



Variation of *Stinga* Evans, 1955, with description of a new species from Mexico (Lepidoptera: HesperIIDae: HesperIIDinae: HesperIIDini)

ANDREW D. WARREN^{1,2} & GEORGE T. AUSTIN¹

¹McGuire Center for Lepidoptera and Biodiversity, Florida Museum of Natural History, University of Florida, P.O. Box 112710, Gainesville, Florida 32611

²Museo de Zoología “Alfonso L. Herrera”, Departamento de Biología Evolutiva, Facultad de Ciencias, Universidad Nacional Autónoma de México, Apdo. Postal 70-399, México 04510 D.F., México

Abstract

Stinga Evans, 1955, has been considered monotypic since its description despite geographical variation that has not been elucidated. The variation of *Stinga morrisoni* (W. H. Edwards, 1878) described and figured here includes a range of superficial phenotypes segregated by a combination of geography and elevation, but united by a common genital morphology of both sexes. In addition, a second species of the genus occurring in southern Mexico (Tlaxcala, Puebla and Oaxaca), with different genitalia and superficial traits outside the range of variation seen in *S. morrisoni*, is described and named as a new species.

Key words: butterfly, genitalia, Nearctic, Poaceae, skipper

Stinga Evans, 1955 (Lepidoptera: HesperIIDae: HesperIIDinae: HesperIIDini), was proposed as a monotypic genus for *Pamphila morrisoni* W. H. Edwards, 1878. That species, described from Colorado, occurs as apparently localized disjunct populations (Brown *et al.* 1957, Brown and Miller 1977, Stanford 1981, Bailowitz and Brock 1991, Toliver *et al.* 1994) in central and southern Colorado, eastern Arizona, much of New Mexico, and extreme western Texas, United States, and southward into Mexico (*e.g.*, Stanford and Opler 1993, Brock & Kaufman 2003). The occurrence of *S. morrisoni* in Mexico has not been well documented. Stanford and Opler (1993) indicated records for *S. morrisoni* from the northern Mexican states of Sonora, Chihuahua, Coahuila and Nuevo León, and the species was reported from high elevations in the Eje Neovolcánico (Ajusco, Distrito Federal) by Beutelspacher (1980). Recent fieldwork has extended its known distribution in Mexico north through the central Mexican Plateau in Guanajuato and Durango, and south to the higher elevations of the Sierra Madre del Sur of Guerrero and the Cuicatlan-Teotihuacan region in Oaxaca (this study).

Although no taxa of *Stinga* have been named beyond the type species, considerable heretofore unenumerated geographical variation exists within populations ascribed to *S. morrisoni*. Some of the variation has been thought to represent species-level differentiation (Warren 2000, Luis-Martínez *et al.* 2003). This phenotypic richness is elaborated below, including the description of a new species from southern Mexico.

This study was initiated by the senior author in March 1998, while visiting the home and private collection of the late Roy O. Kendall, in San Antonio, Texas. Kendall had accumulated a long series of *Stinga* from western Texas, as well as a few specimens from Mexico, including three males from Nuevo León and one male from Tlaxcala. The male from Tlaxcala (collected in March 1977), placed apart from the rest of the series, differed from *S. morrisoni* in many ways, and generated the following note in Kendall's lab notebook: “appears to be an aberrant specimen, if not then a new species.” Based on this individual, an expedition to the south-central Mexican states of Tlaxcala and México (in collaboration with the Museo de Zoología, Facultad