

***Sphaerophoria bankowskiae* GOELDLIN, 1989
(Dipt., Syrphidae): first description of the female:
some recent records of the *Sphaerophoria interrupta* (FABR.)
group from the Alpine Region**

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Summary

A first description is given of the female of Sphaerophoria bankowskiae GOEJLIN (Diptera, Syrphidae), followed by a number of spring records of several species of the Sphaerophoria interrupta FABR. group from diverse regions in the Alps.

Key words: Syrphidae. *Sphaerophoria bankowskiae*. Female. Description.

Samenvatting

Het wijfje van Sphaerophoria bankowskiae GOEJLIN wordt voor het eerst beschreven. Een reeks lentewaarnemingen uit diverse Alpenlokaliteiten van verscheidene soorten uit de groep van Sphaerophoria interrupta FABR. worden gemeld.

Introduction

Though the genus *Sphaerophoria* is clearly defined, there was a great confusion at the specific level until GOELDLIN DE TIEFENAU (1974, 1989, 1991) clarified the issue, at any rate with regard to the males. As to the females it is not certain whether it will be possible in the near future to identify the females of all species with any degree of accuracy; intraspecific variations are quite common in this genus.

When GOELDLIN published the description of *S. bankowskiae* in 1989 the female was still unknown. On 15.VI.1994 I took a pair in copula of this fairly common boreo-alpine species in the French Alps: Hautes Alpes de Provence: La Condamine (on the banks of le Bérard, a small tributary of the Ruisseau de Parpaillon, alt. ca. 2000 m). The pair, mounted on the same pin, has been deposited at the I.R.S.N.B. (Brussels).

Description (based on the allotype)

A rather small species (body length: 7 mm, wing length: 6 mm), like *S. fatarum* GOELDLIN, 1989 and *S. interrupta* (FABRICIUS) showing interrupted arched transverse bands on tergites II to IV: fig. 1-4.

Head:

Face of a shining pale yellow, over the middle a narrow longitudinal zone of a darker translucent yellow; the central protuberance slightly infuscated, the mouth edge marked with a very narrow black stripe; no visible pilosity (30 ×). Frons a brilliant deep black, except for a subcircular zone between lunula and eyes where the colouration of the face is continued; pilosity black, erect, longest and most dense on the vertex. Occiput entirely covered with silvery grey dusting; pilosity (semi-) erect and dense, light yellow on the upper half, silvery on the lower. Eyes bare. Antennae of a light brownish yellow, the third segment infuscated dorsally towards the top; arista practically bare, dark brown, somewhat lighter at the base.

Thorax:

Dorsum bronze coloured, moderately shining, showing vague longitudinal stripes; laterally entirely broadly yellowish, but only faintly so behind the transverse suture; pilosity erect, yellowish, somewhat longer and lighter than the male. Pleura extensively yellow, only partly covered with short and erect yellow pile.

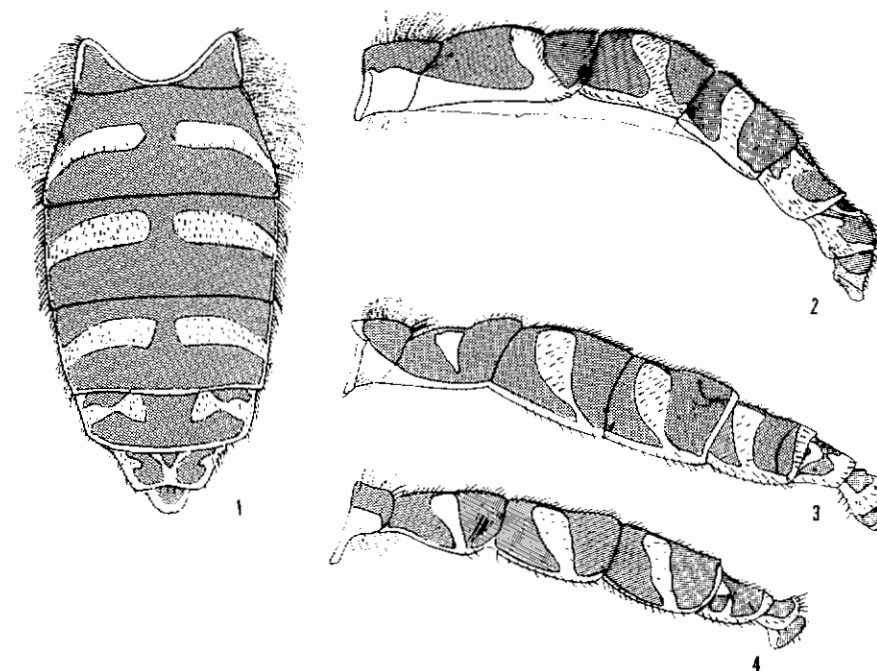
Scutellum lemon yellow, the hind rim blackened underneath at each corner for a short distance; pilosity entirely black, long and erect.

Legs: coxae, trochanters and femora yellow; tibiae yellow to very light brown; front and mid tarsi light brown, hind tarsi darker, the hind metatarsus blackened dorsally. Legs almost entirely covered with short adpressed black hairs.

Wings: only slightly and uniformly infuscated, with pale yellow stigma; veins dark brown, subcosta paler. Microtrichia less dense on the basal half of the 1st and 2nd basal cells. Squamae and halteres lemon coloured.

Abdomen: relatively broad and short, flattened and with subparallel sides (live specimens). Tergites black, moderately shining, punctures fine and sparse. Tergite I bordered with yellow, very broadly so at the sides (Fig. 2). Tergites II-IV with arched yellow bands, neatly separated in the middle, slightly narrowed before joining the relatively broad and uninterrupted yellow band marking the sides of the tergum. The arched bands on t. II

narrower than on the next two tergites. Markings on T. V-VII as in fig. 1. Pilosity yellowish on T. I and the basic part of T. II, the rest of the tergum with short adpressed black hairs. Pile on the sides of the tergum as in fig. 1.



Figs 1-4. 1: *S. bankowskiae* GOELDLIN, abdomen ♀ dorsal view; 2: *S. bankowskiae* ♀, abdomen, lateral view; 3: *S. interrupta* (FABR.) ♀, idem; 4: *S. fatarum* GOELDLIN ♀, idem.

Sternum yellow, with pale pilosity, longest on the distal part of St. I, where it exceeds the diameter of the hind femur. Last visible sternite with a deep wrinkled groove down the middle.

Recent spring records of some species of the "menthastri" group from the Alpine region

As most species of the group were only very recently defined, their distribution and phenology are still poorly known. The following records, collected by the author 1982-1994 in various Alpine regions during the spring months, at altitudes between 800 and 2100 m, may therefore contribute towards a better knowledge of their status. It may be worth mentioning that during several sojourns in September not a single specimen of the group was taken. So far only Switzerland has been surveyed comprehensively (MAIBACH *et al.*, 1992).

1° *S. bankowskiae* GOELDIN, 1989: 1100-2000 m; appears mid May.

Italy: Val Venosta: Prato a. Stelvio (1100): 22.V.82; Montechiaro (1500): 17.VI.85. Val Pusteria: Vila di Sopra (1550): 18.V.83 & 31.V.83; Chienes (1100): 25.V.83; Falzes (1100, 1500) 14.V.83 S. Candido (1400) 26.V.85. Dolomiti: Siusi (1150): 23.V.90 Castelrotto (1200): 25.V.90; Piemonte: Prazzo (1100): 19.V.91.

Austria: Pfunds (Tirol) (1700): 16.VI.90; Buchboden (Vorarlberg) (1500): 21.VI.90.

France: La Condamine (Alpes de H. Provence): 15.VI.94 (2000).

2° *S. fatarum* GOELDIN, 1989: early June, 2000 m.

France: C. du Parpaillon (2000): 9.VI.1994.

3° *S. infuscata* GOELDIN, 1974: 1000-1900 m.; appears mid May.

Italy: V. Venosta: V. Mazio (1800): 27.V.82; V. Planol (1700): 25.V.82, 2.VI.82, 8.VI.85; Stelvio Plaz (1700): 10.VI.85; Tubre, V. d'Avigna (1550): 16.VI.85. Piemonte: Acceglio (1500); 26.V.91.

Austria: Pfunds (1700): 11.VI.1990; Buchboden (1000) 30.V.88, 11.VI.88, 19.VI.90.

France: Haute Provence: La Condamine (1700): 15.VI.94 Maljasset (V. des Maurins, 1900): 10.VI.94.

4° *S. interrupta* (FABRICIUS, 1805): from early May on, 800-2100 m.
= *S. menthastri* auct. nec. L.

By far the commonest species of the group, present at all levels. Only token specimens were taken in each region.

Italy: Val Pusteria: Falzes (1100-1500): 14.V.83, 19.V.83; Val Badia (1400): 17.V.83; Rina (1500) 30.V.83; Vila di Sopra (1550): 18.V.83, 31.V.83. V. di Casies (1200): 19.V.85. Upper Val Venosta: Planol (2000): 25.V.82, 2.VI.85; Mazio (1800): 27.V.82; Tubre (1500): 4.VI.85; Stelvio (1300-2000): 1.VI.85, 10.VI.85; Val Martello (2100): 21.V.85. Dolomiti: Castelrotto (1250): 25.V.90 Alpe di Siusi (1850): 22.V.90 Sesto (1600): 23.V.85. Piemonte: Bobbio Pellice (1000): 8.V.90; V. Maira (1100): 18.V.91.

Austria: Pfunds (1700): 11.VI.90, 16.VI.90; Buchboden (1000): 3.VI.88, 19.VI.90.

Switzerland: Unterengadin: Vnà (1900): 7.VI.90; V. d'Uina (1500): 14.VI.90.

France: Hte Provence: Maljasset (2100): 23.VI.94; La Condamine (2000): 9.VI.94.

5° *S. ? laurae* GOELDIN, 1989: 2000 m, end May.

A single female (*Italy*: Prato allo Stelvio: Alpe di Prato (2000 m) 30.V.85) corresponding perfectly with Goeldlin's description, would to my

knowledge be the first record outside Switzerland. As no male was taken, this record should be taken only provisionally.

6° *S. taeniata* (MEIGEN, 1822): 800-1200 m: appears mid May.

Italy: Dolomiti: Val Badia (800) 18.V.83; Castelrotto (1200) 29.V.90.

7° *S. virgata* GOELDIN, 1974: 1200-1500 m; from Zate May on.

Italy: Val Venosta: Prato allo Stelvio (1500): 13.VI.85. Dolomiti: Siusi (1200): 23.V.90. Val Pusteria: Casteldarne (1550): 27.V.83.

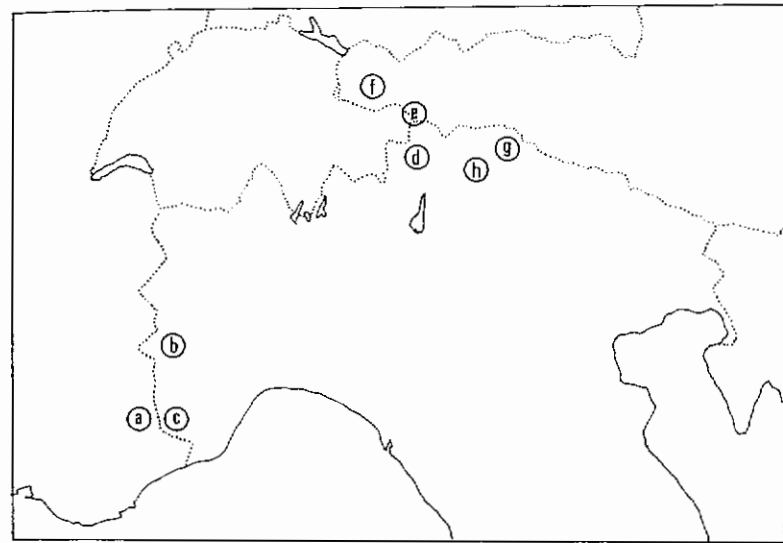


Fig. 5. The Alpine regions sampled by the author 1982-1994: a. Alpes de Haute Provence: Haute Ubaye, b. Piemonte: Val Pellice, c. Piemonte: Val Maira, d. Val Venosta: environs of Prato allo Stelvio, e. Pfunds, Tirol: and adjacent Lower Engadine, f. Buchboden, Vorarlberg: Grosswalsertal, g. Val Pusteria: from Casteldarne (Ehrenburg) to San Candido (Innichen), h. Dolomiti: Siusi (Seis) and Castelrotto (Kastellruth).

Comment

Except for *S. interrupta* and, to a lesser degree *S. bankowskiae* and *S. infuscata* the number of these records is relatively low. Moreover, some Alpine representatives of the group, *S. borealpina* GOELDIN, 1989, *S. batava* GOELDIN, 1974 and *S. philantus* (MEIGEN, 1822) were not taken at all, which is not surprising as they are all rare to very rare (MAIBACH *et al.*, 1992) in the region. Nearly all the above records are based on male specimens (females are usually more numerous), they are all small and inconspicuous insects and, when taken, easily escape from the net. Furthermore they appear to be heliophilous and are only seen when it is not only sunny, but also comparatively warm, atmospheric circumstances that are not at all common in spring, especially at higher altitudes. Even *S. scripta* (L.), so common in summer, is not at all often seen, even in June.

The species recorded here are not all mountain species. Indeed, *S. fatarum*, *S. virgata* and *S. taeniata* occur in the Low Countries in the Plains (especially heathland); so do *S. batava*, *S. philantus* and *S. interrupta*. Yet in the Alps they are not known to descend below 1000 m (*fatarum* occurs only 1600-2500 m), according to MAIBACH *et al.*, 1992.

From our observations it appears that *S. interrupta* is the commonest, the most widespread and the most versatile species of the group. In humid surroundings it appears to be as numerous in the valleys as on treeless grassland above 2000 m. *S. infusata* and *S. bankowskiae* are, in spring, normally found between 1100 and 1700 m, at any rate in the southern Alps; *infusata* seems to prefer open grassland and the banks of mountain streams, but *bankowskiae* has also been taken inside woodland. In spring, *S. taeniata*, in our country a rather warmth-loving insect, was rarely seen, and only at low altitudes and during warm spells.

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Les Coleopteres Carabidae (Coleoptera) de la Reserve naturelle du Pre des Forges à Mirwart'

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Summary

The nature reserve of Pre des Forges (Mirwart, Belgium) is a semi-natural wet meadow along the Lhomme river which was used in the past as meadow. The habitat was modified during the last twenty years by willow shrub recolonisation. The nature reserve was managed in September 1989 to restore the typical wet grassland structure. After this management, carabid beetles were sampled with two aims: (1) to study the species richness and (2) to propose guidelines for future management.

Results are discussed with comments on (1) species of biogeographical interest, (2) species decreasing in Belgium and (3) species assemblages in different habitats.

Key words: Carabidae, inventory, biological assessment, nature reserve, management, pitfall traps.

Resume

La réserve naturelle du Pre des Forges à Mirwart est un pré humide semi-naturel qui était autrefois utilisé comme pré de fauche. Le milieu s'est progressivement modifié ces 20 dernières années suite à la recolonisation du site par les espèces arbustives. Elle a donc été gérée en septembre 1989 de manière à restaurer la structure typique du pré humide. Après cette gestion, les carabides du site ont été étudiés dans deux buts: (1) étudier la richesse spécifique des différents habitats et (2) proposer des mesures pour la gestion ultérieure.

Les résultats sont discutés en se focalisant sur les espèces de grand intérêt biogéographique, les espèces en régression en Belgique et les assemblages d'espèces caractéristiques des habitats prospectés.