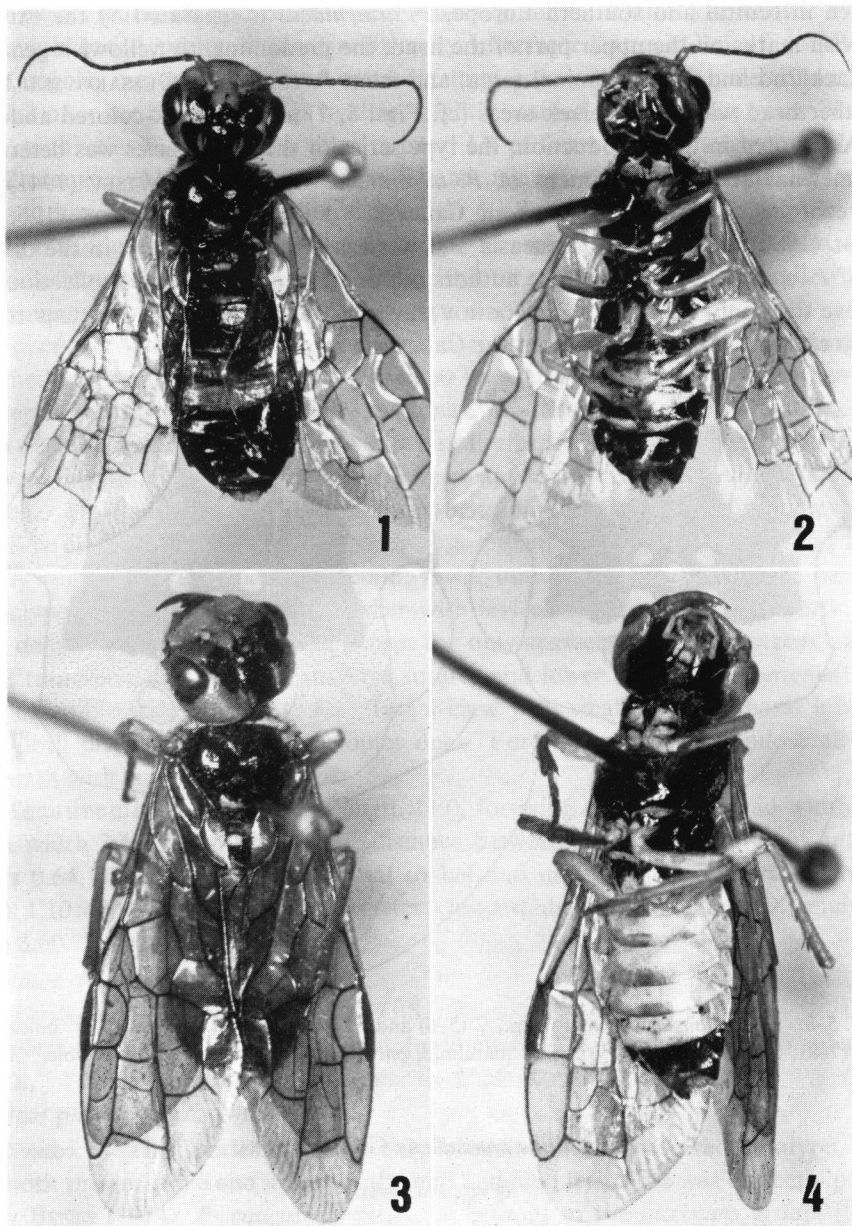
Distribution. Armenia, U.S.S.R.

Holotype: ♀, "Armenia, Delizhan, 6. VI. 1934, ZHELOCHOVTSEV," (MU). Paratype: ♀, same data, except for 29. V. 1934.

Variation. The paratype is very similar to the holotype in size, color and structure; one intact antenna is 22-segmented, with the 3rd segment about 2.5 times as long as the 4th.

Host plant. Unknown.

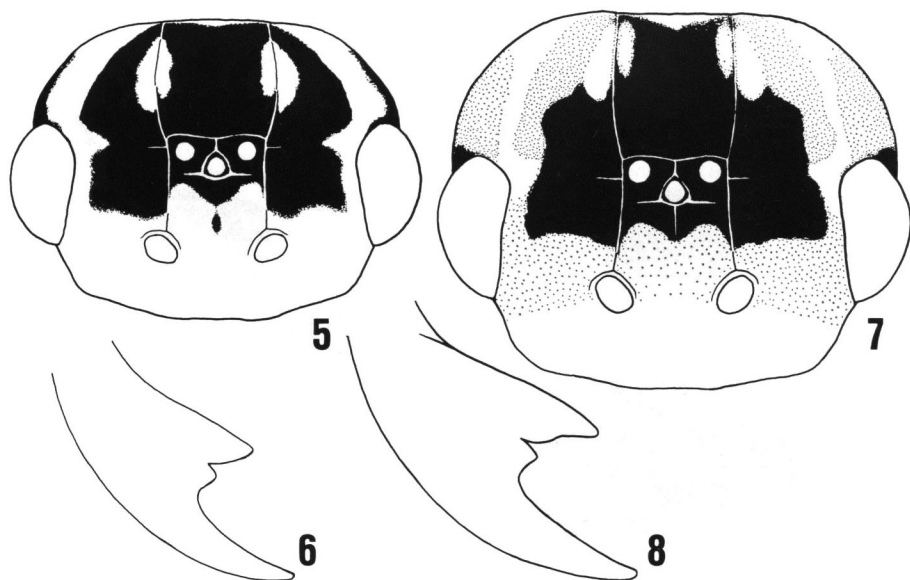
Remarks. This new species belongs to the *alternans* group (BENEŠ, 1976 a). From



Figs. 1-4. *Pamphilius armeniacus* n. sp., ♀, holotype (1-2) and *P. caucasicus* GUSSAKOVSKIJ, ♀, holotype (3-4); 1, 3, dorsal aspect; 2, 4, ventro-lateral aspect.

P. alternans (COSTA), *P. aurantiacus* (GIRAUD) and *P. ignymontiensis* LACOURT, all distributed in central and southern Europe, *P. armeniacus* is separated by the extensive yellowish marks on the upper part of the head, the predominantly yellowish gena, and the black 2nd and 3rd abdominal terga, and from *P. caucasicus* GUSSAKOVSKIJ by the smoother head with larger black areas (cf. Figs. 5, 7) and the dark-colored abdomen.

As I noted in the introduction, the type series of the new species was determined as somewhat aberrant specimens of *P. aurantiacus* by ZHELOCHOVTSEV (1941), who first recorded the latter species from Caucasus. Subsequently, BENSON (1968) and SCHEDL (1980) included Transcaucasia and western Asia, respectively, in the distribution of *P. aurantiacus*, but as these authors did not give any additional collection data, I believe they only referred to ZHELOCHOVTSEV's record. Therefore, It seems reasonable to exclude *P. aurantiacus* from the Caucasian fauna.



Figs. 5-8. *Pamphilius armeniacus* n. sp., ♀ (5-6) and *P. caucasicus* GUSSAKOVSKIJ, ♀, holotype (7-8); 5, head, holotype; 6, right mandible, paratype; 7, head; 8, right mandible.

Pamphilius caucasicus GUSSAKOVSKIJ

(Figs. 3-4, 7-8)

Pamphilius caucasicus GUSSAKOVSKIJ, 1935, 170, 379; BENEŠ, 1974: 313.

Female (holotype). Head orange, with large black mark covering median part of upper head (Fig. 7) and black spot along upper outer orbit; clypeus, postocular stripe, oblong spot on each side of each lateral suture and narrow band along posterior

margin of vertex pale yellow, and frons and gena more or less yellowish; postgena mostly black; mandible orange, pale yellow basally and dark rufous apically. Thorax black, with broad posterior margin (broadly interrupted at middle) of dorsal pronotum, tegula, mesoscutellum and metascutellum pale yellow; legs pale yellow, with basal 1/2 of coxae black. Wings hyaline, slightly stained with brown; veins blackish brown, with veins C, Sc and R₁, veins in basal 1/4 of forewing, and stigma pale brown to dark orange. Abdomen orange dorsally and pale yellow ventrally, with 1st tergum, broad median part and anterolateral spot on 6th tergum, 7th to 9th terga and 7th sternum black; caudal part, including broad posteromedian part of 7th sternum, broad posteromedian margin of 9th laterotergite, 10th tergum and cercus pale yellow; sawsheath mostly dark brown.

Upper frons below ocelli convex, with deep distinct median notch reaching very large median fovea; ocellar basin represented by shallow furrow around median ocellus, deepest in front of median ocellus, with narrow and shallow anterolateral extension almost reaching antennal furrow; frontoclypeal crest low, rounded, with inconspicuous, weakly swollen frontal tubercle between antennal sockets; facial crest convex, rounded. Upper part of head behind transverse and lateral transverse sutures smooth or weakly coriaceous, with rather sparse large punctures; other parts of head rather coarsely rugose and irregularly punctate; lower outer part of paraantennal field and frontoclypeal crest not rugose, smoother with less punctures than other parts; head rather densely pilose before crassa, except for only sparsely pilose upper part of head behind transverse and lateral transverse sutures and lower part of paraantennal field. Right mandible tridentate (Fig. 8). Tarsal claw with small rounded basal lobe and inner tooth distinctly shorter than outer one. Forewing with cell C pilose all over. Sawsheath with small setose peg.

Measurements (in mm): Length 11.0, forewing length 11.0, head width 3.48, thorax width 3.62, malar space 0.31, distance between proximal margins of antennal sockets 0.64, distance between antennal socket and inner orbit 0.73, vertex (length $\times$ width) 1.10×0.95 , eye (shortest diameter $\times$ longest diameter) 0.88×1.10 , hind tibia length 3.60.

Male. Unknown.

Distribution. Western Caucasus, U.S.S.R.

Specimen examined. ♀ (holotype), [gold circle], "Cauc. Occid. Regio subalpina, STARCK," "*Pamphilius caucasicus* GUSS. ♀, GUSSAKOVSKIJ det." (ZIL).

Host plant. Unknown.

Remarks. This species is known only from the poorly preserved holotype, which lacks both the antennae and apices of the mid and hind legs. As was correctly pointed out by BENEŠ (1974), *P. caucasicus* probably belongs to the *alternans* group, in view of the broad tridentate right mandible and the entirely pilose cell C of the forewing. From the other members of the species-group, *P. caucasicus* is separated by the rugosely punctate pale-colored head (Fig. 7) and the uniformly pale brownish stigma. Among members of other species-groups, it closely resembles *P. hilaris* (EVERSMANN) and *P.*

sapporensis (MATSUMURA) in coloration, but these species are readily distinguished from *P. caucasicus* by the bicolored stigma.

Checklist of the Pamphiliidae from Caucasia

1. *Acantholyda erythrocephala* (LINNAEUS, 1758). Distributed widely from Europe to Korea and also introduced to N. America (MIDDLEKAUFF, 1958). Recorded from northern Caucasia by DOVNAR-ZAPOLSKY (1931).
2. *Cephalcia hartigi* (BREMI, 1849). Known from central and southern Europe and Tunisia (BENEŠ, 1976 b). Recorded from "Kaukasus" by KONOW (1897).
3. *Neurotoma saltuum* (LINNAEUS, 1758). Distributed in Europe, Asia Minor, and eastern Siberia (SHINOHARA, 1980). Recorded from northern Caucasia by DOVNAR-ZAPOLSKY (1931).
4. *Neurotoma nemoralis* (LINNAEUS, 1758). Distributed in Europe, east to the Urals (GUSSAKOVSKIJ, 1935). Recorded from northern Caucasia by DOVNAR-ZAPOLSKY (1931).
5. *Onycholyda trigaria* (KONOW, 1897). Endemic to Caucasia. Described from "Transkaukasien (Talysch)" and later recorded from northern Caucasia by DOVNAR-ZAPOLSKY (1931) and from Armenia by ZHELOCHOVTSEV (1941).
6. *Pamphilius armeniacus* n. sp. (= *Pamphilius aurantiacus*: ZHELOCHOVTSEV, 1941, nec GIRAUD, 1857). Endemic to Armenia.
7. *Pamphilius caucasicus* GUSSAKOVSKIJ, 1935. Endemic to Caucasia.
8. *Pamphilius histrio* (LATREILLE, 1812). Distributed in Europe (BENEŠ, 1972). Recorded from northern Caucasia by DOVNAR-ZAPOLSKY (1931).
9. *Pamphilius lethierryi* (KONOW, 1887). Distributed in central and southern Europe (GUSSAKOVSKIJ, 1935). Recorded from "Kaukasus" by KONOW (1897), from northern Caucasia by DOVNAR-ZAPOLSKY (1931) and GUSSAKOVSKIJ (1935), and from Armenia by ZHELOCHOVTSEV (1941).
10. *Pamphilius persicum* MACGILLIVRAY, 1907. Distributed in eastern N. America (MIDDLEKAUFF, 1964). Recorded from Caucasia by SHINOHARA (1985).
11. *Pamphilius pugnax* (KONOW, 1897). Endemic to Caucasia; described from Kussari in Azerbaijan. According to BENEŠ (in OEHLKE & WUDOWENZ, 1984), however, this is a junior synonym of *Pamphilius alternans* (COSTA, 1859), which is distributed in central and southern Europe (GUSSAKOVSKIJ, 1935).
12. *Pamphilius sylvaticus* (LINNAEUS, 1758). Distributed in Europe, east to the Urals (SHINOHARA, 1985). Recorded from northern Caucasia by DOVNAR-ZAPOLSKY (1931).

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