

Notes on taxonomy and distribution
of the genus *Gynaephora* HÜBNER, 1819
(Lymantriidae)

Karel SPITZER

Entomologický ústav ČSAV, Na sádkách 702, CS-370 05 České Budějovice,
Czechoslovakia.

Abstract

A revised check-list and subgeneric characteristics of *Gynaephora* Hb. (s.str.) and *Dasorgyia* STGR. are given. Distribution and new discoveries of the Central Asian alpine species are briefly commented.

The genus *Gynaephora* HÜBNER, 1819 is represented by species well adapted to the cool temperate and arctic climatic zones. There is a highly endemic group of species occurring only in the Central Asian Highlands (Tian-Shan Pamir, Hindu-Kush, Tibet etc.) – see KOZHANCHIKOV (1950), FERGUSON (1978), ČERNÝ & SPITZER (1981), CHOU IO & YING CHIANG CHU (1979). A preliminary note on a possible subgeneric status of the Central Asian group was published by ČERNÝ & SPITZER (1981) in a paper dealing with a recent rediscovery and new data of bionomics of the typical Tian-Shan and Pamiro-Alai species – *Gynaephora (Dasorgyia) selenophora* STGR. All high alpine Central Asian species were classified in a separate endemic genus *Dasorgyia* by STAUDINGER in 1881 (STAUDINGER & REBEL, 1901 ; STRAND, 1912). But this STAUDINGER's genus was not accepted generally (see KOZHANCHIKOV, 1950 ; FERGUSON, 1978) although some morphological and ecological characteristics seem to be sufficient for a classification on a subgeneric level. The relevant characteristics are summarized in Table 1.

The Central Asian group of *Gynaephora* Hb. (= subg. *Dasorgyia* STGR.) was revised by KOZHANCHIKOV (1950) and some new species from highlands of western China were described recently by CHOU IO & YING CHIANG-CHU (1979). The very instructive figures of aedeagus and valvae and a short English diagnosis of *Gynaephora (Dasorgyia) ruorgensis* CHOU & YING provide sufficient characteristics for the synonymization with *G.(D.) selenophora* STGR. *G.(D.) qinghaiensis* CHOU & YING is very closely related to *G.(D.) alpherakii* GR.GR. and may be perhaps classified on a



Fig. 1. A female of *D. selenophora* STGR. after its oviposition inside cocoon (dissected).



Fig. 2. A heliophilous male of *D. selenophora* STGR. Photos : K. SPITZER, Pamiro-Alai Mts. near Fergana, USSR, June 1980.

subspecies level (see CHOU IO & YING CHIANG CHU, 1979 – figs. 1-3, 8-9 and p. 28). The taxonomic status of *G.(D.) sincera* KOZH. (KOZHANCHIKOV, 1950) is not clear and the species seems to be closely related to *G.(D.) selenophora* STGR. Only one male of *G.(D.) sincera* is recorded by KOZHANCHIKOV (1950) and this holotype material is not available.

Both recently described species – *G.(D.) aureata* CHOU & YING and *G.(D.) minora* CHOU & YING are probably confined to the alpine zone of some remote mountains of western China.

The wingless females of the subgenus *Dasorgyia* were discovered recently (CHOU IO & YING CHIANG-CHU, 1979; ČERNÝ & SPITZER, 1981). As demonstrated by RYAN & HERGERT (1977), the arctic species of *Gynaephora* s.str. represent an excellent subject for eco-physiological and population dynamic studies in the extreme periglacial environment. Comparative physiological and ecological data of subg. *Dasorgyia* from the Central Asian Highlands are badly needed.

Table 1
Basic characteristics of the subgenera *Gynaephora* s.str. and *Dasorgyia* STGR.

Characteristics	<i>Gynaephora</i> s.str.	<i>Dasorgyia</i> STGR.
Males : aedeagus (*)	Thin	Thick
Females	Wings developed	Wingless
Oviposition place	On pupal cocoon or/and food plants	Inside pupal cocoon only
Larvae	Characteristic Lymantriid	Mimics of Micrarctia species (Arctiidae)
Food plants	Salix, Saxifraga Dryas etc. (polyphagy)	Poaceae only (oligophagy)
Distribution	Arctic, Eurosiberian and Nearctic	Endemic in the Central Asian Highlands

(*) Small morphological subgeneric differences in genitalia.

Check-list of the genus *Gynaephora* HÜBNER, 1819

Subgenus *Gynaephora* s.str.

G. selenitica (ESPER, 1783)

G. rossii (CURTIS, 1835)

G. groenlandica (WOCKE, 1874)

Subgenus *Dasorgyia* STAUDINGER, 1881

D. pumila STAUDINGER, 1881

D. selenophora STAUDINGER, 1887.

(*ruoergensis* CHOU & YING, 1979 – syn.nov.)

D. alpherakii GRUM-GRZHIMAILO, 1891

D. qinghaiensis CHOU & YING, 1979

D. aureata CHOU & YING, 1979

D. minora CHOU & YING, 1979

D. sincera KOZHANCHIKOV, 1950 (?)

Taxonomical status of *D. sincera* KOZH. is not clear. *D. qinghaiensis* CHOU & YING may be very close or conspecific with *D. alpherakii* GR.GR.

Acknowledgement

I am very grateful to Dr. O. KUKAL (Guelph) and Dr. J. K. RYAN (Edmonton) for their kind help with the comparative material of high arctic *Gynaephora* species. I also wish to thank my colleague Ing. K. ČERNÝ (České Budějovice) for his field cooperation in the Tian-Shan Mts.

References

- ČERNÝ, K. & SPITZER, K., 1981 : *Gynaephora (Dasorgyia) selenophora* STGR. in den Hochgebirgen Zentralasiens (UdSSR) wieder gefunden. (Lep., Lymantriidae). *Ent. Ber.* (Berlin), 1981 (1) : 41-44.
- CHOU IO & YING CHIANG-CHU, 1979 : A taxonomic study on the steppe caterpillars (Lep., Lymantriidae). *Entomotaxonomia*, 1 : 23-28 (In Chinese).
- FERGUSON, D. C., 1978 : Lymantriidae. In : R. B. DOMINICK et al. (Ed.). *The Moths of America North of Mexico*, 22 (2) : 1-110 pp. E. W. Classey Ltd. and the Wedge Ent. Res. Foundation, London.
- KOZHANCHIKOV, I. V., 1950 : Volnyiaki (Orgyidae). *Fauna SSSR*, 12 : 1-581 pp. Moskva-Leningrad.
- RYAN, J. K. & HERGERT, C. R., 1977 : Energy budget for *Gynaephora groenlandica* (HOMEYER) and *G. rossii* (CURTIS) (Lep., Lymantriidae) on Truelove Lowland. In : L. C. BLISS (Ed.). *Truelove Lowland, Devon Island, Canada : A High Arctic Ecosystem*, pp. 395-409, The University of Alberta Press, Edmonton.
- STAUDINGER, O. & REBEL, H., 1901 : *Catalog der Lepidopteren des palaearctischen Faunengebietes*, Teil 1, p. 114-115, Friedländer, Berlin.
- STRAND, E., 1912 : Familie Lymantriidae. In : A. SEITZ (Ed.). *Die Grossschmetterlinge der Erde*, 2 : 109-141 pp., A. KERNEN, Stuttgart.

ZOBODAT - www.zobodat.at

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Nota lepidopterologica](#)

Jahr/Year: 1984

Band/Volume: [7](#)

Autor(en)/Author(s): Spitzer Karel

Artikel/Article: [Notes on taxonomy and distribution of the genus *Gynaephora* Hübner, 1819 \(Lymantriidae\) 180-183](#)