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# *PARAFOMORIA FUMANAE* SP. N., A NEW STEM MINER ON *FUMANA PROCUMBENS* (LEPIDOPTERA: NEPTICULIDAE)

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**Abstract**

LAŠTŮVKA, A., LAŠTŮVKA, Z.: *Parafomoria fumanae sp. n., a new stem miner on Fumana procumbens (Lepidoptera: Nepticulidae).* Acta univ. agric. et silvic. Mendel. Brun., 2005, LIII, No. 1, pp. 15-18

*Parafomoria fumanae* sp. n. is described from southern France. The new species is similar to *Parafomoria ladaniphila* (Mendes, 1910), but very close to *P. cistivora* (Peyerimhoff, 1871) and *P. helianthemella* (Herrich-Schäffer, 1860) after its genital morphology. It differs especially by the characters on valvae, tegumen, uncus and aedeagus. Its larva is a stem miner of *Fumana procumbens* (Dunal) Gr. et Godr., the species is the first stem miner in the genus *Parafomoria* van Nieukerken, 1983.

*Parafomoria*, new species, France, *Fumana*

The species of the genus *Parafomoria* van Nieukerken, 1983 occur in the southwestern part of the Palaearctic region, most of them in the Iberian Peninsula. All known species are leaf miners on Cistaceae, six species have been found in Europe till this time (van Nieukerken, 1983, 1985, Laštůvka & Laštůvka, 1997) and several others remain undescribed (E. J. van Nieukerken, pers. comm.). We collected some unknown empty stem mines on *Fumana procumbens* during the searching for *Stigmella diniensis* (Klimesch, 1975) larvae in the environs of Pertuis (Vaucluse) in southern France in July 1991 and 1992. We presumed a new *Trifurcula* species, because no *Parafomoria* was known as a stem miner. We could find more mines with larvae north of Perpignan only in 2004. We reared only one specimen unfortunatelly. It is a new *Parafomoria* species which we describe here.

*Parafomoria fumanae* sp. n.
(Figs 1–4)

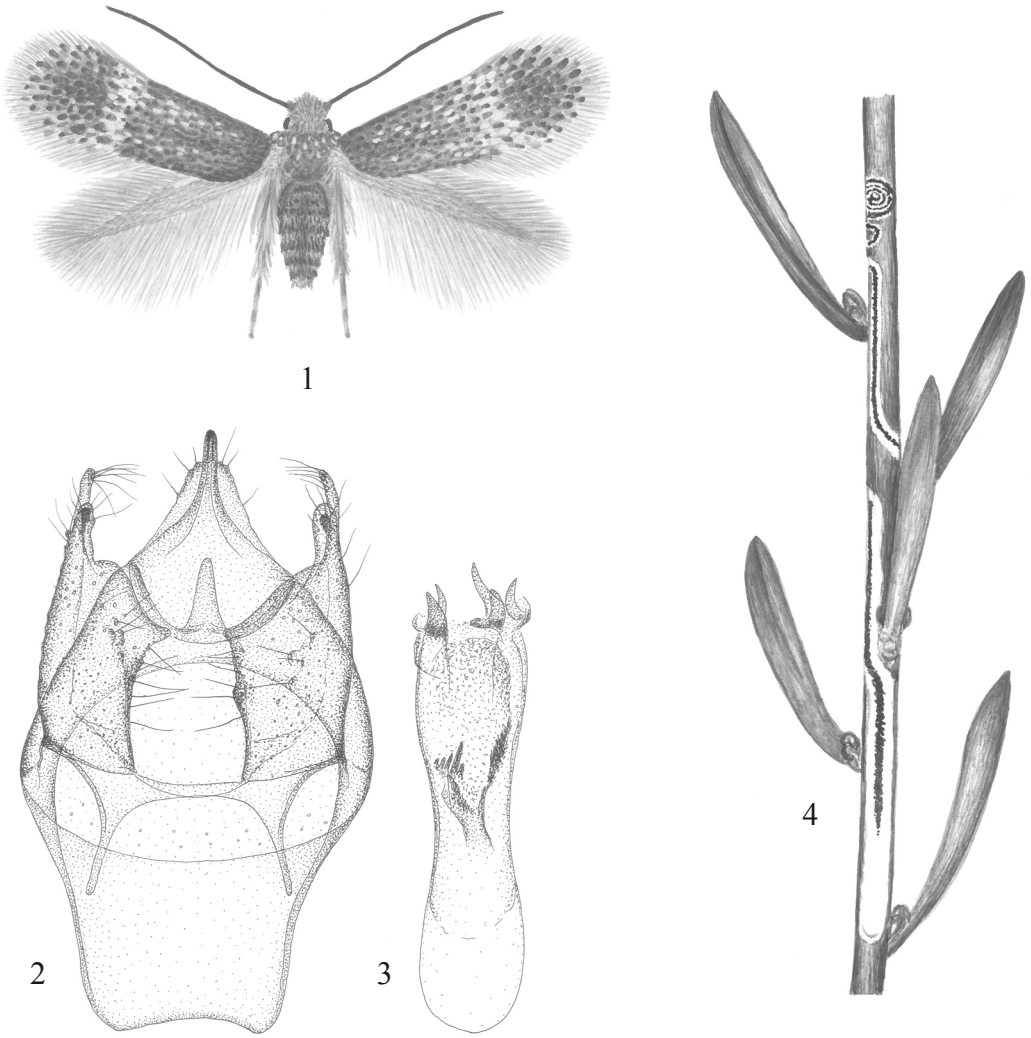
Material. Holotype ♂, France, Pyrénees-Orientales, Salses, vii.2004 ex larva (larvae 2.vii.2004), lgt. et coll. A. Laštůvka.

Description of adult (fig. 1). Wingspan 3,5 mm; frontal tuft and collar fuscous, mixed with brownish and ochreous scales; antenna very long, longer than three quarters of the wing, dark fuscous, with 35 segments; thorax greyish brown, with several whitish ochreous scales; abdomen dark greyish; legs grey; forewing covered by coarse, greyish brown scales, partly mixed with some whitish scales and with an unsharp whitish fascia in the distal two thirds from base; hindwing greyish with a white scale tuft up to one third of the wing; cilia greyish.

Male genitalia (figs 2, 3). Vinculum large, slightly concave in its fore margin; uncus longer than tegumen, pointed; tegumen broad, rounded; gnathos elements of the equal length; valva broad, with a distinct digitate process and subterminal lobe distally and with a pointed corner on its ventral margin; aedeagus with two pairs of curved carinate processes, its vesica with one more large cornutus (between the carinae in the fig. 3), two groups of small cornuti and spines, and with characteristic sclerotization in the central part.

Female unknown.

Diagnosis. *Parafomoria fumanae* sp. n. is very




*1–4: Parafomoria fumanae sp. n.; 1 – adult (holotype), 2 – male genital capsule, 3 – aedeagus, 4 – mine on the stem of Fumana procumbens.*

similar to *P. ladaniphila*, but it belongs into species group with two pairs of carinae in aedeagus and with the digitate process on the valva. *Parafomoria pseudocistivora* and *P. cistivora* of this group differ by their uniformly brownish forewings without white margins, *P. halimivora* by its two white fasciae and *P. helianthemella* especially by its narrow valvae without inner corners, by bilobed tegumen and by characteristic sclerotization in the aedeagus.

Biology and habitat. The hostplant is *Fumana procumbens* (Dunal) Gr. et Godr. The species is the first known stem miner of the genus *Parafomoria*. Its mine starts as narrow, much contorted gallery with distinct central line of the frass. It continues as more or less straight gallery on the stem usually in the direction to its base (fig. 4). The larva is deep yellow. We have found the empty mines during July (1991 and 1992) and the larvae on July 2nd (2004). The holotype adult emerged (from about 20 larvae collected) in the middle of July. So that the species develops at least two generations annually. *Parafomoria fumanae* sp. n. inhabits dry open pine forests on sands and maquis on limestone rocks with the occurrence of its host plant.

Distribution. Southern France (Vaucluse and Pyrénees-Orientales).

Derivatio nominis. After the genus name of its host plant.

**Comparative material of the known European *Parafomoria* species**
(all lgt. et coll. A. Laštůvka)

*Parafomoria cistivora* (Peyerimhoff, 1871) – France, Var, St. Maxime, 26.ix.1996, 1 ♂; Spain, Teruel, Albarracin, x.1992, 34 ♂♂, 21 ♀♀ ex pupa (pupae 25.vi.1992), on *Cistus laurifolius* L.

*P. pseudocistivora* van Nieukerken, 1983 – France, Var, les Adrets-de-l Esterel, 27.ix.1996, 2 ♂♂; Croatia, Istria, Medulin, ix.1998, 11 ♂♂, 8 ♀♀ ex larva (larvae 12.iii.1998), mines with larvae on *Cistus salvifolius* L.

*P. halimivora* van Nieukerken, 1985 – Spain, Cáceres, Valverde del Fresno, 19.vi.2003, 5 ♂♂ on Halimium alyssoides (Lam.) C. Koch; Toledo, Buenasbodas, 19.vi.2003, 1 ♂ on Halimium lasianthum (Lam.) Spach; Malaga, Jimera de Libar, vii.1994, 4 ♂♂, 2 ♀♀ ex larva (larvae 29.vi.1994), on *Halimium atriplicifolium* (Lam.) Spach.

*P. helianthemella* (Herrich-Schäffer, 1860) – France, Hautes-Alpes, Montgenévre, 9.vii.1992, 1 ♂; Czech Republic, Moravia, Mikulov, iii.1992, 12 ♂♂, 8 ♀♀ ex larva (larvae 6.x.1991); Slovakia, Turňa nad Bodvou, vii.1990, 1 ♀ ex larva (larvae 17.vii.1990), Háj, vii.1990, 1 ♂ ex larva (larvae 16.vii.1990), always on *Helianthemum grandiflorum* (Scop.) DC.

*P. liguricella* (Klimesch, 1946) – France, Aude, Sigean, iii.1999, 3 ♂♂, 6 ♀♀ ex larva (larvae 12.x.1998); Herault, Frotignan, v.2003, 8 ♂♂, 7 ♀♀ ex larva (larvae 29.iii.2003), larvae always on *Cistus albidus* L.

*P. ladaniphila* (Mendes, 1910) – Spain, Zaragoza, Herrera de los Navarros, 14.vi.2004, 1 ♂ on *Cistus laurifolius* L.; Guadalajara, El Pedregal, 16.vi.2003, 4 ♂♂, 2 ♀♀ on *Cistus laurifolius*; Cuenca, Boniches, 17.vi.2003, 1 ♂, 1 ♀ on *Cistus ladanifer* L.; Granada, 10 km S El Molinillo, 26.vi.2004, 22 ♂♂, 8 ♀♀ on *Cistus clusii* Dunal.

SOUHRN

*Parafomoria fumanae* sp. n., nový druh minující v lodyze *Fumana procumbens* (Lepidoptera: Nepticulidae)

*Parafomoria fumanae* sp. n. je popsána z jižní Francie. Nový druh je podobný *Parafomoria ladaniphila* (Mendes, 1910), ale podle morfologie kopulačních orgánů velmi blízký *P. cistivora* (Peyerimhoff, 1871) a *P. helianthemella* (Herrich-Schäffer, 1860). Liší se především některými znaky na samčích kopulačních orgánech (valva, tegumen, uncus, aedeagus). Housenka minuje lodyhu *Fumana procumbens* (Dunal) Gr. et Godr. Popisovaný druh je prvním zástupcem rodu *Parafomoria*, který se nevyvíjí v listech.

*Parafomoria*, sp. n., Francie, *Fumana*

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