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On the correct name of the grey larch budmoth (Lepidoptera, Tortricidae)

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It is shown that *Zeiraphera griseana* (HÜBNER) is a *nomen dubium*. Therefore, it is not synonymous with *Zeiraphera diniana* (GUENÉE). The International Commission on Zoological Nomenclature is requested to include *Zeiraphera diniana* (GUENÉE) in the "Official List of Species".

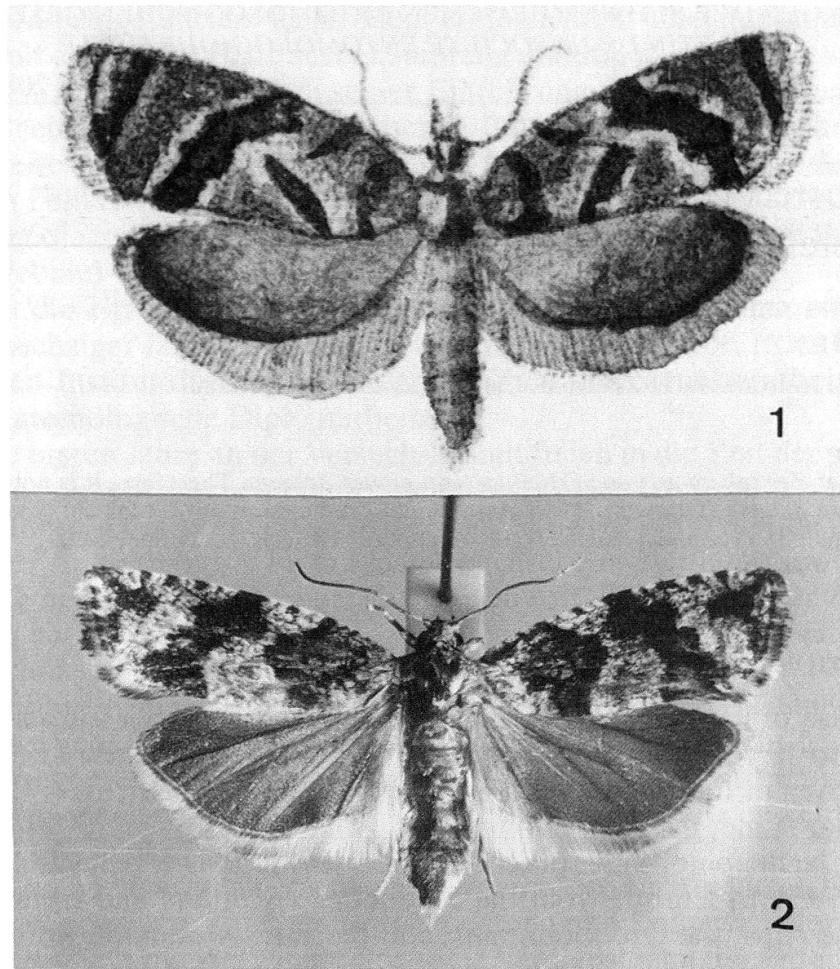
INTRODUCTION

Because of its spectacularly defoliating the Alpine larch forests in regular cycles of 8 to 10 years, the grey larch budmoth is one of the best known Alpine representatives of the Microlepidoptera and the family Tortricidae. Contrary to its vernacular name, the larch budmoth is an oligophagous species with ecotypes feeding on larch, pine, and spruce (BOVEY, 1978). It is a palaeartic species, ranging in Western Europe from the Pyrenees to Scotland and from the south slopes of the Alps, the Ore Mountains, and the Tatra Mountains northwards up to 62° northern latitude in Scandinavia, and eastwards throughout the USSR to Japan (BALTENSWEILER *et al.*, 1977); it does not exist in America (Mutuura & Freeman, 1966). However, whereas its generic affiliation is clear (with the telescopic protractile ovipositor of the female, it belongs to the holarctic genus *Zeiraphera* TREITSCHKE), there is no agreement on the proper scientific name of the species. Although the moth was first unmistakably described as *Sphaleroptera diniana* GUENÉE (GUENÉE, 1845), indicating *Zeiraphera diniana* (GUENÉE) to be the proper name of the species, some modern authors claim priority for the species name *griseana* HÜBNER, 1785–89, e. g. KUZNETZOV (1980), SCHNACK (1985), KUCHLEIN (1987), and others. Therefore, the nomenclatorial situation has been reinvestigated.

RESULTS

The French entomologist GUENÉE (1845) described the species, basing on specimens collected on European larch near Digne in the French "Département Basses Alpes". In the following year, the same species was described as *Grapholita pinicolana* Zeller, 1846, basing on specimens collected on spruce, and as *Poecilochroma occultana* Douglas, 1846, collected on pine.

HÜBNER's *Tortrix griseana* is presented in his "Sammlung europäischer Schmetterlinge", Augsburg 1786–1805, Volume IV, fig. 135 (Fig. 1). This doubtful figure does not resemble the larch budmoth (Fig. 2), whereas the Latin description of GUENÉE (1845) characterizes the larch budmoth unmistakably.



Figs. 1–2. 1. Photograph of HÜBNER's *Tortrix griseana* (Fig. 135, 4.6 times enlarged). 2. Photograph of larch budmoth from the Engadine, prepared for collection (4 times enlarged).

It seems that the species name *pinicolana* ZELLER was used exclusively until the priority of *diniana* GUENÉE was recognized by ESCHERICH & BAER (1909). Since then, the species was called *diniana* in more than 90% of the papers dealing with the larch budmoth. Nobody used the name *griseana* HÜBNER, although the saga circulated that HÜBNER's *Tortrix griseana* corresponded with the larch budmoth. DAVALL (1857), discussing for the first time the forest pest status of the species, wrote: "Mister ZELLER DE GLOGAU, one of the first to describe the species, named it *Tortrix pinicolana*. Before him, HÜBNER had pictured it, fig. 135 under the name *T. griseana*; but the drawing was bad. Nobody could recognize it. On the other hand, HERRIG-SCHÄFFER (misspelling of HERRICH-SCHÄFFER) gives very good drawings in his Supplement to HÜBNER fig. 384 & 385. . . . The insect is most rarely found in German collections and in France, it is not even cited in Mister QUENCÉ's index; unless it is the one given the specific name *diniana*." HERRICH-SCHÄFFER (1849, 1856), cited by DAVALL, referred to the species as *Tortrix (Ditula) pinicolana* ZELL., 1846, and presented it in the two figures mentioned above, which recognizably represent two varieties of the larch budmoth (Fig. 3). Although aware of HÜBNER's *Tortrix griseana*, he doubted its synonymy with *pinicolana* ZELLER. When discussing HÜBNER's "Sammlung europäischer

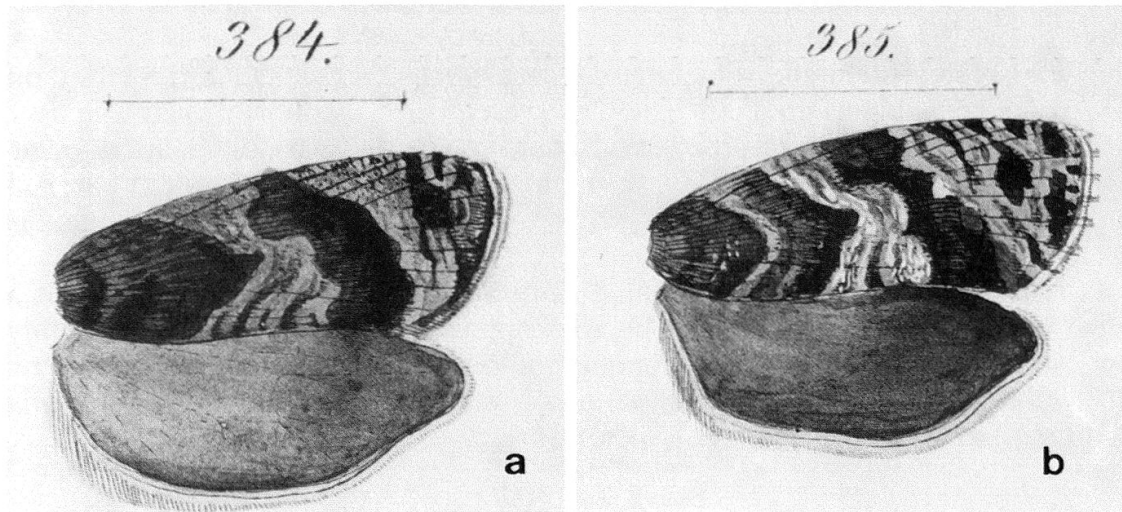


Fig. 3. Photographs of *Tortrix pinicolana* ZELL. from HERRICH-SCHÄFFER (1956). a = brown variety with dark basal field and relatively dark ground in fore wings, but relatively light coloured hind wings; b = greyish variety with light ground in fore wings and relatively dark hind wings.

Schmetterlinge” in his “Nachträge” (1856), he (on p. 152) refers to *griseana* saying: “Doubtful are 135. *Griseana*, perhaps to *Pinicolana*; ...”.

The two figures of HERRICH-SCHÄFFER (1856) and the drawing of KUZNETZOV (1980) (Fig. 4) show great variability of the larch budmoth’s wing pattern (and colour) but are sufficiently characteristic to be recognized as larch budmoth. The question then arises, why exactly in HÜBNER’s drawing the species cannot be recognized, HÜBNER being the only authority whose drawings—just for their outstanding quality—were accepted as valid descriptions of species. To get a better survey on the spectrum of variability, the author together with Professor W. SAUTER, a well known microlepidopterologist, checked 120 specimens of larch budmoth without finding one single specimen looking like HÜBNER’s Fig. IV, 135.

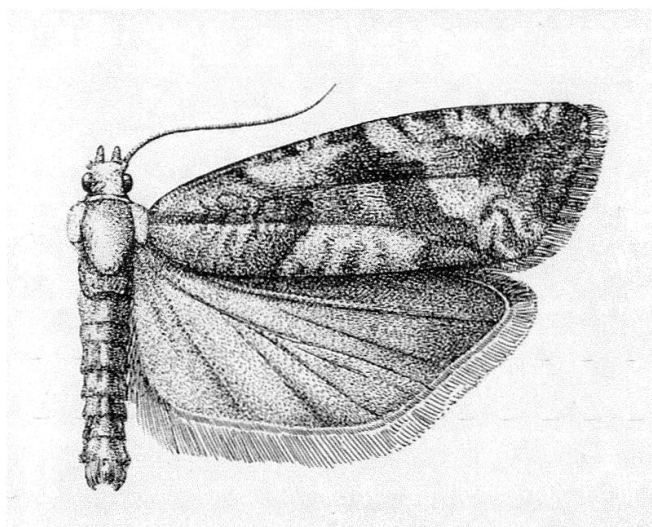


Fig. 4. *Zeiraphera griseana* Hb. of KUZNETZOV (1980), for comparison.

CONCLUSION

Griseana HÜBNER must be regarded as a *nomen dubium*, since it is based on *Tortrix griseana* HÜBNER, 1785–1789, of which only a doubtful picture exists, which, if it should represent the larch budmoth, is either wrongly painted, or represents a fully atypical specimen. Therefore, *griseana* HÜBNER cannot enter in synonymy with *diniana* GUENÉE; as cited by Leraut (1980), *griseana* auct. is synonymous to *diniana* (GUENÉE).

The grey larch budmoth being an important forest pest and subject of a great many investigations, the ambiguous nomenclature of the species is highly undesirable. The International Commission on Zoological Nomenclature is requested, therefore, to clarify the situation and to include *Zeiraphera diniana* (GUENÉE) in the "Official List of Species".

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