

PHORETIC MITES (ACARI) ON A TAIWANESE SKIPPER, *ISOTEINON LAMPROSPILUS FORMOSANUS* (LEPIDOPTERA: HESPERIIDAE)

THOMAS C. EMMEL and JAMES L. NATION, JR.

Division of Lepidoptera Research, Department of Zoology,
University of Florida, Gainesville, FL 32611, USA



Fig. 1. Adult skipper, *Isoteinon lamprospilus formosanus* (Hesperiidae), with coiled proboscis.

Over 90 mite species of the subclass Acari in the arthropod class Arachnida have been found on more than 380 species of moths and butterflies (Treat, 1975). With perhaps 30,000 known species, the mites may actually number upwards of half a million undescribed species, and undoubtedly many additional mite associations with Lepidoptera remain to be discovered. These mites may be free-living predatory mites, parasitic forms, or phoretic mites. Because mites are small, wingless, and generally slow-moving, mites of many species may hitch a ride on lepidopterans and other insects as vehicles of transportation and dispersal. Hence this habit of phoresy may be rather common, and indeed species of most families of butterflies have been reported to carry mites. Satyrids, nymphalids, and lycaenids tend to be more frequently reported as mite hosts than other groups.

Most of these mites are red velvet mites in the order Trombidiformes, which are parasitic and attach themselves temporarily to the wing veins or body membranes and suck haemolymph until engorged, then drop off to complete their development. Only one species of Hesperiidae, from Europe, has been reported previously to carry a mite species, a member of the Trombidiformes group



Fig. 2. A single flower mite moving down the extended proboscis of an *I. l. formosanus* adult which is feeding on *Lantana* nectar.

Fig. 3. Mites moving up and down an extended proboscis, as well as gathering in the head scales of an *I. l. formosanus* skipper.

that is parasitic (Treat, 1975).

Thus we were quite intrigued to discover and photograph a new mite association with a skipper butterfly, *Isoteinon lamprospilus formosanus* Fruhstorfer (Fig. 1), in the Chilan area of Ilan Co., Taiwan, on 11 Aug 1988. While individuals of this skipper species were visiting *Lantana* flowers planted near the buildings, we noticed tiny flower mites literally running up the proboscis of the adult butterfly and gathering in groups among the long hairy scales on the skipper's head (Fig. 2-3). Each of the skippers was soon wearing a crown of living mites. These mites were hitching a ride on their temporary "host" from flowerhead to flowerhead, wherever the skipper moved to drink nectar. It was an amazing sight to peer through the camera lens and see these minute yellow flower mites running up and down the proboscis as the butterfly stopped at each flowerhead. The name of the mite species is not yet known.

LITERATURE CITED

Treat, A. E.

1975. *Mites of Moths and Butterflies*. Ithaca: Cornell Univ. Press. 362 pp.

