Phyllonorycter berberidella Nunes, Laštůvka & Laštůvka, 2026 (Gracillariidae) in Alto Alentejo

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Between 1995 and 2003 I visited Parque Natural da Serra de São Mamede a number of times. This was on the recommendation of José Passos de Carvalho. My previous entomological activities in Portugal had been confined to Algarve. He thought that I should extend my activities to other parts of the country. He proposed PN Serra de São Mamede because there were no Lepidoptera records from the Parque Natural. He informed me that Serra de São Mamede was a locality where some plants and animals had their most southerly Portuguese records, while others had their most northerly records. From a base at Escusa most of my work was in the northern half of the Parque, around Castelo de Vide and Marvão, south as far as the high point of São Mamede itself. We also stayed a few times at Hortas de Baixo at the southern extremity of the Parque. The area between São Mamede and Esperança appeared to me to have little interest and was neglected for the first few years. After a day spent with a local botanist, I became aware that there were localities with interesting plants in this area and that these could harbour interesting moths.

On 19.iv.2000 I found several plants which I was able to identify as *Genista berberidea* Lange. The site (39.214620N, 7.261614W) was about 1 km south of Besteiros, on moist slightly peaty soil on a slope between a track and a small stream at an altitude of 450 m. Aware that several *Genista* species are host to particular microlepidoptera, I examined these plants and found a single upperside leaf-mine of a *Phyllonorycter* species. I also netted a single female of a *Phyllonorycter*. On a later visit on 6.xi.2000 another leaf-mine was found, but no moth was reared from either of these leaf-mines. Further visits to the site on 1.ix.2001 and 20.v.2003 failed to produce any more mines or moths. On the 2003 visit, I had the impression that there were fewer plants of the *Genista*, perhaps because brambles (*Rubus*) were becoming more dominant at the site.

It was known at the time that there were several species of *Phyllonorycter* associated with various species of *Genista* and related genera in the tribe Genisteae of Fabaceae. Laštůvka & Laštůvka (2006) reviewed the European species of this group, describing 12 new species. None of these species was recorded from *Genista berberidea*, nor did the single female from Besteiros closely resemble any of the described species, suggesting that this was an undescribed species. As females in the group are not safely distinguishable by genitalia characters, it was hoped that further specimens would eventually be found.

On 24.iii.2017 Sónia Ferreira and I visited a site by Rio Ferreira at Ponte do Couce, Valongo, Douro Litoral. On a steep slope above a track east of the river there was a number of plants of *Genista berberidea* bordering a very small stream. A quick look at some of these plants did not reveal any leaf-mines. Subsequently I alerted João Nunes to the presence of these plants and the possibility that they could harbour an undescribed *Phyllonorycter*. As his home at Valongo was only a few kilometres from this site and because I knew that he had considerable expertise in rearing *Phyllonorycter* species, I hoped he would be able to find leaf-mines on the *Genista*. In the spring of 2024 he did indeed find leaf-mines and was able to rear adults, with further mines collected in autumn 2024 and spring 2025. This resulted in the description of *Phyllonorycter berberidella* Nunes, Laštůvka & Laštůvka, 2026 (Nunes et al., 2026).

After the description of the new *Phyllonorycter* I looked out my single specimen (numbered P5648) intending to compare the external appearance of the moth with illustrations in Nunes et al. (2026). Unfortunately there had been some insect damage to some of the specimens in the store box and the *Phyllonorycter* had been entirely consumed.

According to Flora-on and Castroviejo (1999) *Genista berberidea* is a rare and threatened species of the north-west of the Iberian Peninsula, designated Vulnerable on the Portuguese Red-list of Flowering Plants. The Flora-on distribution map shows 12 hectads (considered extinct in one) between Serra do Caramulo and Serra de Arga. The locality in PN Serra de São Mamede is therefore surprising, being much the furthest inland and about 160 km south-east of the Serra do Caramulo population. As it is far outside the known distribution area of the species, the legend on this species in Flora-on does not match the location of the Besteiros population. However, the legend describes what is known of the species and therefore could not cover what is not known. The flora of Serra de Sao Mamede is not particularly well known. From my own plant records there are many plant species in the area which are not shown on the distribution maps in Flora-on. As with *Genista berberidea*, some of these also show significant disjunction from other populations.

When I visited the site in 2003, I feared that *G. berberidea* was already in decline. There is a strong possibility that it is now extinct there. However there is also the possibility that there could be additional populations in the area, but any such discovery would require extensive field work.

References

Flora-On: Flora de Portugal Interactiva. 2026. Sociedade Portuguesa de Botânica. www.flora-on.pt. Accessed 28 February 2026.

Castroviejo, S. 1999. *Flora iberica. Plantas vasculares de la Península Ibérica e Islas Baleares. Vol. VII(I). Leguminosae (partim)*. Real Jardín Botánico, CSIC, Madrid. 578 pp.

Laštůvka, A. & Laštůvka, Z. 2006. The European *Phyllonorycter* species feeding on the plants of the tribe Genisteae (Fabaceae), with descriptions of twelve new species (Lepidoptera: Gracillariidae). *Acta universitatis agriculturae et silviculturae Mendelianae Brunensis*, **54** (5), 65–84. https://doi.org/10.11118/actaun200654050065

Nunes, J., Laštůvka, A., Hansson, C. & Laštůvka, Z. 2026. A new species of *Phyllonorycter* Hübner (Lepidoptera: Gracillariidae) associated with *Genista berberidea* Lange (Fabaceae), and a new species of *Achrysocharoides* Girault (Hymenoptera: Eulophidae) associated with both, from Portugal. *Zootaxa*, **5760** (1): 139–150. https://doi.org/10.11646/zootaxa.5760.1.7