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A NEW RIODINID FROM NORTHERN ARGENTINA (Riodinidae)

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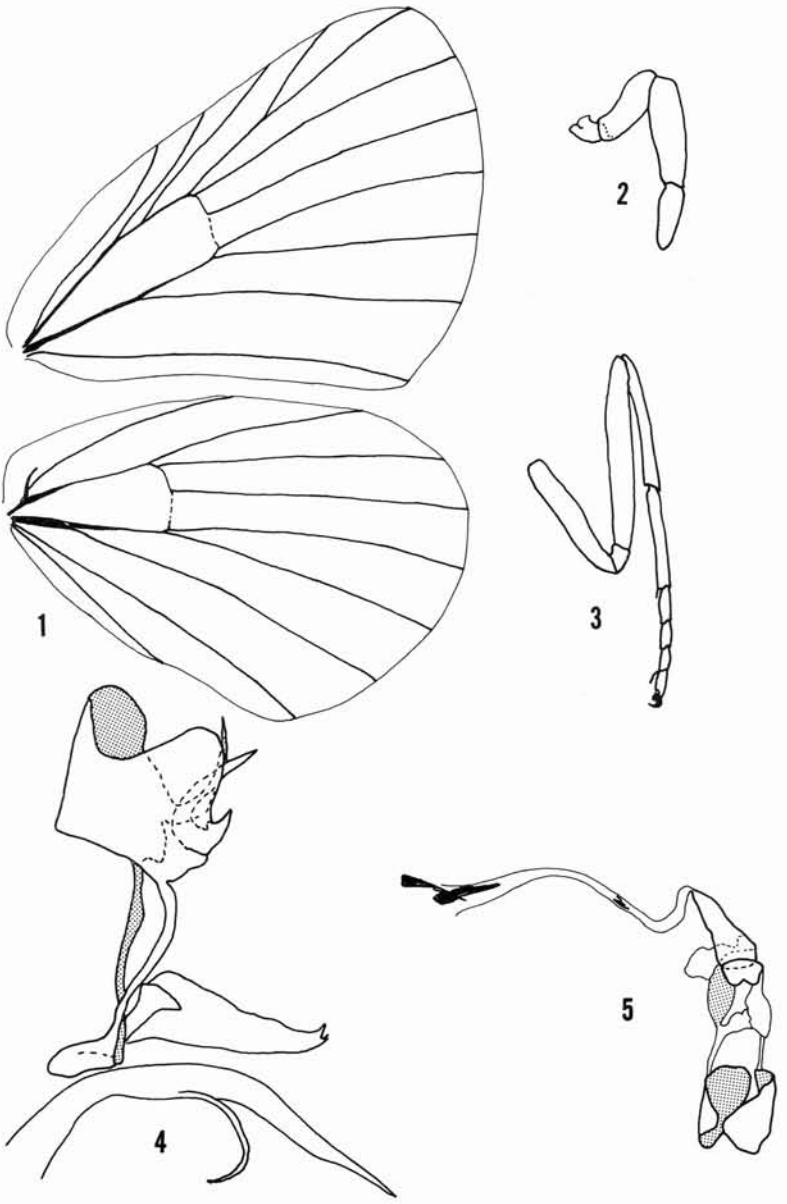
In the autumn of 1971 the Rev. Robert C. Eisele, a missionary stationed in Pichanal in the Province of Salta, Argentina, stopped by the Museum with some butterflies that he had been unable to determine. Among these was a fascinating tawny and blackish specimen that Rev. Eisele stated had been identified variously as a moth and as a butterfly. This specimen looked rather like an exceedingly aberrant riodinid of some kind, but Eisele mentioned that he had taken several specimens in his time at Pichanal and asked if we would be interested in trying to place a definitive identification on the specimen. He left the specimen with us, and close critical examination of the specimen showed that it was a riodinid, as we had suspected, apparently representing a new genus, as well as a new species. Subsequently he sent ten more specimens of both sexes, and this series is the basis of the description which follows.

EISELEIA, new genus

Type species : *Eiseleia pichanalensis*, new species

Eyes naked. Palpi slender, porrect and parallel: third segment slender, approximately one-third length of second (not as long as in *Aricoris* or *Orimba*). Antennae of about 50 segments, slightly more than half length of forewing with a very weak club.

Forewing (Fig. 1) rather similar to that of *Aricoris* (Stichel, 1911: pl. 22): cell about two-fifths length of wing; R_1 and R_2 arising somewhat more proximad than in *Aricoris* or *Orimba*; M_1 arising near to, but not connate with, Rs; and M_2-M_3 more weakly developed than M_1-M_2. Hindwing rather more similar to that of *Orimba* (Stichel, 1911: pl. 22) than to *Aricoris*: cell about two-fifths length of wing; humeral vein curved distad: Rs arising near



Figs. 1-5: *Eiseleia pichanalensis*, all figures drawn from Paratypes. 1, ♂ venation. 2, ♂ foreleg (drawn twice relative size to Fig. 3). 3, ♀ foreleg. 4, ♂ genitalia. 5, ♀ genitalia.

to, but not connate with, M_1; Cu_2 arising nearer base than end of cell; M_2 arising nearer M_1 than M_3; M_2-M_3 weaker than M_1-M_2; 3A shorter, as in *Aricoris*.

Male foreleg (Fig. 2) much aborted, stubbier than in either *Orimba* or *Aricoris*: tibia very short, monomerous tarsus about half the length of tibia. Female foreleg (Fig. 3) rather similar to those of *Orimba* and *Aricoris*, but bearing spurs on first and fourth tarsal subsegments.

Male genitalia as figured (Fig. 4): rather closer to *Aricoris* and *Audre* (St., 1911: pl. 22, as *Hamearis*) than to *Orimba*. The penis is long and pointed as in *Aricoris*, but the valvae are more similar to those of *Audre*.

Female genitalia as figured (Fig. 5).

Eiseleia pichanalensis, new species

Male (Figs. 6, 7): Head tawny above, white around eyes. Antennae black. Palpi black above, white below. Thorax brownish-black clothed with tawny hairs above, white ones below. Legs black, white laterally. Abdomen blackish-brown above, gray-brown below.

Forewing above tawny, broadly blackish-brown at apex narrowing along outer margin to anal angle; blackish-brown apical area enclosing tawny spots in R_5-M_1 toward tornus; these spots gradually merging with tawny ground-color posteriad (in one Paratype these tawny spots only vaguely indicated). Hindwing above tawny with narrow dark border, prolonged proximad along veins Rs and M_1; dark marking of under surface showing through on this surface. Fringes of both wings white checkered with black at ends of veins.

Forewing below tawny white between veins along costa, apex, outer margin and all veins from Sc to Cu_1 darkened (radial and medial veins strongly blackened); a white spot at end of cell. Hindwing below white with all veins strongly brownish-black, as in figure. Fringes below as on upper surface.

Length of forewing of Holotype ♂ 19.5 mm., those of the seven ♂ Paratypes ranging from 18.5 to 20.5 mm., averaging 19.5 mm.

Male genitalia (Fig. 4) similar to those of members of the *Aricoris-Orimba-Audre* somplex (Stichel, 1911: pl. 22).

Female (Figs. 9, 10): Head, thorax, abdomen, and appendages similar to those of ♂, but tawny hairs replaced by cream-colored ones. Upper surface similar to that of ♂, but ground color paler (pale tawny on forewing and cream-colored on hindwing) and dark markings slightly more extensive, especially on hindwing. Under surface as in ♂.

Female genitalia (Fig. 5) as figured.

Lengths of forewings of the three ♀ Paratypes ranging from 21.5 to 22.0 mm., averaging 21.8 mm.

Ultraviolet pattern (Figs. 8, 11): *Male* (Fig. 8) with low level of reflectance on pale portions of upper surface, especially strong on hindwing at anal angle and on fringes. Antennae somewhat reflective. *Female* (Fig. 11), by contrast, with pale part of upper surface highly reflective on both wings; light portions of fringes also very reflective.

Described from eleven specimens, eight males and three females, from the vicinity of Pichanal, Salta, Argentina, hence the specific name.

HOLOTYPE ♂: ARGENTINA: SALTA: 1 km. NE Pichanal, 28-x-1971 (R. C. Eisele).

PARATYPES: Same locality as Holotype: 1♂ 1♀ 10-x-1968; 2♂ 10-iv-1970; 1♂ 26-x-1971; 1♂ 6-xi-1971; 1♀ 22-xi-1971; 1♀ 29-x-1971; 1 km. *NW* Pichanal: 1♂ 10-x-1968 (all R. C. Eisele).

The holotype, three male and two female Paratypes will be deposited in

the Allyn Museum of Entomology. The remaining four male and one female Paratypes are being returned to Rev. Eisele for eventual distribution by him.

Rev. Eisele (*in. litt.*) informs us that *Eiseleia pichanalensis* flies in rather open, drier parts of the "chaco" or "monte" (thorn scrub). This is an area dominated by *quebracho* and *agarrobal* trees and small shrubs with very sparse ground cover. The butterfly is a weak flier, but its habit of flying in and out of the thorny bushes make capture difficult. The habitat preference of the present species suggests a closer affinity to *Audre* than to the forest dwelling *Orimba* and *Aricoris*.

The ultraviolet pattern (Figs. 8, 11) of the present species is distinctive and in direct contrast with those patterns shown in various Pieridae (Nekrutenko, 1964, *in* press; Silberglied, *in* preparation) in that the female is the strongly reflective sex (Fig. 11). The male demonstrates very limited areas of strong reflectance (Fig. 8), but definite ones, nevertheless. A possible explanation involves mate-location as seems indicated in some pierid work. The female may rest on the ground or in low herbage where her coloration would blend with that of the dry earth in the "visual spectrum", but under ultraviolet light she would become highly visible to the male. It is further postulated that the male's ultraviolet-reflecting fringe spots and antennae may serve as secondary recognition symbols in the courtship ritual.

ACKNOWLEDGMENTS

We would, of course, like to thank Rev. Eisele for the opportunity to examine and describe this remarkable riodinid. Mr. Harry Clench was a great help in comparing this species with other described ones. The photographs were done by Mr. A. C. Allyn, who was also involved in the discussions which led to the proposed explanation of the ultraviolet pattern.

LITERATURE CITED

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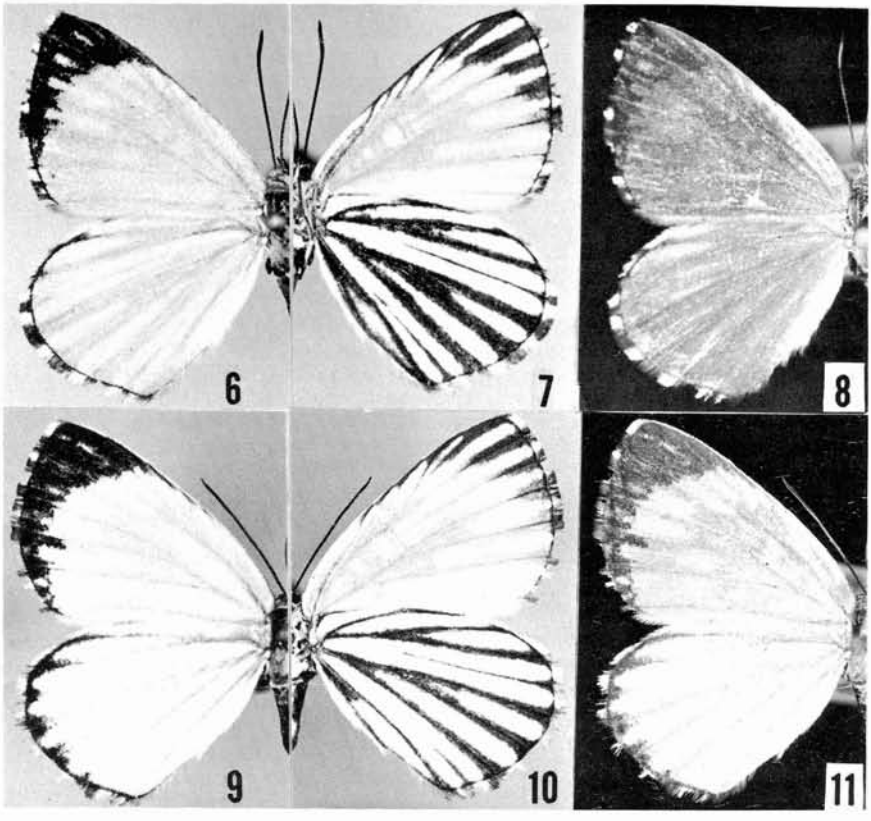

Figs. 6-11: *Eiseleia pichanalensis*. Figs. 6-8. Holotype ♂ upper (6) and under (7) surfaces under visible light; upper surface under ultraviolet light (8). 9-11, Paratype ♀ upper (9) and under (10) surfaces under visible light; upper surface under ultraviolet light (11).