

## Notes on the genus *Agdistis* from Asia Minor, with descriptions of two new species

(Lepidoptera, Pterophoridae, Agdistinae)

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### Abstract

Material of the genus *Agdistis* from Asia Minor has been examined. The taxon *Agdistis cypriota* ARENBERGER, 1983 as new to Asia, and *Agdistis karabachia* ZAGULAJEV, 1990, is recorded, known until now only from Azerbaidjan, as a new species in Asia Minor. He describes two taxa new to science, *Agdistis sabokyi* sp.n. and *Agdistis cappadociensis* sp.n.

### Introduction

Several Hungarian expeditions have visited the territory of Asia Minor recently, but the researchers have collected microlepidoptera only sporadically. The specimens of Pterophoridae that have reached our museum are therefore especially valuable. The Western Palaearctic, in particular Turkey, is extremely rich in *Agdistis* species. However, according to recent researches (ARENBERGER 1995, ZAGULAJEV & BLUMENTHAL 1994), we have very little information about many of the species and species-groups. In the present study, the author describes two new species from Turkey and provides new faunistical and biological details of two other little-known species.

### Material

The bulk my research material was in the Natural History Collection at Komló. I take this opportunity to thank the following private collectors for the ban of the material in their care:

Csaba Szabóky's private collection, Budapest, Hungary and Kalmán Szeőke's private collection, Székesfehérvár, Hungary

### Systematic part

#### *Agdistis sabokyi* sp.n.

**Type material.** Holotype, male. Turkey, Prov. Ankara, Tuz Gölü 9 km N of Sereflikochisar 1000 m, 33°32'E, 38°58'N, 30.v.1990 leg. SZABÓKY, Cs., gen. prep. FAZEKAS, No 3015. The holotype is deposited in the Natural History Collection at Komló, Hungary. Other material: So far unknown.

**Description** (fig. 1). Alar expanse 28 mm. Ground colour of forewing dark brown-greyish, with three brown dots on costa. Edge of costa white between 2<sup>nd</sup> and 3<sup>rd</sup> dots. Upper edge area darker and lower are lighter in colour. There is a scattering of white and brown scales. Base of wing with a whitish stripe above dorsum. Two small dots in cell. Base of fringe white, outer 1/3 light brown. Hindwing light brown-greyish, the same colour as central area forewing, but dark brown at ends of nervures an1, pcu and cu. Frons weakly cone-shaped, brown coloured. Third joint of

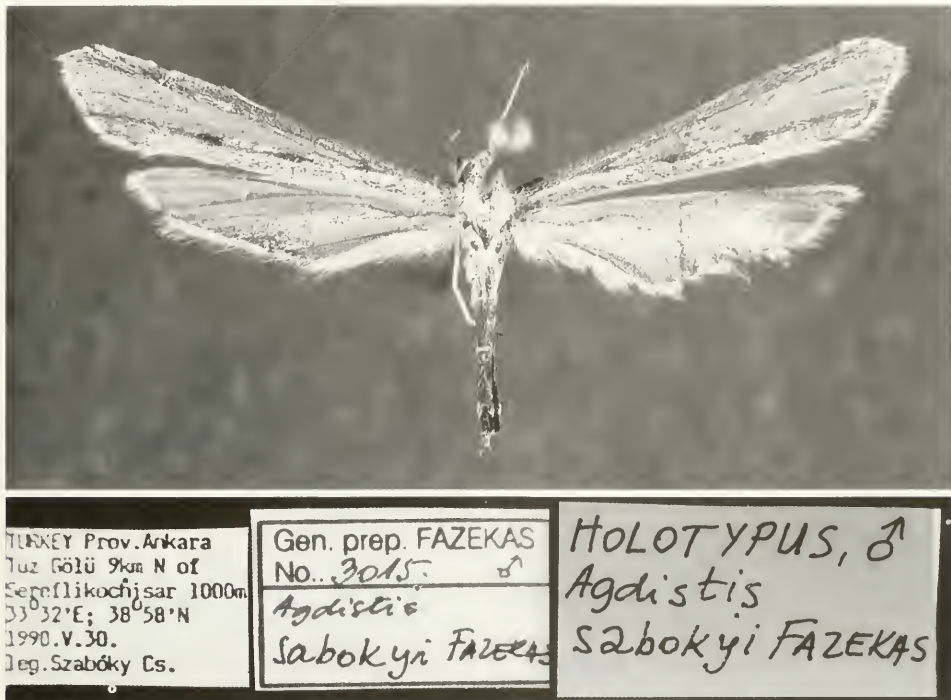


Fig. 1. *Agdistis sabokyi* sp. n. holotype, ♂, Turkey Sereflikochisar, 30.V.1990 leg. SZABÓKY, gen. Slide 3015 FAZEKAS.

palpus labialis concealed by scale-bunch of 2<sup>nd</sup> joint. Scapus with brown scale-ring distally. Antenna light brown.

**Male genitalia** (fig. 2). Valvae symmetrical, similar to those of *Agdistis caradjai*, but with much longer apex in shape of a knife-blade. Sacculus excavated, costa extension absent. Tegumen longer and narrower and uncus more extended than in *Agdistis caradjai*. Aedeagus short, tick, curved, widened at base, lacking cornutus. Eighth sternite with two finger-shaped extensions, basal line concave.

**Female genitalia.** So far unknown.

**Biology** (fig. 3). The habitat is heavily grazed short-grass steppe mainly on volcanic rock, with *Artemisia* and *Anagyrdalus spedes*. *Stipa* and other grass species are common everywhere. Altitude 1000 m. Early stages and foodplant unknown.

**Flight period.** Holotype flies in May.

**Distribution** (fig. 4). Known from the type locality; Turkey, Prov. Ankara, Tuz Gölü.

**Remarks and differential diagnosis.** *Agdistis sabokyi* sp.n. belongs to the species-rich "adensis-group", centred in the Syrian/Iranian refuge. There are few Atlanto-mediterranean (*Agdistis pseudocanariensis*) and Mongolian (*Agdistis astenes*) species. A few taxa (*Agdistis sissia*, *A. falkovitschi*, *A. rubasiensis*, *A. caradjai*) have been described recently from the Ponto-caspian area. The genitalia of this species-group are very heterogenous, and dose relationship can be assumed only among the *Agdistis rubasiensis-caradjai-sabokyi* subgroup of species on the basis of similarity of the male genitalia. The gene-centre of this group is likely to be the Ponto-caspian area.

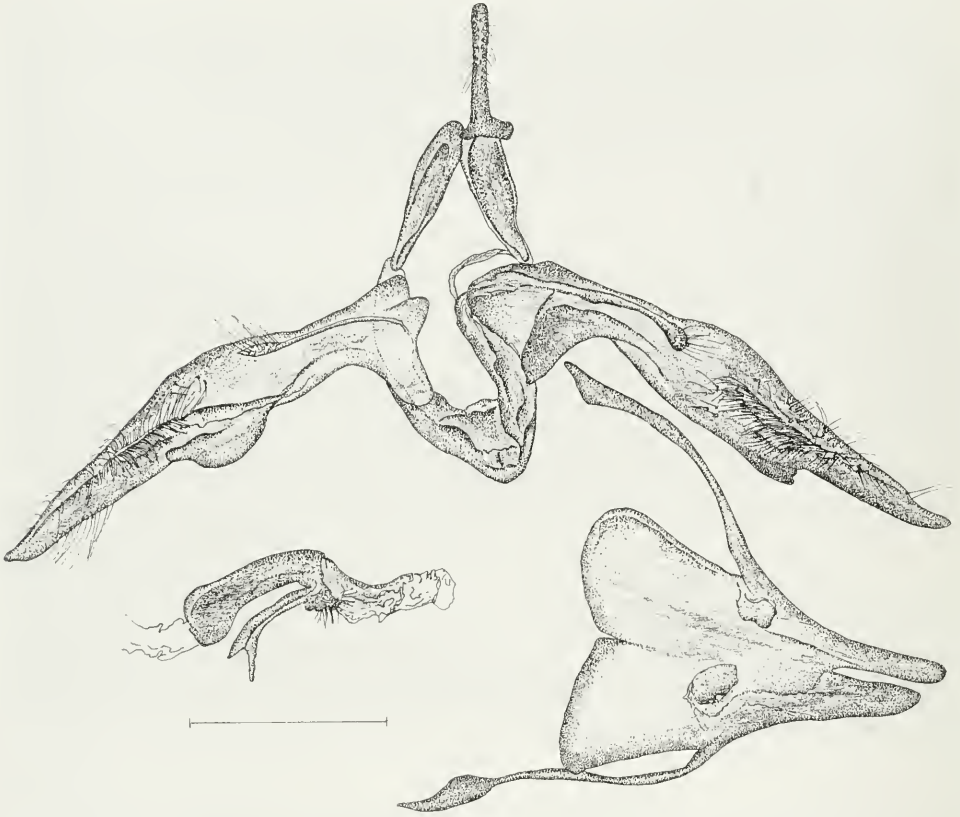


Fig. 2. *Agdistis sabokyi* sp. n. holotype, male genitalia, gen. slide 3015 FAZEKAS. Scale line 0,5 mm.



Fig. 3. The habitat of *Agdistis sabokyi* sp. n. on the Tuz Gölü, Sereflikochisar (Foto: ABRAHAM, L.).

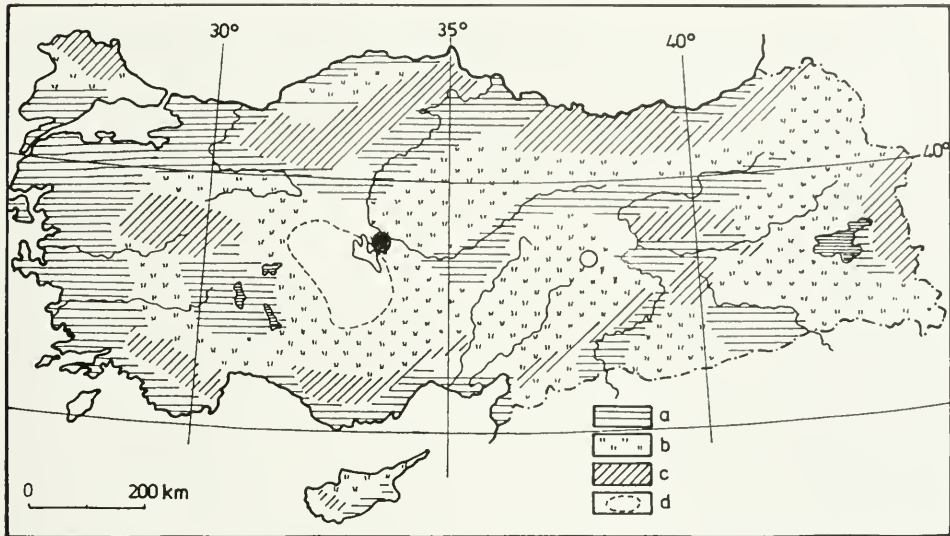


Fig. 4. Localities of *Agdistis sabokyi* sp. n. (●) and *Agdistis cappadociensis* sp. n. (○) in Turkey. Map marks: a = cultivated area, b = pasture, c = forest, d = barren district.

**Name derivation.** The species name *sabokyi* is the Latin variation of the name of the collector Csaba Szabóky. The letter "sz" used in Hungary is equivalent to Latin "s".

#### *Agdistis cappadociensis* sp.n.

**Type material.** Holotype female, Turkey, Prov. Sivas, Gürün 1500 m, 37°12'E, 38°45'N, 28-29.v.1990 leg. SZABÓKY, Cs., gen. prep. FAZEKAS, No. 3031. The holotype is deposited in the Natural History Collection at Komló, Hungary. Other material: So far unknown.

**Description** (fig. 5). Alar expanse 22 mm. Ground colour of forewing brown with central area slightly paler, costal dots absent. A scattering of brown scales along costal and dorsal areas. Two dots in the cell are small and faint. Fringe unicolourous, light brown-grey. Apical area on underside of forewing with extensive white. Hindwing light brown-grey. Frons with slight prominence, curved but not cone-shaped, grey-white with sparse brown scales. Third joint of palpus labialis minute, 2<sup>nd</sup> joint broad, with fan-like scales. Scapus widened distally, outer part paler, inner part darker greyish. Antenna greyish-white, scape unringed.

**Male genitalia.** So far unknown.

**Female genitalia** (fig. 6). Different from any known species. Antrum extensively sclerotised, widened apically, shovel-shaped, with distal margin deeply concave. Ductus bursae wrinkled, corpus bursae short and extended. Ductus seminalis narrow and about twice the length of corpus bursae. Posterior margin of 7<sup>th</sup> sternite straight. Apophyses posteriores shorter than antrum.

**Biology** (fig. 7). Dominant vegetation on the habitat is heavily pastured steppe interspersed with ploughed fields. There are some *Crataegus* spp. growing in the dry rock grass, many *Allium* spp. amongst the grass and patches of *Dianthus* spp. Altitude 1500 m. Early stages and foodplant unknown.

**Flight period.** Holotype flies in May.





Fig. 5. *Agdistis cappadociensis* sp. n. holotype, ♀, Turkey, Gürün, 28.-29.V.1990, leg. SZABÓKY, gen. Slide 3021 FAZEKAS.

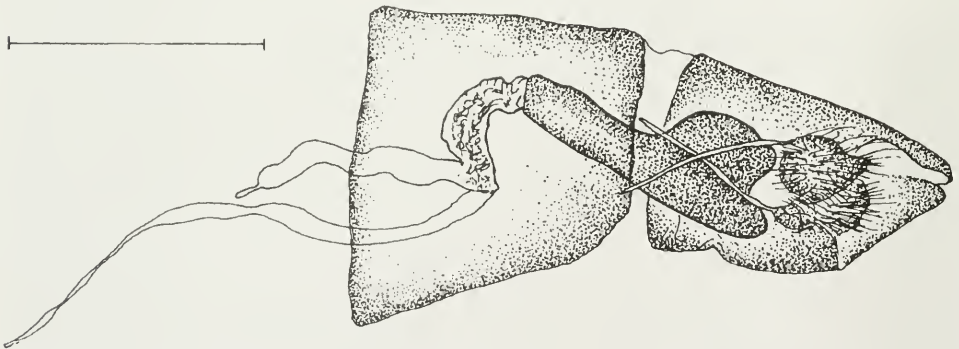


Fig. 6. *Agdistis cappadociensis* sp. n. holotype, female genitalia, gen. Slide 3021 FAZEKAS. Scale line 1 mm.



Fig. 7. The habitat of *Agdistis cappadociensis* sp. n. on the Gürün (Foto: ABRAHAM, L.).

**Distribution** (fig. 4). Known from the type locality only; Turkey, Prov. Sivas, Gürün.

**Remarks and differential diagnosis.** *Agdistis cappadociensis* sp.n. is presumed to belong in the so-called *frankeniae*-group. It shows closely similar facies to *Agdistis turkestanica*, and the shape of the antrum also shows links with this group, but the protacted form of the latter separates it.

**Name derivation.** Cappadocia is the historical provincial name in Asia Minor from the time of the Greek and later Roman Empires.

*Agdistis cypriota* ARENBERGER, 1983, Studi Sassaesi 21(2): 650-652

**New data:** 2♂, Turkey, Prov. Seylan, Tuzla 2 km N, 36°40'E, 35°10'N, 4.v.1989 leg. SZABÓKY, Cs., gen. prep. FAZEKAS, No. 3033 (fig. 8), in Natural History Collection at Komló, Hungary.

**Remarks.** *Agdistis cypriota* is new to Asia. Until now, it has been known only from Cyprus and Tunisia (ARENBERGER, 1995), from the plains. Its Turkish habitat is a heavily pastured, dry, warm area without trees or shrubs. Because of the heavy grazing, only some *Artemisia* spp. can be recognized in the steppe-type vegetation. The wingspan of the new specimen from Tuzla is 15 mm. The ground colour of the forewings is paler than in the originally-described material.

*Agdistis karabachia* ZAGULAJEV, 1990, Ent. Obozr. 69(1): 112, 113. fig. 7.

**New data:** 1♀, Turkey, Prov. Ankara, Tuz Gölü 9 km N, Sereflikochisar 1000 m, 2.v.1989 leg. SZABÓKY, Cs. gen. prep. FAZEKAS, No. 3035 (fig. 9-10), in Natural History Collection at Komló, Hungary.

**Remarks.** *Agdistis karabachia* is new to Asia Minor. Until nown, the only known specimen has

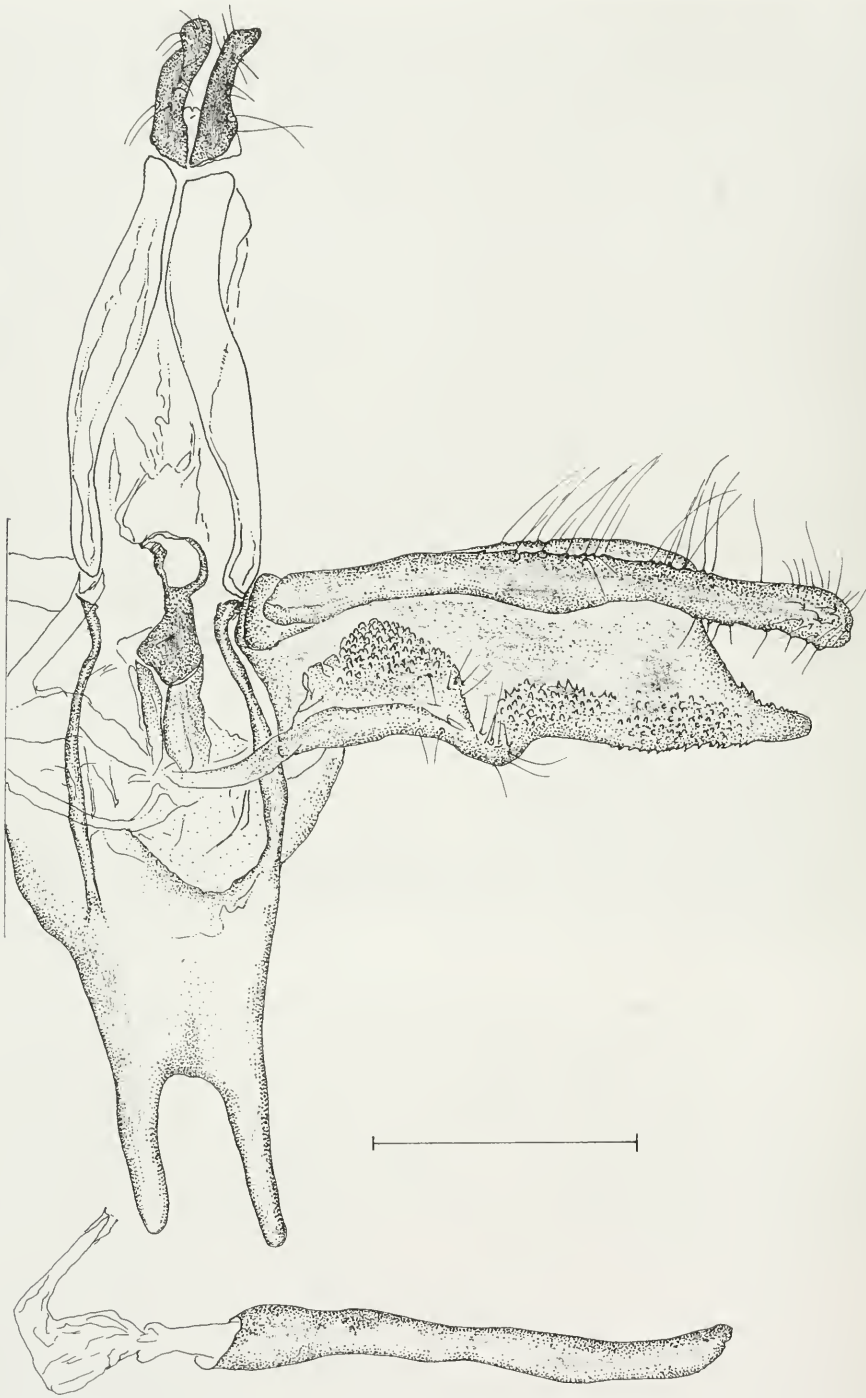


Fig. 8. Male genitalia of *Agdistis cypriota* ARENBERGER, 1983, Turkey, Tuzla 4.V.1989 leg. SZABÓKY, gen. slide 3033 FAZEKAS. Scale line 0,5 mm.





Fig. 9. Imago of *Agdistis karabachia* ZAGULAJEV, 1990, Turkey, Tuz Gölü, 2.V.1989, leg. SZABÓKY, gen. Slide 3035 FAZEKAS.



Fig. 10. Female genitalia of *Agdistis karabachia* ZAGULAJEV, 1990, Turkey, Tuz Gölü, 2.V.1989 leg. SZABÓKY, gen. slide 3035 FAZEKAS.



been the holotype Azerbaidjan (Khamlar, 500-1200 m). The wingspan of the Asia Minor specimen is 26 mm. The upper fringe of costa is white throughout, the dots are the same size. The line of the anterior part of the forewing is brown; fringe silky, greyish-white. The slightly prominent caudal line of the frons is flat. The scapus is light brownish-grey, without rings. The habitat in Turkey is on calygyssum sediment strata, with tufa and lava rocks. The vegetation is typically xerophilous short-grass steppe with *Artemisia* spp. and *Amygdalus* spp. shrubs. *Stipa* and other wild grasses are present in quantity

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