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REVIVAL OF AN OLD SPECIES WITH TWO NEW SYNONYMS AND DESCRIPTIONS OF TWO SPECIES OF THE PALAEARCTIC CHOREUTIDAE (LEPIDOPTERA)

by

A. DIAKONOFF

Rijksmuseum van Natuurlijke Historie, Leiden

With 9 text-figures

In connection with a revision of the family, two species of *Eutromula* Frölich, from China and the Far East, are described, and a third, from the Far East and Japan, recorded below.

The figures are by Mr. A. C. M. van Dijk, the Hague. The author is greatly indebted to the Uyttenboogaart-Eliassen Stichting for the grant covering the costs of these figures.

Eutromula atrosignata (Christoph) comb. nov. (figs. 1-2, 8)

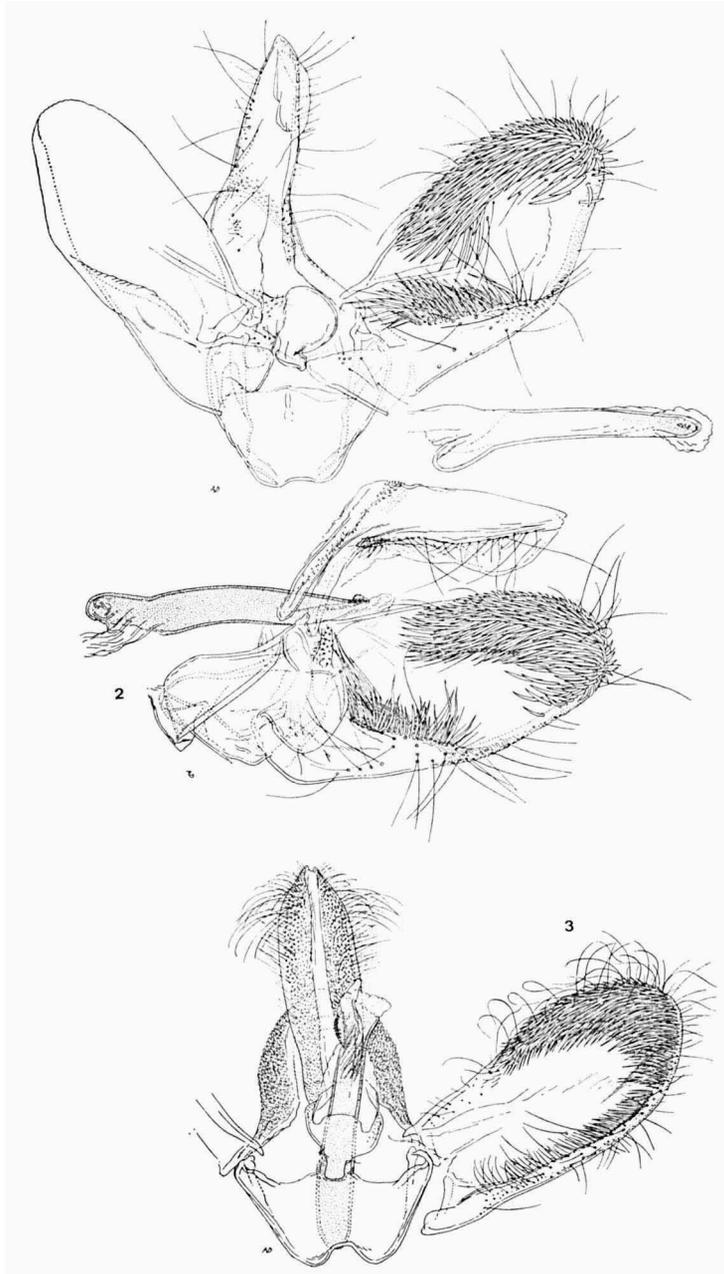
Simaethis atrosignata Christoph, 1888, Horae Soc. ent. Ross., 22: 331 (Amur Region).

Lectotype, hereby designated: ♂/Lectotype, *Simaethis atrosignata* Christoph, 1888 (black cadre) / 913 (small pentagonal label, in purple ink) / (A mauve metal disc) / (A golden metal disc) / ♂ Nikolsk, 16.9.76 (typical Christoph label with black cadre, date on reverse side) / Christoph Coll. (print) / Walsingham Coll. 1910 - 427 (print) / *Simaethis atrosignata* Christ. Hor. Soc. Ent. Ross. 22 p. 311 (1888) Type ♂ (Walsingham Collection label, in Durrant's hand) /. In the British Museum (Natural History), London.

Simaethis moiwana Matsumura, 1931, 6000 Ill. Ins. Japan: 1080, no. 2195. **Syn. nov.**

Anthophila moiwana: — Inoue, 1954, Check List Lep. Japan, 1: 49, no. 237.

Holotype, ♀ / Moiwa / 13/IX.1903 / *Simaethis moiwana* Mats. (all three labels written in black ink) / (A red rectangular empty label) /. The specimen is pinned but not spread and lacks the abdomen. Otherwise it apparently is in good condition and shows the characteristic pattern of the fore



Figs. 1-3. Male genitalia of *Eutromula* Fröhlich. 1, *E. atrosignata* (Christoph), slide no. 10058; 2, do., slide no. 247YA; 3, *E. cunuligera* sp. n., holotype.

wing of the present species, proving its identity. In the Entomological Institute, Hokkaido University, Sapporo.

Hemerophila ussuriensis Danilevsky, 1973, Horae Soc. ent. Union. Sovet., 56: 16, fig. 9. **Syn. nov.**

Holotype, ♂ / Gen. no. 10052 A. Diak. (print and ink) / Vinogradovka, Ussur. 7.VIII. 929, Djakonov *) Filip[jev] (Russ., print and ink) / Micr. prep. 9752 (print and ink) / Holotype ♂, *Hemerophila ussuriensis* Danil., teste A. Diakonoff (ink) / Type (red) /. In the Zoological Institute of the Academy of Sciences, Leningrad.

The author is indebted to Dr. Gaden S. Robinson, and the Authorities of the British Museum (Natural History), for information and loan of the above syntype specimen. It proves to agree literally with the terse but quite adequate original description which runs as follows:

“♂♀ Alis anticis olivaceis brunescente nebulosis, fasciis duabus (antica dentata, postica ante apicem lata cuneiforme) limboque nigris; posticis fusco-cinereis, ciliis omnium rufescentibus. — Long. Alae ant. 6 mm. Von Nikolskaja (Amurgebiet). In September”.

To Dr. Tosio Kumata, Hokkaido University, Sapporo, Japan, the author is obliged for the loan of two Matsumura's type specimens, viz. of “*Simaethis moiwana*” and “*Simaethis kochiensis*”.

To Dr. V. I. Kuznetsov, Zoological Institute of the Academy of Sciences, Leningrad, USSR., the author's thanks are due for the loan of the type of *H. ussuriensis*.

To Mr. Yutaka Arita, Zoological Laboratory, Faculty of Agriculture of the Meijo University, Japan, the author is grateful for the loan of a series of recently collected specimens of “*E. moiwana*” from Japan; these proved to be in all details similar to the above lectotype of the present species.

Male genitalia. Tegumen strong, tuba analis rather long, pointed; socius, a lateral row of very weak bristles. Vinculum strong, robust and truncate. Valva oblong-oval; costa with a characteristic oblique flat ridge at base, attenuated basad to a marginal thin point. Patch of bristles limited to less than apical fourth of margin, but extending along upper half of disc to middle, bristles rather thick, acute, not very dense, on top of sacculus becoming shorter and rather isolated; basal third of sacculus forming a fold, densely bristled, bristles becoming long basad. Anellus large, flat and sclerotic,

*) In order to prevent confusion, it may be pointed out, that my late uncle, colleague, and instructor, Aleksandr Mikhaïlovich, transliterated the family name thus: Djakonov or D'akonov. (The author, Aleksey Nikolayevich Diakonoff).

almost semicircular. Aedeagus little sinuate, rather thick and spindle-shaped, apex strongly narrowed, below top with a small serrulate keel. (Description after genitalia slides nos. 10058AD and 247YA).

Female genitalia. Ovipositor moderately long. Seventh sternite little sclerotic, triangular, with rounded angles. Sterigma with a large opening, shaped as an inverted egg; ostium bursae proper excentric, projecting above level of sterigma opening: a rather sclerotic, clavate tube, on top with minute lateral serrulations, thence colliculum quickly dilated and furcate, with ductus seminalis originating at the left side. Ductus bursae narrow, granulate along lower $2/3$. Corpus bursae spheroidal. Signum, a rhomboidal scobination. (Description after genitalia slides nos. 10059AD and 248YA).

Remarks. The species is distinct by the characteristic pale and dark markings and the female genitalia. The male genitalia are characterized by the oblique basal ridge from costa, the shape and size of the patch of bristles, the large naked space in middle of sacculus.

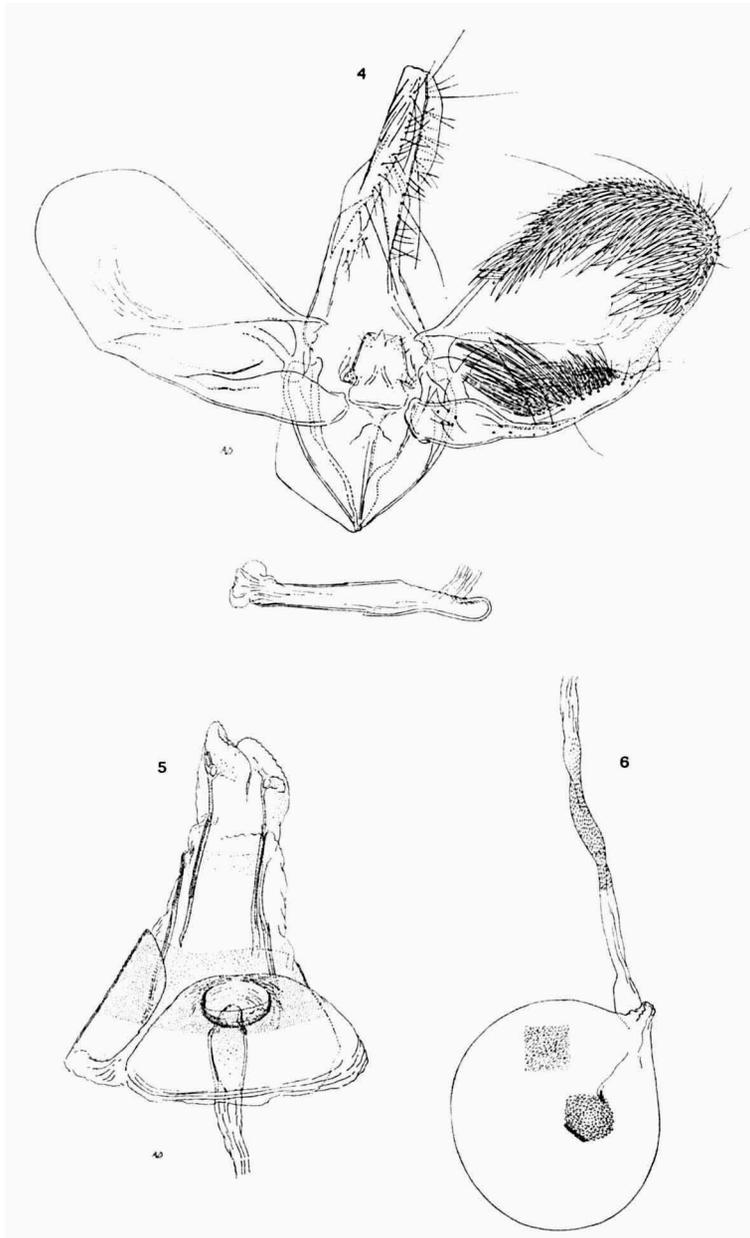
Unfortunately the lectotype lacks the abdomen, but it agrees completely with the terse but accurate description of Christoph and judging from the labels, undoubtedly is a syntype.

***Eutromula vinosa* spec. nov. (figs. 4-7)**

(*vinosus* = richly wine-colored)

♀ 11.5 mm. Head grey, with a slight vinaceous tinge. Face below and orbits narrowly whitish. Antenna purplish ringed with white. Palpus moderate, slightly curved, subascending, obtuse, median segment roughish below, top of terminal slightly roughish; white, apex of median segment towards top and apical segment except base, coarsely dusted with purplish. Thorax vinaceous. Abdomen fuscous-grey.

Fore wing broad, dilated, costa curved, apex subobtuse, termen gently rounded. Rather deep vinaceous, on extreme base slightly suffused with light grey, basal patch more fuscous-tinged. Bands formed of dense light grey, vinaceous-touched suffusion. First band just beyond $1/4$, slender, hardly excurved, almost vertical, slightly narrowed and white on extreme margin of costa, delicately edged anteriorly by deeper vinaceous suffusion; second band very broad, at about $2/3$, from middle to $5/6$ of wing; on costal edge this fascia narrowed and shifted anterad, with a few white scales on anterior and on posterior edge, with two blackish-purple suffused spots, beyond anterior and beyond posterior edge, respectively; first spot emitting a narrow line of ground colour, widely angulate at $1/3$ of fascia, thence running along middle of fascia to before its middle on dorsum, slightly zigzag and dilated along lower half; some ill-defined dark purplish dusting edging lower part



Figs. 4-6. Genitalia of *Eutromula* Frölich. 4, *E. vinosa* sp. n., ♂, holotype; 5, do., ♀, allotype, ovipositor; 6, do., bursa.

of second fascia on both sides; termen evenly deep glossy vinaceous-bronze, brighter than remainder of ground colour. Cilia duller, evenly deep purple, prominent on apex, in middle and on tornus, tips narrowly white between the prominences.

Hind wing glossy vinaceous-bronze. Cilia evenly fuscous-grey, with a whitish suffused submedian narrow band.

Paler specimens with ground colour dull light fuscous grey, with both transverse fasciae less contrasting, but more distinctly edged anteriorly with darker fuscous-grey suffusion; termen also paler, but with the same characteristic vinaceous lustre. Hind wing paler, whitish band of cilia broader.

Male genitalia. Tegumen with thick pedunculi; top rounded. Tuba analis long, narrowed and pointed, laterally with a few very long bristly hairs. Vinculum robust, sclerotic, end truncate, opposite this a triangular (ventral) process. Valva rather broad, oval cucullus from slightly beyond middle, to $2/3$ of sacculus, beset with large and coarse incurved spines; sacculus strong, rather broad, inner edge with a moderate patch of long slender transparent spines, mixed with fine short hair-like bristles. Anellus (in ventral aspect) tubular, with a strong keel, upper edge emarginate on both sides of keel, base triangular.

Female genitalia. Rather similar to those of *E. pariana* (fig. 9), differing constantly by the colliculum: little sclerotized, wall thick and refracting, shape, a regular oval, with less than upper third regularly constricted; no other sclerites present. Ductus bursae slender and long, corpus bursae spherical. Signum, a moderate rounded-rhomboidal scobination.

Holotype, ♀, labelled thus: / Gen. no. 9647 / Irkutsk, Sib. or., Hnr (black ink, black cadre, small, quadrate) / Coll. ex-Great Prince Nikolai Mikhailovich (print, Russ.) / Holotype ♀, *Eutromula vinosa*, A. Diakonoff, 1978 (black cadre) /. In the Zoological Institute of the Academy of Sciences of the U.S.S.R., Leningrad.

Allotype, 1 ♀, / Gen. no. 10054 A. Diak. / and 1 ♀, paratype, with intact abdomen, with large labels with red cadre, in faded ink / *Simaethis solaris*, Silesia, Staud. / (sic!). Further paratypes, 2 ♀ with intact abdomens: / Sibir. Staud. 25.1.84 Hamfelt Collection /. Apparently all four specimens were purchased from Staudinger, who had them wrongly identified, and "Siberia" obviously misspelled or misread "Silesia" on two of the four specimens! Further paratypes: 1 ♀ with labels as in holotype and abdomen intact; 1 ♀ / Gen. no. 8149 / / *Choreutis solaris* Ersch. Irkutsk (black ink, name label erroneous) / *Sim. pariana* Cl. Danilevsky det. (black cadre, violet ink) / Coll. Acad. Petrop.; 1 ♂ / Gen. no. 10025 A. Diak. / and 1 ♀ / Gen. no.

10026 A. Diak. /. Both further labelled thus: / Nikolaevsk, Ussur., 5.IX.1931, on Apple, A. Tokareva / Micr. prep. 8377, *atrosignana* Chr. ♂♀ / 1 ♀ / Yakovlevka, Spas'ski county, Ussuri Region, 2.IX.926, Djakonov Filipyev / Wood along inundation of river Daubikhe (print, Russ.) /.

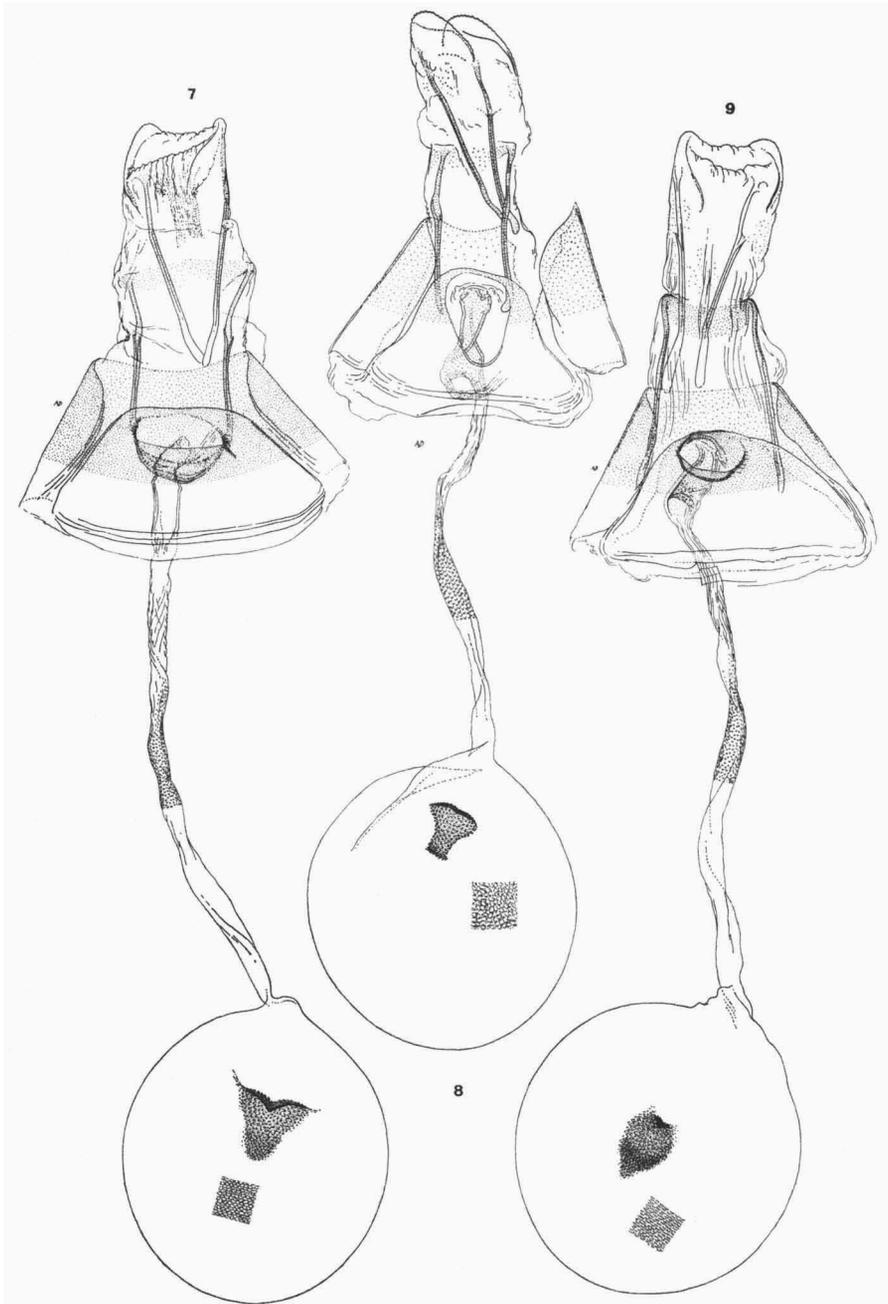
Remarks. A deep vinaceous-brown coloured species with unicolorous pale grey fasciae; however, in paler specimens the ground colour is light fuscous-grey, with hardly any vinaceous tinge. These paler specimens therefore are rather closely resembling the so far undescribed subspecies from Japan (now in press). This neglected old material together with the more recent additions, must have been confounded with *E. pariana* which may vary to the extreme and be quite confusing. *E. vinosa* has distinct genitalia in the two sexes; I expect the species to be not rare; probably more material is concealed among that of *E. pariana*.

***Eutromula cunuligera* spec. nov. (fig. 3)**

(*cunula* = a small cradle, *gero* = to bear)

♂ 12 mm. Head fuscous, sides of vertex mixed with yellowish, face below whitish, orbits whitish. Antenna dark fuscous, above banded with pale yellow, ciliations 1, whitish, scape below whitish. Palpus smooth, yellowish-white, median segment with a basal and a broader subapical fuscous ring, terminal segment dark fuscous with a submedian oblique white ring and white tip. Thorax greyish-fuscous with a purple gloss, an ochreous anterior and a broader subapical band. Abdomen fuscous, posterior halves of segments ochreous, venter ochreous.

Fore wing ovate-triangular, costa curved, apex obtusely pointed, termen curved, rather oblique. Greyish-fuscous, with a purple gloss, markings ochreous, gently becoming brighter posteriorly, white on costa. Base of wing with a cloudy ochreous suffused spot not reaching wing edges; a moderate, light ochreous, well-defined, almost straight transverse fascia at 1/3, hardly outwards-convex and gently outwards-oblique; white on costal edge, scarcely dilated downwards; this is closely followed by a parallel, similar, but ill-defined transverse fascia formed of deep ochreous dusting, from below costa to dorsum; a second fascia at 2/3, more slender, slightly clavate below and hardly inwards-oblique, white on costa, reaching to middle of wing, with a slender and short small streak, opposite this, on 3/4 of dorsum; a third broad deep ochreous fascia well before termen, from well below costa, with top rounded and slightly turned anterad; its inner edge twice gently concave, more gently convex in middle and closely preceded by a parallel, slender, sinuate line from about vein 7 to fold; wing edge beyond third fascia dusted



Figs. 7-9. Female genitalia of *Eutromula* Frölich. 7, *E. vinosa* sp. n., paratype, slide no. 9606; 8, *E. atrosignata* (Christoph), slide no. 10059; 9, *E. pariana* (Clerck), slide no. 9494.

thinly with ochreous, except a narrow line of ground colour edging fascia. Cilia whitish, with a dark fuscous basal line and infuscated median part, three usual fuscous blotches: in apex, middle of termen and tornus, a small silvery-white marginal mark on costa before apex.

Hind wing fuscous with a golden gloss, a central dilated broad bar from base: ochreous, clavate, along $2/3$, and an irregular ochreous spot before and opposite termen before tornus. Cilia creamy whitish, pale fuscous in apex, tornus and along dorsum.

♀ 11 mm. Similar to male, but basal patch ill-defined, first fascia whitish, sinuate line preceding third fascia connected with middle of second fascia, hind wing with yellow bar and spot almost obliterate.

Male genitalia. Tegumen short and rounded, surface densely verrucose (because of a dense clothing with long modified black scales, removed in mount). Tuba analis attached somewhere in the middle of its dorsal wall, lower end more or less free; bristled the whole length, denser so towards extremities, upper end gently clavate, apex narrowed. Vinculum sclerotic, broadly inverted-trapezoidal, end emarginate. Valva oblong-oval, posterior half rather abruptly dilated, with costa rounded-prominent, finely spined with moderately dense short spines around posterior half of valva, along and towards base of sacculus becoming hairy bristles. Aedeagus sclerotic, moderate, indistinctly narrowed, orifice with a projecting lip. Cornuti, an oval serrulate blade. Anellus spherical, a rather sclerotic cup, with ventral edge forming a truncate lip flanked by emarginations, dorsal edge, a simple, raised collar.

China, West Tien-mu-shan, Province Chekiang, 16.V.1932 (H. Höne), 1 ♂, holotype, genit. slide 9654; West Tien-mu-shan, 1500 m, Chekiang (H. Höne), 1 ♀, allotype (abdomen missing).

Closely allied with *E. japonica* (Zeller) and together forming a separate group of species. Type in the Bonn Museum.

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