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A New *Polyommatus* Species from Southern Mongolia:

Polyommatus aloisi spec. n.

(Lepidoptera: Lycaenidae)

from

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Abstract: *Polyommatus aloisi* spec. n. is described from Southern Mongolia. The new species is compared with its relatives *Polyommatus eroides* FRIV., 1835, *Polyommatus erotides* STGR., 1892 and *Polyommatus eros* OCHS., 1808.

Zusammenfassung: *Polyommatus aloisi* spec. n. wird aus der Südmongolei beschrieben. Diese wird mit den zur ihr verwandten Arten *Polyommatus eroides* FRIV., 1835, *Polyommatus erotides* STGR., 1892 und *Polyommatus eros* OCHS., 1808 verglichen.

Introduction

Last summer four Hungarian lepidopterologists undertook a collecting trip to Mongolia. They collected about 20.000 Macrolepidoptera specimens, mostly Noctuidae. Nevertheless the material contains more than 1.000 lycaenid butterfly specimens.

I compared the newly collected butterflies with the rich Mongolian collection of the Hungarian Natural History Museum and I am convinced that there are some new Blue butterfly taxa in the collected material.

Among the Blue butterflies captured in the Gurvan Sayhan Mountains isolated by deserts and semideserts in southern Mongolia I have found four specimens of a smaller *Polyommatus* species which redembles *P. erotides* STGR., but it has a different appearance. Hitherto *P. erotides* STGR. widely distributed in Mongolia had only one known relative flying there, namely: *Polyommatus icarus fuchsi* SHELJ., 1928. I examined the species of the eros-group and I establish that the four southern Mongolian *Polyommatus* specimens represent a new, undescribed species, which will be described below.

Polyommatus aloisi spec. n.

Etymology. The new species is dedicated to Brother ALOIS of Taizé.

Description.

Male, dorsal Surface (based on holotype and three paratypes): The ground colour is gleaming silver blue with a greenish shade. The veins are poorly suffused with black scales. The discoidal spot is like a fine black line on the forewing. The black

marginal border is wide (1-3 mm), with black antemarginal spots in each intervenal area-end of the hind wing. (The black border is absent in one of the paratypes hind wing. It has only antemarginal spots.) The fringes are grey near the margin but white farther out.

Ventral Surface. The ground colour is brownish grey. The presence of the discal spot is variable, sometimes only on one of the wings. The discoidal spot is striking surrounded with white ring which is sharpened towards the outer margin. The postdiscal spots are black with a white ring arranged in a soft wavy line. Two distinct but very close small black spots surrounded by the same white ring are between the veins 1 and 2 of the forewing. The antemarginal markings are distinct but reduced, the submarginal orange-lunules are brownish, the greyish spots are very small. The antemarginal portion seems to be a bit lighter. The basal area of the hindwing is suffused by gleaming blue scales. The three basal spots are smaller and white ringed. The discoidal spot is present only like a fine black line, but the surrounding white ring is extensive, prominent and sharpened towards the outer margin. The postdiscal spots are smaller as on the forewing, a doubled and strongly marked spot is between the veins 1_a and 1_b of the hindwing. There is a prominent white area between the postdiscal spots and the submarginal marking bordered the vein 2 and vein 4. The submarginal orange lunules are darkly coloured (in the case of old specimens they are paler), the inner part is closed by fine black arrow-heads. The antemarginal portion is white, the spots are well visible. Fringes are grey.

Androconial scale: Long-shaped and expanded. The upperend is strongly pointed.

Genitalia (in dorsal view): The valva is not so strong, the apical hook is claw-shaped but rounded and turned inwards (as in *icarus* ROTT., 1775). The furca is long. The labides is squat and curved, the falces is short.

Female: Unknown.

Size (length in mm of primary along costa from wing base to greatest extent): Holotype = 13.0; Allotypes (three males) = 13.5 (13.0-14.0).

Type Locality. Govi Altay, Gurvan Sayhan Mountains, valley Yulin am, 2350 m and Alyut am, 2400 m.

Geographical Ranges. The new taxon is at now only known from the type locality.

Phenology: The type specimens were collected on 24.VII. between 9 a.m. and 10 a.m. It seems that the new taxon has one brood in a year. Early stages are unknown.

Habitat: Mountainous, southern-facing talus slopes and subalpine slopes covered with low grass. Accompanying lycaenid butterfly species, *Albulina lucifera* STGR., 1867, *Lycaeides argyrognomon* BRGSTR., 1779, *Lycaeides idas* L., 1761 and *Lycaeides cleobis* BREM., 1861.

Types. Holotype ♂: Mongolia, Ömnögovi aimak, Govi Altay, Mts. Gurvan Sayhan uul, valley Alyut am, 2400 m, 103°55'E 43°30'N, 24.VII.1986, leg. GY. FÁBIÁN, M. HREBLAY, L. PEREGOVITS and G. RONKAY

Paratypes: 3 ♂♂ Mongolia, Ömnögovi aimak, Govi Altay, Mts. Gurvan Sayhan uul, valley Alyut am, 2400 m, 103°55'E 43°30'N, 24.VII.1986, leg. GY. FÁBIÁN, M. HREBLAY, L. PEREGOVITS and G. RONKAY (2 ♂♂), Mongolia, Ömnögovi aimak, Govi Altay, Mts. Gurvan Sayhan uul, valley Yulin am, 2350 m, 104°03'E 43°26'N (1 ♂).

Deposition of Type Material: The type specimens are deposited in the Lepidoptera Collection of the Zoological Department of the Hungarian Natural History Museum, Budapest.

Specific Differences: The new species resembles *Polyommatus erotides* STGR. but it is smaller, its black border on the upperside of the wings is wider as in *P. erotides*. The undersides ground colour is brownish grey, not white as in *P. erotides*. The black patterns are larger and the submarginal orange band is more extensive in *P. erotides*. The androconial scale of *P. erotides* is roundish, not so extended as in *P. aloisi* spec. n. and the upper-end of the scale is not so strongly pointed. The apical hook of the valva of *P. erotides* is horeshoe-like. The falces of *P. erotides* is much longer, the labides is not so curved.

The European and Central Asian *Polyommatus eros* OCHS. is similar sized, but the ground colour of *P. eros* is pale shining blue without gleaming silvery shade. The black marginal border is not so wide as in the new species. The spots on the underside of *P. eros* are larger, the discal spot is bigger, the submarginal orange lunules are pale, without brownish shade. The ground colour of the underside of *P. eros* is dirty grey. The genitalia is also different: the apical hook of the valva is rounded but squat in the case of *eros*, the labides is shorter and less curved as in *P. aloisi* spec. n.

The other, closely related species *Polyommatus eroides* FRIV. flying in the Balkans, Southern Russia, Asia Minor and in the Caucasus has gleaming sky blue ground colour and the width of the prominent black marginal border is equal, constant. The genitalia of *P. eroides* is similar to *erotides* STGR.

Taxonomic Status: From taxonomic and zoogeographic point of view the new species is situated between the Central Asian *Polyommatus erotides* STGR., 1892 and the European and Central Asian *Polyommatus eros* OCHS., 1808.

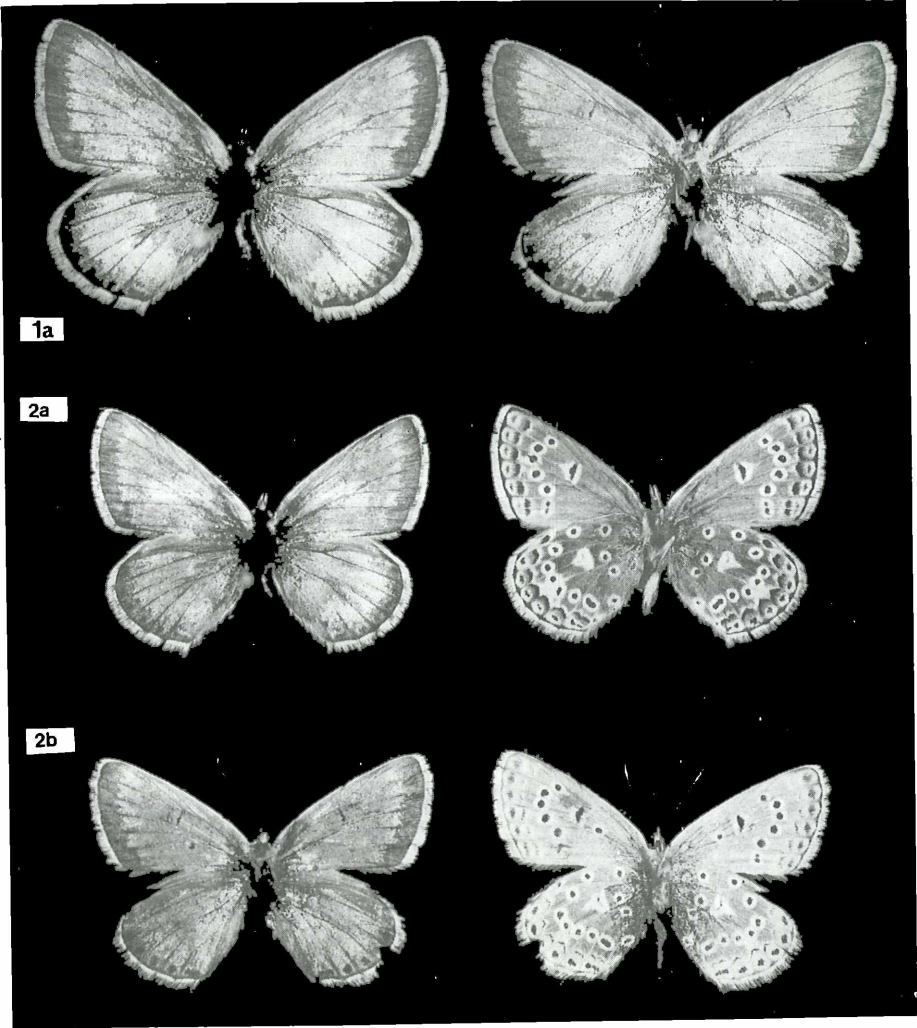
Material examined (only males): 38 ♂♂ *Polyommatus eroides* FRIV.: Balkans (4 types), Macedonia (15), Mts. Rila (15), Sarepta (2), Asia Minor (2).

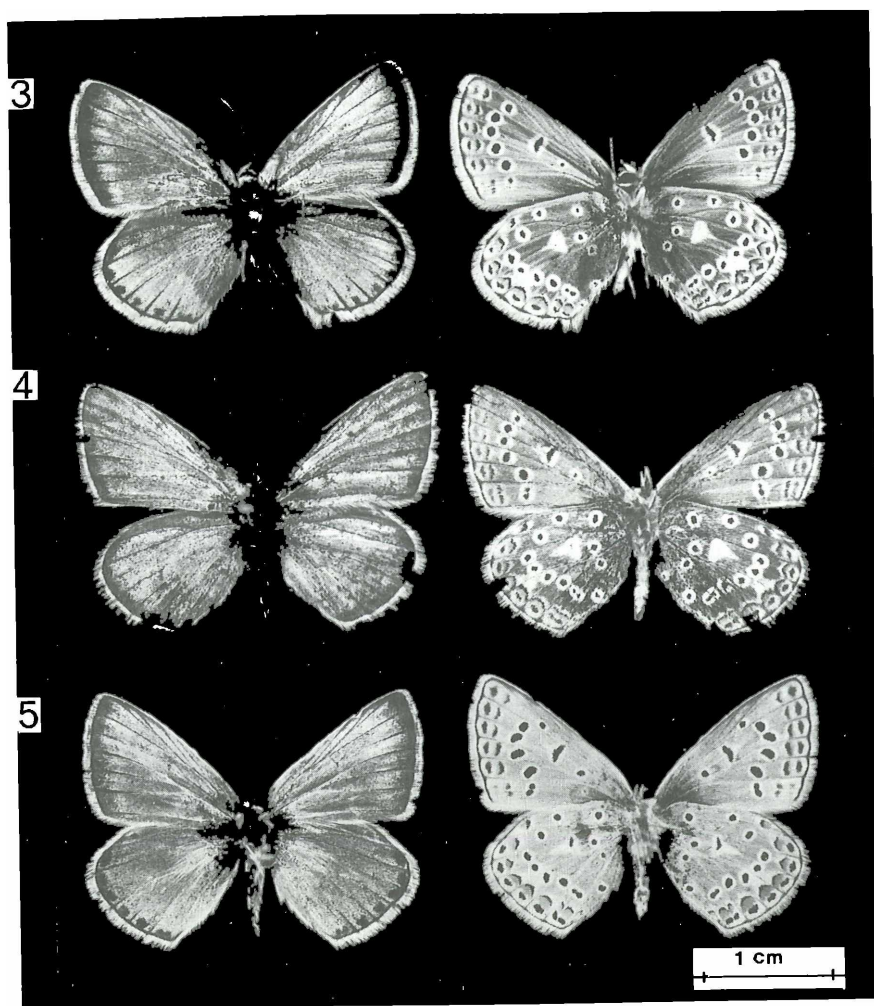
55 ♂♂ *Polyommatus erotides* STGR.: Krasnojarsk (6), Minusinka (1), Ermolojev (1), Mongolia, Central aimak (33), Mongolia, Chövsgöl aimak (8), Mongolia, Bulgan aimak (1), Mongolia, Cojbalsan aimak (2), Mongolia, Chentey aimak (3).

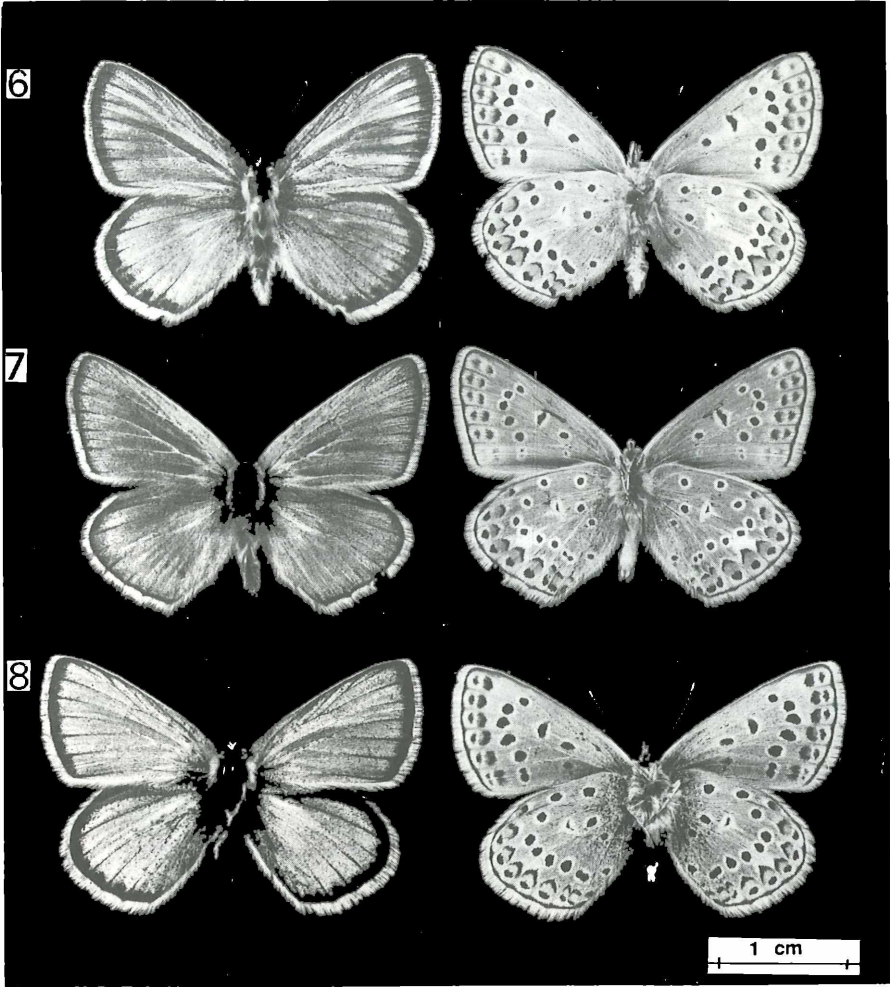
Figures

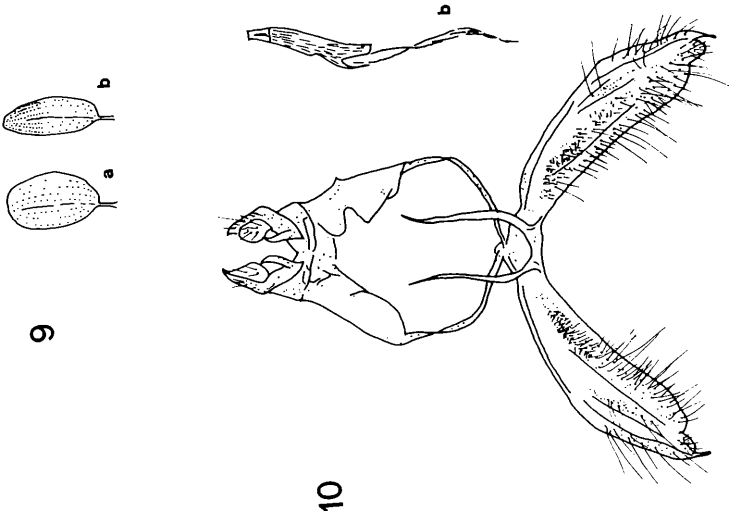
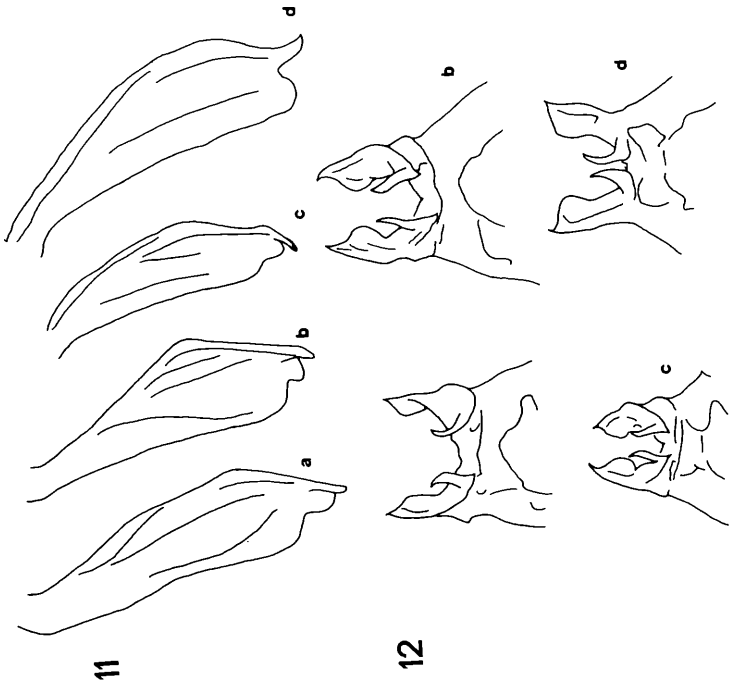
- Figs. 1 1a: *Polyommatus aloisi* spec. n. ♂ Holotype, upperside
1b: *Polyommatus aloisi* spec. n. ♂ Paratype (Yulin am)
- Figs. 2 2a: *Polyommatus aloisi* spec. n. ♂ Holotype, upper and underside
2b: *Polyommatus aloisi* spec. n. ♂ Paratype (Yulin am) upper and underside
- Figs. 3 3-5 *Polyommatus* taxa upper and undersides:
3: *P. aloisi* spec. n. ♂ Paratype (Alyut am)
4: *P. aloisi* spec. n. ♂ Paratype (Alyut am)
5: *P. erotides* STGR. ♂ (Mongolia: Harhorin)
- Figs. 6-8 *Polyommatus* taxa upper and undersides:
6: *P. eroides* FRIV. ♂ (Bulgaria: Kostenec)
7: *P. erotides* STGR. ♂ (Mongolia: Tosgoni ovoo)
8: *P. eros* OCHS. ♂ (Suisse: Brelo)
- Fig. 9: Androconial scales: a) *P. erotides* STGR.; b) *P. aloisi* spec. n.
- Fig. 10: *Polyommatus aloisi* spec. n. ♂, genitalia in dorsal view (Paratype, Alyut am; gen. prep. Nr. 31 BALINT)
- Fig. 11: Valvae of some *Polyommatus* species:
a) *P. eroides* FRIV. (gen. prep. Nr. 32 BÁLINT)
b) *P. erotides* STGR. (gen. prep. Nr. 30 BÁLINT)
c) *P. aloisi* spec. n. (gen. prep. Nr. 31 BÁLINT)
d) *P. eros* OCHS. (after F. F. RUBIO) 71*
- Fig. 12: Labides and falces of some *Polyommatus* species: as in Figs. 11.
- Fig. 13: View of the locus typicus of *Polyommatus aloisi* spec. n.: The valley of Alyut am in the Gurvan Sayhan Mountains, Southern Mongolia.
- Fig. 14: Talus slope of the valley Yulin am (2400 m) in the Gurvan Sayhan Mountains, Southern Mongolia where was collected one of the type specimen of *P. aloisi* spec. n.
- Fig. 15: Geobotanical zones of Mongolia: 1) alpine zone, 2) mountainous taiga, 3) mountainous forest steppe, 4) arid steppe, 5) desertsteppe, 6) desert.

* = RUBIO, F.F. (1976): Genitalias / Andropigios de los Ropaloceros de Alava y su entroso iberico, Parte I: Lamina 71.



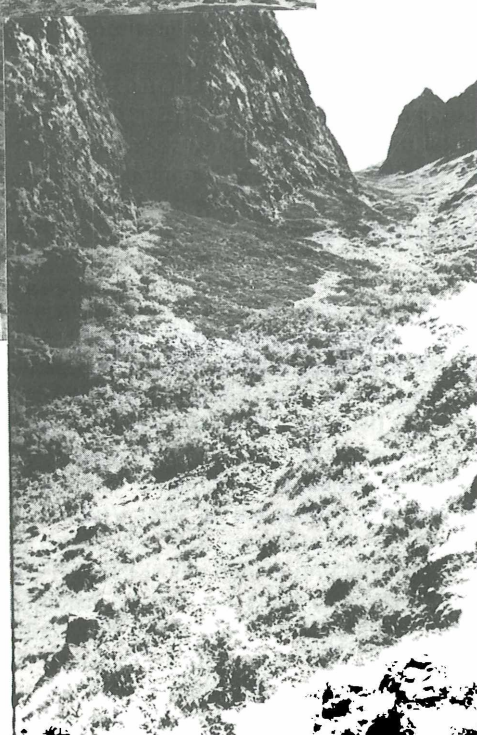






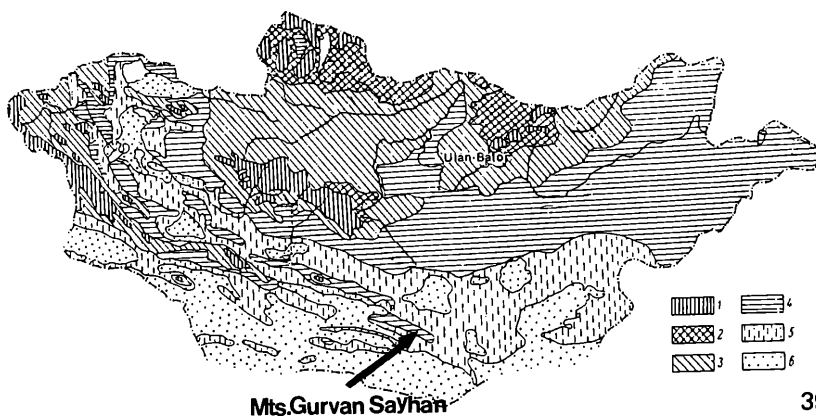


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14

15



96 ♂♂ *Polyommatus eros* OCHS.: Pyrenees (2), Savoie (34), Abruzzo (3), Mts. Sibillini (1), Piemont (1), Hautes Alpes (1), Alpes Maritimes (1), Tessin (3), Wallis-Engadin (17), Tirol-Carinthia (26), Dinaric Mountains (3), Thien Shan (2), Aksutal (1), Kuldscha (1), Mts. Sajan (1).

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