

# Strange Bedfellows: Report of a Red-Spotted Purple (*Limenitis arthemis astyanax*) mating with a Question Mark (*Polygonia interrogationis*)

Jeffrey M. Marcus

Department of Biology, Western Kentucky University, 1906 College Heights Boulevard #11080, Bowling Green KY 42101-1080, [jeffrey.marcus@wku.edu](mailto:jeffrey.marcus@wku.edu)

On August 22, 2007 at 4:43 pm, Monica Thomson, a butterfly gardener in Palmyra, Harrison County, Indiana, observed a red-spotted purple (*Limenitis arthemis astyanax*) mating with a question mark (*Polygonia interrogationis*). The GPS coordinates of the location of the mating were 38.406845 N, 86.095282 W. The mating took place after both individuals had visited her bait feeder, which rested on the ground and contained a mixture of stale beer, brown sugar, molasses, and rotten bananas. She took two digital photos (Figures 1 and 2, pp. 132), and then startled the butterflies, which flew a short distance while still joined at the abdomen. When the animals re-ighted, Thomson took an additional photo of this very unusual pair (Figure 3). The photographer did not recognize just how unusual this mating was at the time, and left the scene to observe other butterflies in her garden and give the odd couple some privacy. She was interested enough by the event to share the photos with me and has given permission to share them with the News of the Lepidopterists' Society. I have examined the photos (including using Adobe Photoshop to look for evidence of manipulation) and questioned Monica Thomson carefully, and I am convinced by the authenticity of these photos.

Based on its coloration and the size of the abdomen, I suspect that the *L. arthemis astyanax* is female, suggesting that the *P. interrogationis* pictured is male. There is not much known about interspecific hybridization in *Polygonia*

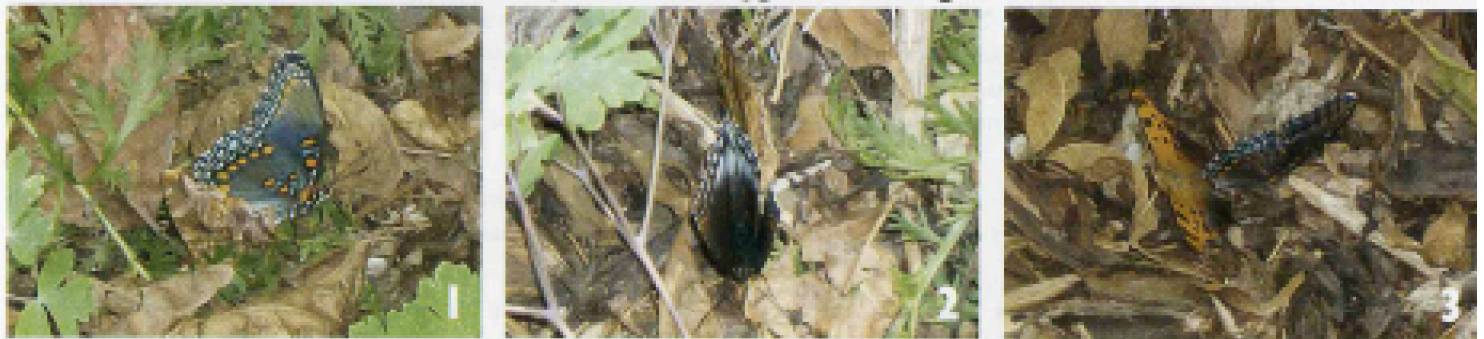
(Family Nymphalidae, tribe Nymphalinae), though hybridization between European populations of *P. comma* has been used to study the genetics of oviposition behavior on alternate larval host plants (Janz, 1998). In contrast, there have been many studies of hybridization in *Limenitis* (Family Nymphalidae, tribe Limentidinae), including observations of interspecific mating between *Limenitis* species in the wild (Boyd et al., 1999; Covell, 1994; Klots, 1959; Marcus et al., ms.; Platt, Greenfield, 1971; Ritland, 1990; Ruby, 2005). However, mating behavior between butterfly species from different genera is rare and most such events do not result in copulation (Shapiro, 1973). That makes Monica Thomson's photographs between members of two different Nymphalid tribes particularly noteworthy.

Parallel examples do exist. Among the Lepidoptera, perhaps the largest number of intergeneric matings have been documented in the giant silk moths (Carr, 1984; Peigler, 1977; Tuskes et al., 1996). These reports include cases, as reported by Steve Huffman, of the successful hand pairing of male *Hyalophora columbia gloveri* from the tribe Attacini mating with female *Antheraea polyphemus* from the tribe Saturniini (Oehlke, 2007). The ova that are produced by these matings fail to develop. Now that we know that the pairing of *Limenitis arthemis astyanax* and *Polygonia interrogationis* is possible, it will be extremely interesting to determine if such matings result in

ova, and to what extent the ova develop.

## Literature Cited

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**Strange Pairing: *Limenitis arthemis astyanax* and *Polygona interrogationis***

Monica Thomson of Palmyra, Indiana, found this strange couple in her butterfly garden. Figures 1 and 2 show them in the spot she originally found them. Startled, they flew away to a nearby location (Fig.3). See article on pp. 129.