

Two *Helianthemum*-feeding species of Lepidoptera new to The Netherlands: *Mompha miscella* (Momphidae) and *Scythris dissimilella* (Scythrididae)

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Abstract: Two species of Lepidoptera whose larvae feed on *Helianthemum* are recorded for the first time from The Netherlands, viz. *Mompha miscella* (Momphidae) and *Scythris dissimilella*. Of both species one specimen was captured: near Goes (province of Zeeland) on 6 August 1960 and near Vrouwenpolder (also province of Zeeland) on 15 August 1987, respectively. The nearest habitats of the foodplant (*Helianthemum*) occur in West-Belgium. External characters, genitalia, bionomics and geographical distribution of the two species are discussed. It is concluded that both specimens are casual migrants.

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Introduction

In The Netherlands the occurrence of the Rockrose (*Helianthemum nummularium* (L.) Mill. is restricted to the southern part of the province of Limburg (mainly to the Sint Pietersberg near Maastricht) (Mennema et al., 1980; Blink, 1997). However, in another part of the country, the province of Zeeland, where the foodplant does not occur, two species of Lepidoptera were found, whose larvae live on Rockrose. It concerns *Mompha miscella* (Denis & Schiffermüller) and *Scythris dissimilella* (Herrich-Schäffer). A female of *M. miscella* was taken by J. H. Kuchlein by means of a light trap east of Goes on 6 August 1960. The specimen of *Scythris dissimilella*, a male, was captured by A. Schreurs in the dunes near Vrouwenpolder on 15 August 1987. Both specimens are heavily worn and, as may be apparent from the dates, remained unidentified for years.

The finding of these two species in The Netherlands deserves closer attention, firstly because of the localities, far removed from the foodplant, and, secondly, because of the iden-

tification problems for which the genera *Mompha* and *Scythris* are notorious.

In the Dutch checklist (Kuchlein, 1993) *Mompha miscella* must be inserted as 608a between *M. terminella* (Humphreys & Westwood) and *M. raschkiella* (Zeller). *Scythris dissimilella* has to be inserted as 631a between *S. ericivorella* (Ragonot) and *S. ericitella* (Von Heinemann).

Identification

Mompha miscella is externally well distinguished from the other Dutch *Mompha*-species by her small size (5 - 10 mm), and by colour and pattern of the forewing (fig. 1). The forewing is greyish brown with three ferruginous transverse fascia, the head is not metallic. Also the recognition of the male genitalia (fig. 2) does not present problems: the valvula is slightly shorter than the sacculus, and the transtilla is absent. The female genitalia (fig. 3) are characterized by the length of the ductus bursae, which is longer than the corpus bursae, by the dish-like shape of the antrum and by the lamella antevaginalis,

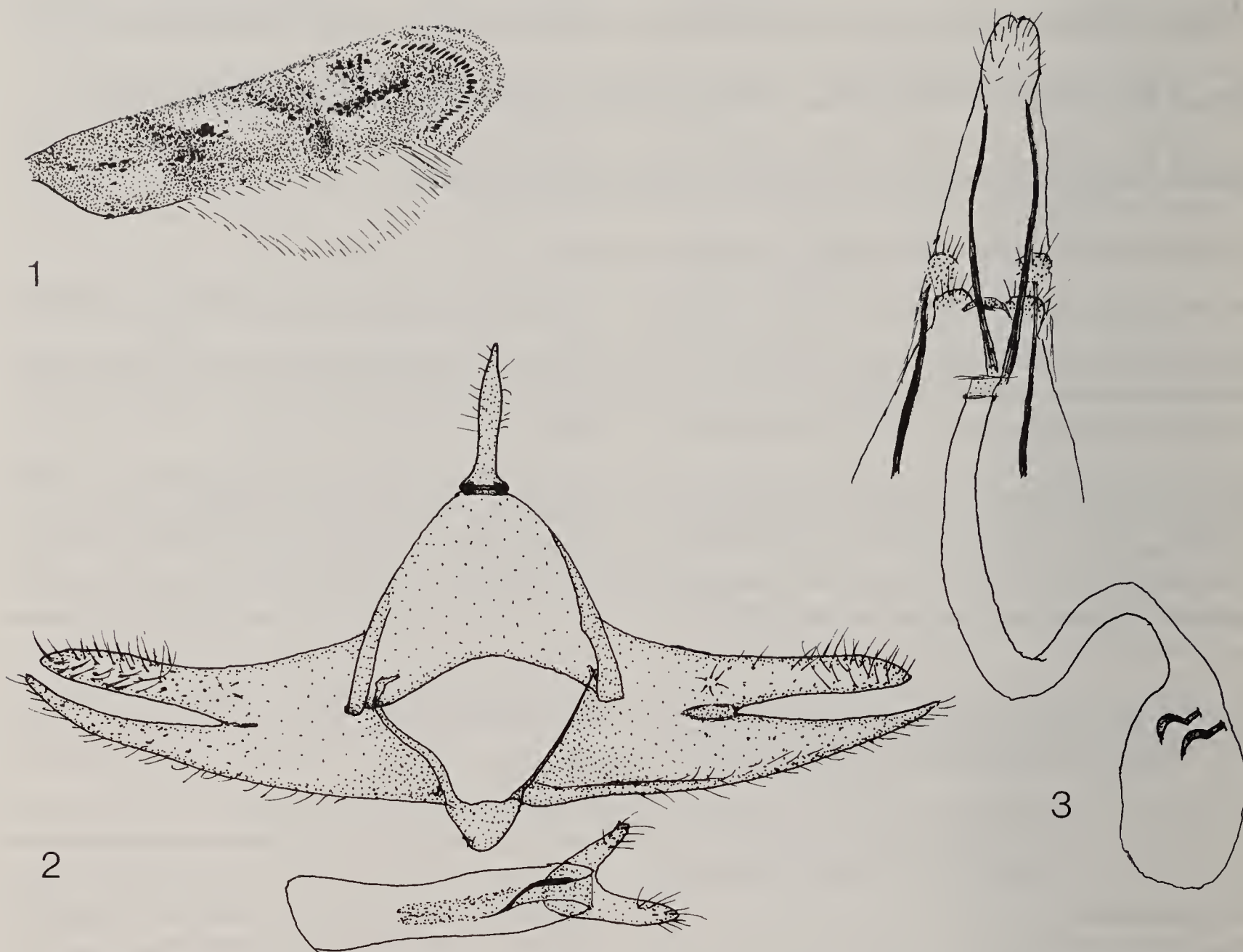


Fig. 1-3. *Mompha miscella*. 1, right forewing; 2, male genitalia (after Koster & Biesenbaum, 1994, modified); 3, female genitalia.

which consists of an arch-like structure with two lobes.

The genus *Scythris* has a reputation for extreme difficulties in determination of, particularly, the unicolorous species. However, *Scythris dissimilella* (fig. 4) belongs to a group of species with a pale basal streak in the fold of the forewing, and these species present far less identification problems. In The Netherlands this group is represented by *S. cicadella* (Zeller), *S. limbella* (Fabricius) and *S. knochella* (Fabricius). *Scythris dissimilella* is readily distinguished from *S. cicadella* by its larger size (14 - 16 mm versus 10 - 12 mm). *Scythris dissimilella* can be distinguished from the two other species by the relatively long pale plical streak of the forewing, which extends far beyond the middle of the wing and often reaches the termen. Some forms of *S. potentillella* (Zeller) show something as a whitish plical streak. However, the latter species

is of the same size as *S. cicadella*, i.e. substantially smaller than *S. dissimilella*. The male genitalia of the species belonging to the genus of *Scythris* are very heterogenous. In *S. dissimilella* (fig. 5) the genitalia show considerable reductions; they are distinguished by the long and slender gnathos, which is provided with four conspicuous apical thornlike processes. Also the female genitalia (fig. 6) are characteristic. The genitalia of *S. dissimilella* are distinguished from the above mentioned species of *Scythris* by the distinct and uniform sclerotization of the ductus bursae, which is not sclerotized in the other species.

The Dutch specimen of *S. dissimella* lost almost completely its markings, very probably after its capture.

Bionomics

The larvae of *Mompha miscella* live on

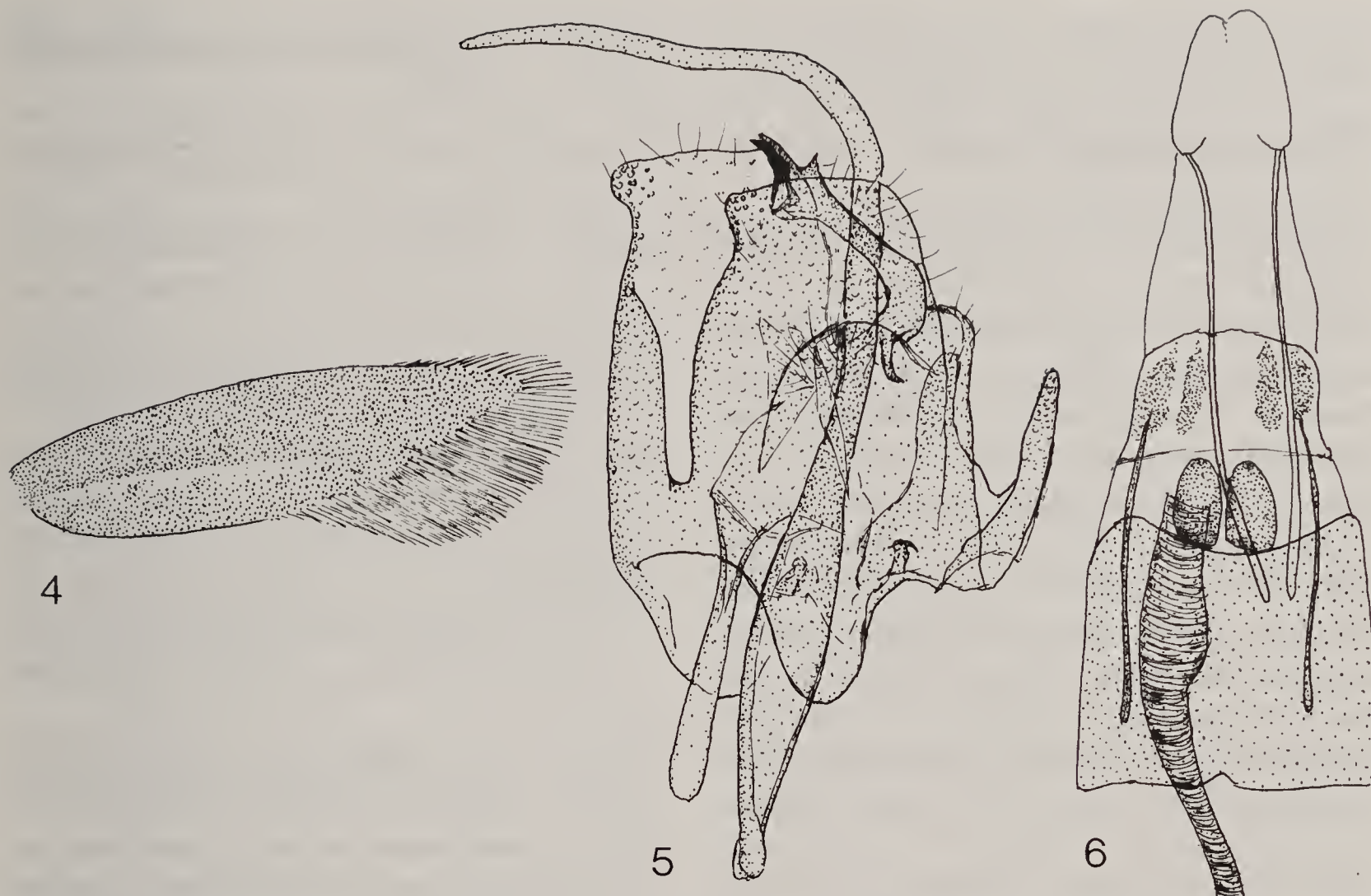


Fig. 4-6. *Scythris dissimilella*. 4, right forewing; 5, male genitalia; 6, female genitalia (after Bengtsson, 1984, modified).

Rockrose (*Helianthemum*-species) (Riedl, 1969; Emmet, 1988; Zagulyaev & Sinev, 1990). In The Netherlands and adjacent regions only one species has to be considered, viz. *H. nummularium* (Mennema et al., 1980). In Great Britain the larvae are found in July and from October onward to early spring (Emmet, 1988). Initially the larva produces an irregular linear mine, which is afterwards enlarged to a blotch, the top leaves of the plant being preferred (Hering, 1957). The mine is figured by Steuer (1995). In Northwest-Europe *M. miscella* has two generations, the moths appearing in Germany from late April to late June and from early July to mid August (Koster & Biesenbaum, 1994). For Great Britain Emmet (1988) gives May, June and August, September.

Also the larvae of *Scythris dissimilella* feed exclusively on *Helianthemum*-species (Schütze, 1931), so that again only *H. nummularium* has to be considered as the foodplant. The larva, which is still undescribed, spins a thin silken tube on the underside of the basal leaves of the plant and is found in May and June (Schütze, 1931). In Central-Europe *S. dissimi-*

lella has one generation, adults flying from the end of June to early September (Biesenbaum, 1996) but most frequently at the end of July (Bengtsson, 1984).

The larva of neither *M. miscella* nor of *S. dissimilella* is known to feed on cultivated *Helianthemum*-species.

Geographical distribution

Mompha miscella is known from nearly all European countries and according to local faunas it is widely distributed and often common. In the western half of Europe, the species is only missing in Norway and Ireland (Riedl, 1996). However, the species is not distributed equally over the continent. Hering (1932) already established that *M. miscella* is often missing in North-Germany. In The Netherlands it was not found thus far and from the adjacent regions of Germany only some records from the Eifel are known (Koster & Biesenbaum, 1994). Also in Belgium *M. miscella* is very rare: there are only records from the provinces of West-Vlaanderen (before 1980) and Namur (De Prins, 1998). We must therefore conclude

that the Dutch specimen of *M. miscella* was captured beyond its known range. The nearest habitats of *Helianthemum nummularium* are found along the Belgian North Sea-coast (Van Rompaey & Delvosalle, 1979).

The geographical distribution of *Scythris dissimilella* shows another pattern, the northern limits of its range being situated far more southward. This species is not known from Denmark, Fennoscandia, Great Britain and Ireland (Passerin d'Entrèves, 1996). In the western half of Germany the most northerly locality is situated in the Eifel (Biesenbaum, 1996). The only Belgian record is from the province of Namur (eastern Belgium), and dates from the 19th century. Evidently, the Dutch specimen of *S. dissimilella* is found far beyond its range limits, though the foodplant - as explained above - occurs along the Belgian coast.

From the foregoing it becomes clear that the specimens of *M. miscella* and *S. dissimilella*, captured in The Netherlands, have to be considered as rare vagrants.

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