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## Records of *Polygonia haroldi* (DEWITZ, 1877) in Sonora, Mexico

(Lepidoptera, Nymphalidae)

by

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**Abstract:** The little known *Polygonia haroldi* is recorded in the state of Sonora, northwestern Mexico. *P. haroldi* is a high altitude species, and in Sonora it is found in two separate localities at 2000–2500 m. In these localities *Ribes spec.* is common, and this is a possible host plant for the species. *P. haroldi* bears some resemblance to *Polygonia gracilis* (GROTE & ROBINSON, 1867).

**Zusammenfassung:** Die wenig bekannte *Polygonia haroldi* wird aus dem mexikanischen Bundesstaat Sonora gemeldet. Sie ist eine Art der Hochlagen und wird in Sonora an zwei verschiedenen Stellen zwischen 2000 und 2500 m Höhe gefunden. Dort ist eine *Ribes*-Art häufig, die möglicherweise die Futterpflanze der Raupen sein könnte. *P. haroldi* zeigt einige Ähnlichkeit mit *Polygonia gracilis* (GROTE & ROBINSON, 1867).

DE LA MAZA RAMÍREZ (1987) mentions three species of the genus *Polygonia* HÜBNER, 1819 from Mexico. These are *Polygonia interrogationis* (FABRICIUS, 1793), *Polygonia g-argenteum* (DOUBLEDAY, 1848) and *Polygonia haroldi*. Besides, J. P. BROCK (pers. comm.) has informed me that *Polygonia satyrus* (EDWARDS, 1869) is expected to fly in northern Sonora, immediately south of the border to Arizona, USA. According to BAILOWITZ & BROCK (1991) *P. satyrus* occurs in south-eastern Arizona close to the border between the two countries.

In September 1992 the author made a trip to the northern and central parts of Sonora, and on 9. September one male *P. haroldi* was found when perching in the bottom of a canyon at about 2000 m level. This locality is situated close to the village of Yecora, on highway 16, about 250 km east of Hermosillo. The perching site was on low vegetation in a shaded area a few meters from a creek. No more individuals were seen on this date, but the author observed another individual on the wing the next morning in the same canyon. According to DE LA MAZA RAMÍREZ (1987), *P. haroldi* is recorded in the states of Hidalgo, San Luis Potosí, Michoacán, Morelos and Distrito Federal, and he is including one male from Desierto de los Leones, Distrito Federal in the colour plates. All these states are situated far to the south of Sonora. BROCK, who has been studying the butterflies in Sonora, was informed about the record. In early May 1997 BROCK discovered a colony of *P. haroldi* in the mountains of Sierra El Gato, east of Mactezuma, Sonora, and he has observed the species in these mountains on later occasions, up to seven or eight individuals during a single day. Later information received through BROCK states that R. HOLLAND recorded one single individual *P. haroldi* in the same mountains at 2500 m level on 3. July 1979.

Except from DE LA MAZA RAMÍREZ (1987) and D'ABRERA (1987) the author has not succeeded in obtaining any information about *P. haroldi*, including the earlier stages, which may not yet be

described. D'ABRERA includes a picture of a worn male and gives the locality Mexico (Amecameca) for this specimen. The authors suggests that *P. haroldi* is closely related to *Polygonia gracilis* (GROTE & ROBINSON, 1867) represented by ssp. *zephyrus*, earlier considered a separate species by most authors. According to SCOTT (1986) this western subspecies of *P. gracilis* is distributed from southwestern Canada and southwards. BAILOWITZ & BROCK (1991) state that this species does not occur south of Gila River, Arizona, USA. Even though *P. gracilis zephyrus* since has been recorded south of Gila River on Mt. Graham, Pinaleno Mountains (BROCK), it seems to be replaced by *P. haroldi* in Sonora, Mexico. Both *P. haroldi* and *P. gracilis* appear to have the forewings very elongated. *P. haroldi* differs from all the other members of *Polygonia* by the absence of dark markings on the upperside. It has a golden unicolour appearance. The underside is two-toned grayish and looks very identical to the underside of *P. gracilis zephyrus*. The shape of the white mark on the underside of the hindwings is also similar in both species. When on the wing, *P. haroldi* can be mistaken to be a member of the genus *Vanessa* (FABRICIUS, 1807), and therefore overlooked. Both *Vanessa cardui* (LINNAEUS, 1758) and *Vanessa virginiensis* (DRURY, 1770) were observed by the author in single individuals in Yecora on 9. September 1992, close to the canyon where *P. haroldi* was perching.

In both the abovementioned localities, Yecora and Sierra El Gato, *Ribes* spec. is common. *P. gracilis zephyrus* feeds on *Ribes* (SCOTT, 1986; NYLIN & JANZ, 1999). Even the polyphagous Eurasian *Polygonia c-album* (LINNAEUS, 1758) feeds occasionally on Grossulariaceae (*Ribes*) (NYLIN & JANZ, 1999), but this is not an important host plant for *P. c-album*. According to BROCK, *Ribes* is common in Sierra El Gato only above 1800 m, and his observations of *P. haroldi* in these mountains have always been in association with this plant. I suggest that *P. haroldi* uses *Ribes* as a host plant. This theory is supported by BROCK.

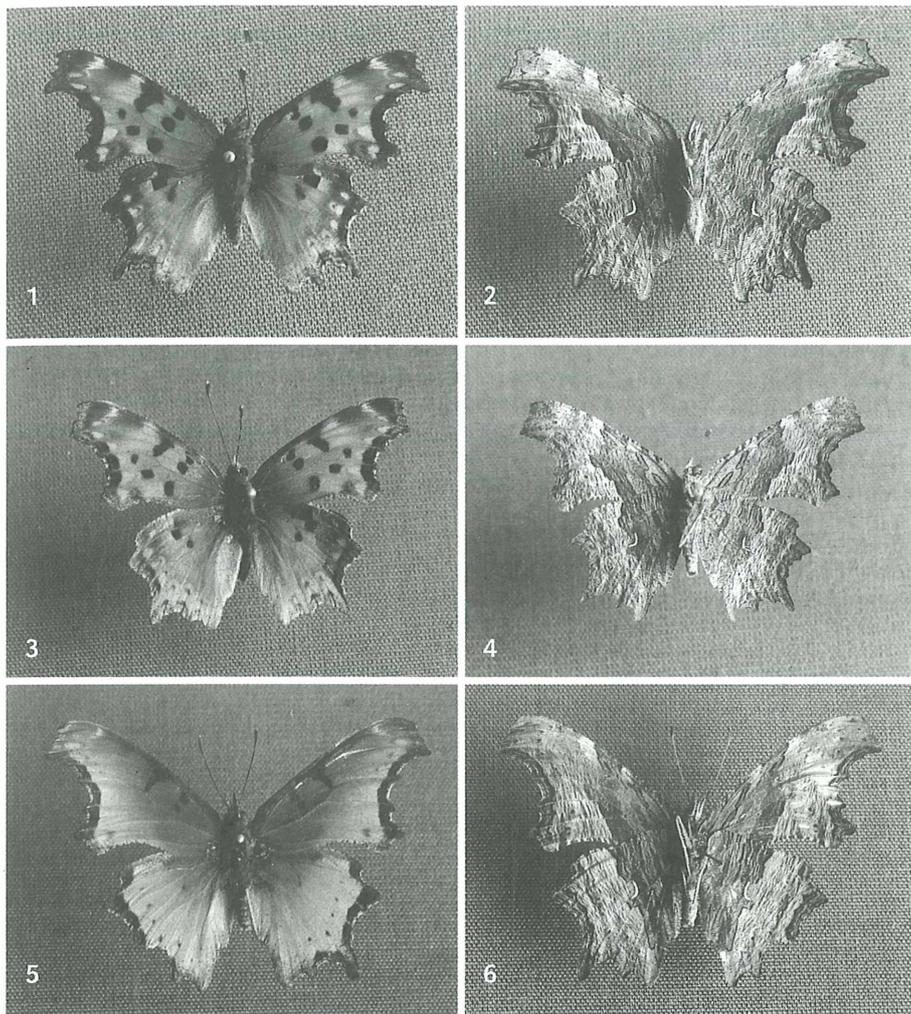
The author suggests that further studies of this little known species is strongly needed. *P. haroldi* has probably a broader distribution pattern at high altitudes in Mexico. Many of the actual montane regions are not visited by any lepidopterists due to their inaccessibility.

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Figs. 1, 2: *Polygonia haroldi*, ♂, Mexico, Sonora, Yecora, 2000 m, 9.IX.1992; fig. 1 – upperside, fig. 2 – underside; length of forewing: 30 mm. Figs. 3, 4: *Polygonia gracilis zephyrus*, ♂, USA, California, Calaveras Co., Moore Creek, 1800 m, 21.VI.1994; fig. 3 – upperside, fig. 4 – underside; length of forewing: 27 mm. Figs. 5, 6: *Polygonia gracilis zephyrus*, ♂, USA, California, Calaveras Co., Black Springs, 2000 m, 2.IX.1992; fig. 5 – upperside, fig. 6 – underside; length of forewing: 23 mm.

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