

On three European species of *Simulium*.

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A small collection of European *Simulium* received for determination from the Vienna Museum through Dr. H. Zerny includes an example of a remarkable new species, which is described below as *S. xanthinum*. A study of other material in the collection has also brought to light certain new synonymy as noted under *S. rufipes* and *S. bezzii*.

Simulium rufipes Mg.

A few years ago I described two supposed new species of the subgenus *Prosimulium* under the names *S. gallii* and *S. fulvipes*, the types of the former being from Switzerland and of the latter from Mt. Rila, Bulgaria. At the time I suggested that *S. fulvipes* might be the same as *S. rufipes* Mg., and Séguy and Enderlein have since proposed to accept this synonymy definitely. Since publishing these names I have seen much fresh material from Switzerland, and the present collection contains several examples from the type locality of *S. fulvipes*. Examination of this fresh material shows that the distinctions relied on do not hold good, and I would therefore now regard both *S. fulvipes* and *S. gallii* as synonymous with *S. rufipes*.

It would seem probable that *S. rufipes* is to be regarded as the central and South European representative of *S. hirtipes* Fries. My record of *S. hirtipes* from Corsica refers not to that species but to *S. rufipes*, and Corti's description of Italian material of *S. hirtipes* evidently also applies to *S. rufipes*. The confusion has probably arisen owing to the difference in colour of the legs in the two sexes of *S. rufipes*; males now before me have the legs almost completely blackish, but differ from *S. hirtipes* in having the basal fringe of the abdomen yellowish. The two species are structurally almost identical, even the male hypopygia being indistinguishable, but Scandinavian and Scottish examples of *S. hirtipes* which I have examined have the basal abdominal fringe of the male black and the legs of the female entirely blackish. Enderlein's *S. nigripes* is in my view a synonym of *S. hirtipes*.

Puri has recently referred to differences in the pupal respiratory organs between specimens of *S. hirtipes* from Norway and from France. It now seems likely that the latter (with about 50 instead of 16 filaments) belonged to *S. rufipes*.

Simulium bezzii Corti.

Two female specimens collected by Dr. Z e r n y at Albarracin (Aragon) agree well with C o r t i's description except that the femora are perhaps more extensively dark, the tips however remaining narrowly pale and the bases more broadly so. These specimens further agree in all respects with a female received from E n d e r l e i n as *Friesia tristrigata* End., and this name may be regarded as a synonym of *S. bezzii*. A further synonym is *S. vittatum* var. *delphinense* Villeneuve, the description of which corresponds. It has been suggested by S é g u y that this may be the same as Meigen's *S. maculatum*, but there are some discrepancies in the description, and a quite different species has (perhaps correctly) been determined as *S. maculatum* by C o r t i and E n d e r l e i n.

Simulium xanthinum sp. n.

♀. H e a d entirely yellow; frons very broad and distinctly shining; face dusted with whitish. Antennae short, orange-yellow, indistinctly darker towards tip. Palpi brownish at base, remainder blackish. T h o r a x almost completely yellow, somewhat darker dorsally, lighter on shoulders and pleurae; a blackish patch on sternopleura, a small blackish area on mesosternum, and a small black mark above middle coxa. Mesonotum shining, without pruinosity on shoulders; pubescence moderately fine and pale. Pleurae with a whitish pruinose area in middle; anepisternal membrane bare; hairs in sub-alar tuft very few in number and dark. A b d o m e n mainly brownish-yellow, only segments 4, 5, 7 and 8 blackish towards sides (but with posterior margins pale). Segments 6—8 shining; whole abdomen nearly bare. L e g s with alle coxae and femora entirely yellow, also middle tibiae; front and hind tibiae with about the apical fourth blackened. Front tibiae with conspicuous silvery pruinosity on outer side. Front tarsi entirely black and much flattened, first segment only about four times as long as wide. Middle tarsi with first segment yellow on basal two-thirds, second yellow at base, remainder black. Hind tarsi with first segment yellow on basal three-fourths, second yellow at base, remainder black. All claws simple, of moderate size. W i n g s normal. Halteres yellow.

Spain, Andalusia: Algeciras, 12.—20. V. 1925 (Dr. H. Z e r n y), 1 ♀. Type in Vienna Museum.

This strikingly distinct species belongs to the *reptans*-group (*Simulium* in the most restricted sense of E n d e r l e i n) but differs from all other known members of this and related group in the yellow colour of the body. The only other yellow Simuliids found in Europe are *S. ferrugineum* Wahlgren and *S. rufum* Mg.; the former belongs to the subgenus *Prosimulium* and is not improbably a synonym of the latter.