

**Eupithecia fennoscandica n. sp.**  
**(Lepid., Geometridae).**

By

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The first report on the occurrence of *Eupithecia scriptaria* H. S. (= *undata* Frr.) in Fennoscandia was made by W. M. Schøyen in 1885, based on his discovery of a ♂ and ♀ (in copula) in Junkersdal in Saltdalen on the 6th of July 1881. Originally he determined the pair to be *E. pygmaeata* Hb. (Schøyen 1882), but after having seen some specimens of *E. scriptaria* H. S. from the Tyrolean Alps, he changed his opinion, and came to the conclusion that it was really the latter species he discovered in Saltdalen (Schøyen 1885).

Fortunately, the pair in question was found in the collection of the Zoological Museum in Oslo, labelled *scriptaria* H. S. I got the permission to dissect the specimens in order to examine the shape of the genitalia, and found that they did not belong to *scriptaria* H. S. (= *undata* Frr.) at all, but to *palustraria* Dbl. (= *pygmaeata* Hb.), as at first stated by Schøyen.

In more recent times Haanshus (1921) claims to have found *E. undata* Frr. in Hol in Hallingdal on July 8th 1912. In the collection of the Zoological Museum in Oslo there is a specimen of *Chloroclystis chloërata* Mab. labelled: «*undata*» and «8 VII 1912, Hol, K. Haanshus». While otherwise no *undata* could be discovered in the collections of dr. Haanshus, I take it for granted that this erroneously determined specimen of *C. chloërata* is in reality the «*undata*» he published in 1921.

Herewith, *E. undata* Frr. has to be eliminated from the Norwegian fauna.

During my work, revising the *Eupithecia* of Norway, the «*undata*» question has turned up again. The investigation of the genitalia of an *Eupithecia* (♀), collected by Barca at Jotkajavrre, Alta in Finmark on July 9th 1924, showed that the specimen in several respects resembled *E. undata* Frr., but differed considerably from the latter by the shape of the bursa. It was therefore reasonable to assume that the Finmark specimen belonged to a species nova, though closely related to *undata*.

*E. undata* has been mentioned from several localities in Finland and Swedish Lappland. I am indebted to dr. F. Nordström in Stockholm,

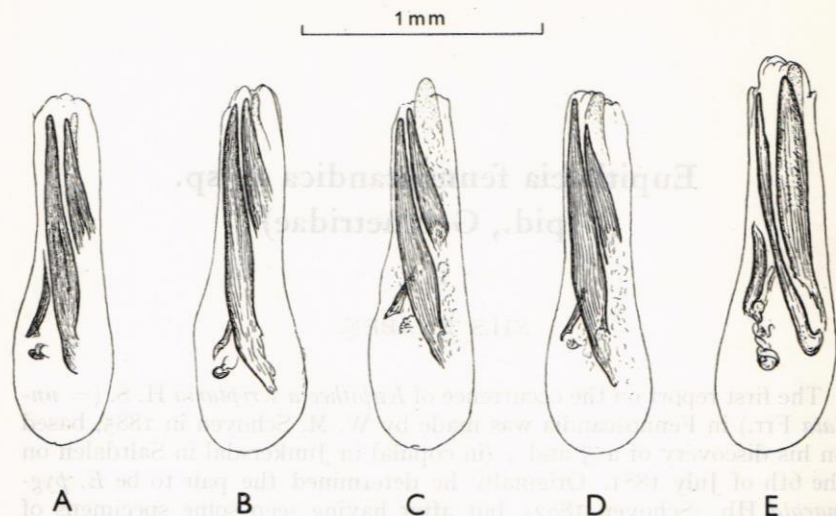


Fig. 1. A—D aedeagus (ventral view) of *E. fennoscandica* n. sp. (A from Toskalharju, B, C and D from Saana); E aedeagus (ventral view) of *E. undata* Frr. (from Hochschwab).

dr. R. Frey at the University Museum in Helsingfors and Mr. Max v. Schantz in Åbo for the loan of specimens from northern localities, viz: 2 ♀♀ Snuritjåkko, Torne Lappmark July 1920 (F. Nordström); 1 ♀ Ivalo July 20th 1921 (O. Fabricius); 1 ♂ Saana July 16th 1938 (A. Nordman); 5 ♂♂ and 6 ♀♀ Saana July 4th—17th 1947 and 1 ♂ and 1 ♀ Toskalharju July 16th 1948 (Max v. Schantz).

For comparison I have had the following specimens of *undata* Frr. from the Austrian Alps at my disposal: 1 ♂ and 1 ♀ from Hochschwab July 1909 (H.) and 1 ♀ from Schneeberg July (Wagner).

Altogether 7 ♂♂ and 6 ♀♀ from the Arctic localities were dissected. Both the males and the females show a substantial deviation from *undata* in regard to the structure of the genitalia, we can therefore without doubt recognize the form from the far north as a species, distinct from *undata*, which, due to geographic isolation has evolved from a common ancestor, on parallel lines with *undata*. In consideration of its distribution in Finland and Scandinavia I propose to name it *fennoscandica* n. sp.

#### ***Eupithecia fennoscandica* n. sp.**

Description: The size varies considerably, length of forewing being 8—10 mm. Antennae threadlike, in the male densely ciliated, more dispersed in the female. The (labial) palpi are about the same length as



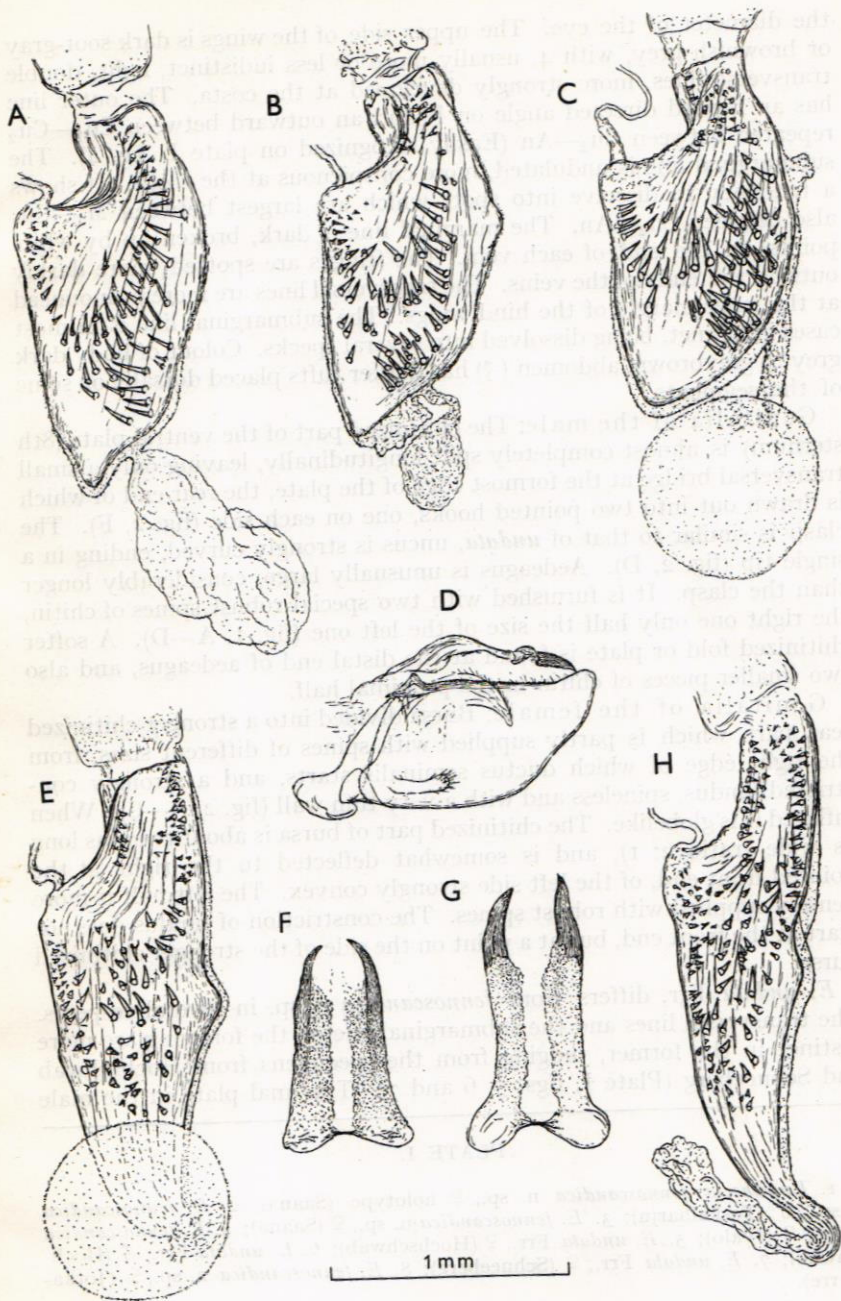


Fig. 2. A—C bursa (dorsal view) of *E. fennoscandica* n. sp. (A from Ivalo, B and C holotype from Saana); D clasp of *E. fennoscandica* n. sp.; E bursa of *E. undata* Frr. (Schneeberg); F ventral plate (8th sternum) of *E. fennoscandica* n. sp.; G ventral plate (8th sternum) of *E. undata* Frr.; H bursa of *E. undata* Frr. (Hochschwab).

the diameter of the eye. The upper side of the wings is dark soot-gray or brownish grey, with 4, usually more or less indistinct, light, double transverse lines, more strongly developed at the costa. The outer line has an inward directed angle on R and an outward between  $Cu_1$ — $Cu_2$ , repeated between  $Cu_2$ —An (Easily recognized on plate I, fig. 4). The submarginal line is undulated, more conspicuous at the costa. It shows a tendency to dissolve into spots which are largest between  $M_3$ — $Cu_1$  also between  $Cu_2$ —An. The marginal line is dark, broken up by white points on the end of each vein. The fringes are spotted, more darkly outside the ends of the veins. The transversal lines are more pronounced at the inner margin of the hind wings. The submarginal line is in most cases indistinct, being dissolved into several specks. Colour of body dark grey to greybrown, abdomen ( $\sigma$ ) has darker tufts placed dorsally on some of the segments.

Genitalia of the male: The chitinized part of the ventral plate (8th sternum) is almost completely split longitudinally, leaving only a small transversal bridge at the foremost edge of the plate, the rear end of which is drawn out into two pointed hooks, one on each side (fig. 2, F). The clasp is similar to that of *undata*, uncus is strongly curved, ending in a single tip (fig. 2, D). Aedeagus is unusually large, considerably longer than the clasp. It is furnished with two special robust spines of chitin, the right one only half the size of the left one (fig. 1, A—D). A softer chitinized fold or plate is found at the distal end of aedeagus, and also two smaller pieces of chitin in the proximal half.

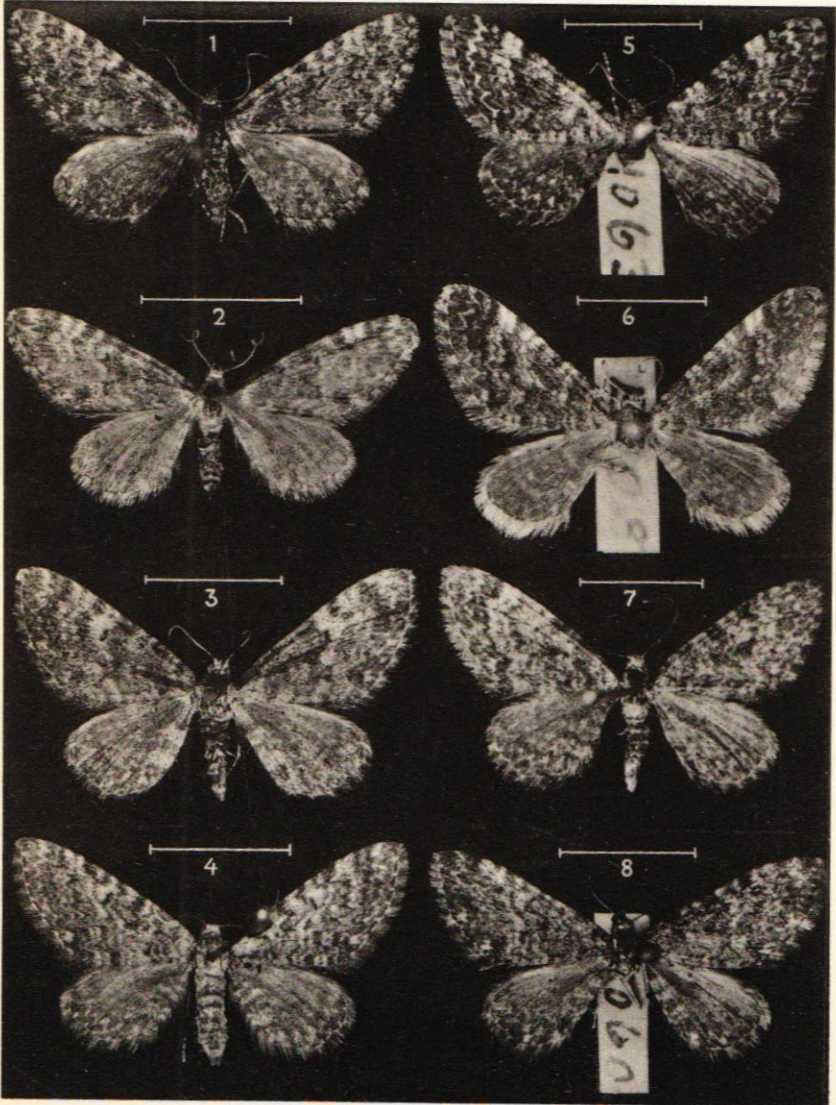
Genitalia of the female: Bursa divided into a stronger chitinized rear part, which is partly supplied with spines of different sizes, from the right edge of which ductus seminalis starts, and a strongly constricted fundus, spineless and with a very thin wall (fig. 2, A—C). When inflated it is globelike. The chitinized part of bursa is about twice as long as wide (ratio 2: 1), and is somewhat deflected to the right at the pointed front end, of the left side strongly convex. The left half is more densely supplied with robust spines. The constriction of fundus does not start at the front end, but at a point on the side of the stronger chitinized bursa.

*E. undata* Frr. differs from *fennoscandica* n. sp. in several respects. The transversal lines and the submarginal one on the forewing are more distinct in the former, judging from the specimens from Hochschwab and Schneeberg (Plate I, figs. 5, 6 and 7). The anal plate in the male

PLATE I.

1. *Eupithecia fennoscandica* n. sp., ♀ holotype (Saana); 2. *E. fennoscandica* n. sp., ♂ (Toskalarju); 3. *E. fennoscandica* n. sp., ♀ (Saana); 4. *E. fennoscandica* n. sp., ♀ (Ivalo); 5. *E. undata* Frr., ♀ (Hochschwab); 6. *E. undata* Frr., ♂ (Hochschwab); 7. *E. undata* Frr., ♀ (Schneeberg); 8. *E. fennoscandica* n. sp., ♀ (Jotkajavrre).





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seems to be more sturdy, with coarser hooks (fig. 2, G). The two largest pieces of chitin in aedeagus do not show very great difference in size, the right one is somewhat shorter, but has on the other hand a greater width than the left (fig. 1, E). The chitinized part of bursa is more stretched, the ratio of length to width being about 3:1. The constriction of fundus (in the examined *undata* specimens) is located at the tip of bursa which bends over to the left (fig. 2, E and H, also vide: Petersen, 1909, Taf. 18, fig. 75, B). Consequently the left side of the chitinized bursa is almost straight, more concave towards the tip. The spines are more evenly dispersed than in *fennoscandica* n. sp.

Holotype: 1 ♀ Saana July 10th 1947, Coll. Max v. Schantz (Plate I, fig. 1).

### Literature.

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