



<http://dx.doi.org/10.11646/zootaxa.3861.1.6>

<http://zoobank.org/urn:lsid:zoobank.org:pub:854CE13E-2873-4440-A5CE-01378047DE53>

## *Psoralis mirnae* sp. nov., the first species of the skipper genus from Central America (Lepidoptera: Hesperiidae)

RICARDO RUSSO SIEWERT<sup>1</sup>, ICHIRO NAKAMURA<sup>2</sup> & OLAF HERMANN HENDRIK MIELKE<sup>3</sup>

<sup>1,3</sup>Laboratório de Estudos de Lepidoptera Neotropical, Departamento de Zoologia, Universidade Federal do Paraná, P.O. Box 19.020, ZIP Code 81.531-980, Curitiba, Paraná, Brazil. <sup>2</sup>41 Sunrise Blvd, Williamsville, New York 14221, U. S. A. E-mail:

<sup>1</sup>ricardo.siewert@gmail.com; <sup>2</sup>inakamura@buffalo.edu; <sup>3</sup>omhesp@ufpr.br

*Psoralis* Mabille, 1904 (Hesperiinae: Moncini) contains 11 species of skippers distributed throughout South America (Mielke 2004, 2005). According to Evans (1955), *Psoralis* resembles *Lerema* Scudder, 1872, in several morphological characters of antennae, palpi, wings and legs, but could be distinguished from the latter by the male genitalia, where the uncus is undivided instead of being quadrid. This paper describes a new species of *Psoralis* from Central America, *P. mirnae* sp. nov., based on specimens collected by the second author (I. Nakamura) in Guatemala.

The specimens studied had their abdomen detached, soaked in a heated 10% potassium hydroxide solution for removal of the genitalia to analyze their structures. All illustrations were prepared with the aid of an eye-piece grid or a camera lucida attached to a stereoscopic microscope. The specimens are deposited at Coleção Entomológica Padre Jesus Santiago Moure, Curitiba, Paraná, Brazil (DZUP) and in the second author's collection.

### *Psoralis mirnae* Siewert, Nakamura & Mielke, sp. nov.

(Figs 1–12, 17–18)

**Diagnosis.** *Psoralis mirnae* sp. nov. is similar to other *Psoralis* species in the spot pattern of both wings, but can be easily distinguished from the others members of the genus by its rufous brown ground color and the yellow patch between  $CuA_2-2A$  on the forewing underside. The male genitalia resemble those of *P. degener* in the tegumen, uncus and gnathos (Figs 13–16), but differ mainly in the valva and aedeagus.

**Description.** Sexes similar except as noted. *Head:* Brown; frons densely covered by brown and yellow elongated scales with greenish tinge; antennae shaft brown on upper side, underside similar but with yellow scales at the base of each segment; underside basal half of the club yellow, nudum 12–14 segments ( $n=8$ ); eye glabrous, brown, surrounded by yellow scaling; labial palpus mixed with brown and yellow scales in the first and second segments, third segment short, conical, dark brown.

*Thorax:* Dorsally dark brown; legs reddish.

*Forewing* (Figs 1–4): Male, length 16–17 mm (average 16.5 mm,  $n=11$ ), female, length 18 mm ( $n=1$ ); triangular; costal margin straight; apex rounded; outer margin convex; tornus rounded; inner margin straight. *Upper side* (Figs 1, 3): ground color dark brown; fringes dark brown with paler outer two thirds; two small apical semi-hyaline spots in  $R_4-R_5$  and  $R_5-M_1$ , the latter the larger of the two; three semi-hyaline spots in  $M_3-CuA_1$ ,  $CuA_1-CuA_2$  and  $CuA_2-2A$ , the first rectangular, the second oblique and elongated, the third opaque, small and yellow; male with tripartite and sagittate black stigma in  $M_3-CuA_1$ ,  $CuA_1-CuA_2$  and  $CuA_2-2A$ . *Underside* (Figs 2, 4): costa, apex and external margin rufous brown; similar spots as on the upper side; opaque yellow patch in  $CuA_2-2A$  more extensive than on the upper side; inner margin dark brown.

*Hind wing* (Figs 1–4): Rounded; costal margin convex; apex rounded; external margin rounded, truncated in  $2A-3A$ ; inner margin slightly straight towards tornus. *Upper side* (Figs 1, 3): ground color dark brown; fringes dark brown with lighter tips; small white discal spots in  $M_1-M_2$ ,  $M_2-M_3$  in some individuals. *Underside* (Figs 2, 4): ground color rufous brown; anal fold dark brown and inner margin narrowly rufous brown; one rounded white spot in discal cell, but the spot barely visible in the single female; three smaller similar spots in  $M_1-M_2$ ,  $M_2-M_3$  and  $M_3-CuA_1$ .

## References

- Austin, G.T., Méndez, C. & Launer, A.E. (1998) A preliminary checklist of Guatemala butterflies: HesperIIDae (Lepidoptera: Hesperioidea). *Tropical Lepidoptera*, 9 (Supplement 2), 8–19.
- Barrios, M.V., Méndez, C. & Austin, G.T. (2006) *Las HesperIIDae (Lepidoptera: Hesperioidea) de Guatemala*. In: Cano, E.B. (Ed.), *Biodiversidad de Guatemala, Vol. 1*. Universidad del Valle de Guatemala, Guatemala, Guatemala, pp. 431–439.
- Campbell, J.A. & Vannini, J.P. (1989) Distribution of amphibians and reptiles in Guatemala and Belize. *Proceedings of the Western Foundation of Vertebrate Zoology*, 4 (1), 1–21.
- Evans, W.H. (1955) *A catalogue of the American HesperIIDae indicating the classification and nomenclature adopted in the British Museum (Natural History). Part IV. (Groups H to P) HesperIIDae and Megathyminae*. British Museum (Natural History), London, 499 pp.
- Mielke, O.H.H. (2004) *Hesperioidea*. In: Lamas, G. (Ed.) (2004) Checklist: Part 4A. Hesperioidea - Papilionoidea. In: Heppner, J.B. (Ed.), *Atlas of Neotropical Lepidoptera 5A*. Association for Tropical Lepidoptera/Scientific Publishers, Gainesville, 428 pp.
- Mielke, O.H.H. (2005) *Catalogue of the American Hesperioidea: HesperIIDae (Lepidoptera). Vol. 1–6*. Sociedade Brasileira de Zoologia, Curitiba, 1536 pp.
- Warren, A.D., Davis, K.J., Stangland, E.M., Pelham, J.P. & Grishin, N.V. (2014) Illustrated Lists of American Butterflies. Available from: <http://www.butterfliesofamerica.com/> (accessed 2 July 2014)