

- Edwards, W. H. 1868-69. The Butterflies of North America, Vol. 1. Amer. Ent. Soc., Phila.: 218 pp. + 50 pl. ["Lycaena I" issued Dec., 1868; "Lycaena II" issued Dec., 1869.].
- Edwards, W. H. 1884. The Butterflies of North America, Vol. 2. Houghton, Mifflin & Co., Boston: 357 pp. + 51 pl. ["Lycaena II, III"].
- Eliot, J. N. & A. Kawazoe. 1983. Blue Butterflies of the Lycaenopsis Group. British Museum (Natural History), AS Printers Limited, Over Wallop, Hampshire, England: 309 pp.
- Ferris, C. D. (ed.). 1989. Supplement to: A Catalogue/Checklist of the Butterflies of America North of Mexico. The Lepidopterists' Society, Memoir No. 3: vii + 103 pp.
- Howe, W. H. (ed.). 1975. The Butterflies of North America. Doubleday & Company, Inc., New York: xiii + 633 pp.
- Ômura, H., T. Itoh, D. M. Wright, H. Pavulaan & S. Schröder. 2015. Morphological study of alar androconia in *Celastrina* butterflies. Entomological Science 2015: 1-7.
- Pavulaan, H. 2014. A case of sympatric *Celastrina ladon* (Cramer), *Celastrina lucia* (W. Kirby) and *Celastrina neglecta* (Edwards) (Lycaenidae: Polyommatainae) in Northern Virginia, with additional records of *C. lucia* in Virginia. The Taxonomic Report 7(7): 1-10.
- Scott, J. A. 1986. The Butterflies of North America. Stanford University Press, Stanford: xiii + 584 pp.
- Wright, D. M. & H. Pavulaan. 1999. *Celastrina idella* (Lycaenidae: Polyommatainae): A new butterfly species from the Atlantic Coastal Plain. The Taxonomic Report 1(9): 1-11.

ADDENDUM

North American *Celastrina* butterflies form a complex grouping of very closely related (recently-evolved) species, ecotypes, biotypes and host-associated populations. Over 30 years of attempts at crossbreeding some of the eastern taxa has proven fruitless, as the males and females seem to be able to identify and respond only to their own kind, certainly by the scent of lactone compounds in the male androconia, and in the case of *ladon* – the lack thereof. Evidence of hybridization between different *Celastrina* has not been documented. Our present knowledge depends heavily on morphological comparison of specimens, field observations, and hostplant acceptance experiments. Microscopic evaluation of the genitalia of correctly-identified *neglecta* and *ladon* awaits future study, since any past examination of genitalia of eastern North American *Celastrina* was based on outdated taxonomy and not clearly identified to species by current definitions. Presently, in collaboration with Dr. David Wright and myself, a team of geneticists at the University of Texas Southwestern Medical Center is conducting intensive genomic sequencing of all North American members of the *Celastrina*. Results will be forthcoming but preliminary analysis clearly shows distinctive differences between *neglecta* and *ladon*.

A rare case of mosaic gynandromorphism in the Zabulon Skipper (*Lon zabulon*) (Boisduval & Le Conte[1837]) (Hesperiidae).

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On August 15, 2021, I found an odd, yet beautiful example of a Zabulon Skipper (**Figs. 1-6**) in Elkridge, Howard Co., MD (off the Morning Choice Trail), not far from the Rockburn Branch stream. The habitat was at the edge of a forest clearing, typical for the butterfly. A few patches of thistles in peak bloom were covered with Zabulon Skippers. It took me a few seconds to figure out that this particular butterfly was, in fact, a Zabulon Skipper. But what a skipper it was! It had both male and female characteristics. I

have seen gynandromorph photographs of butterflies with one side female and the other male, but this skipper showed a blending of traits throughout. The underside of a normal Zabulon male skipper is yellow orange with several small reddish-brown spots, while the female is dark brown and purple gray with frosting on the outer margins. This skipper showed the dark brown color and frosting of the female along with the yellow orange markings of the male (Figs. 1-2). I have never seen anything quite like it. The typical Zabulon males that also appear in the frame were perfect for comparison purposes.

After later investigations and subsequent emails, it turns out that this Zabulon Skipper may be the only North American Skipper ever documented with mosaic gynandromorphism. Gynandromorphism is usually only noticed in Swallowtails and species where males and females look quite different. However, mosaic gynandromorphism is much rarer.

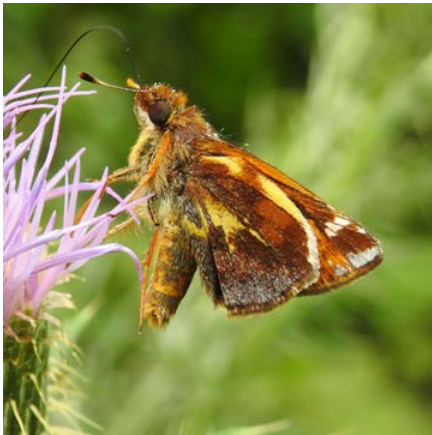


Fig. 1. *Lon zabulon* mosaic gynandromorph (left ventral view) showing mainly female characteristics. All photos courtesy Annette Allor.



Fig. 2. *Lon zabulon* mosaic gynandromorph (right ventral view) showing mainly male characteristics.



Fig. 3. *Lon zabulon* mosaic gynandromorph (right FW ventral view) showing mainly female characteristics.

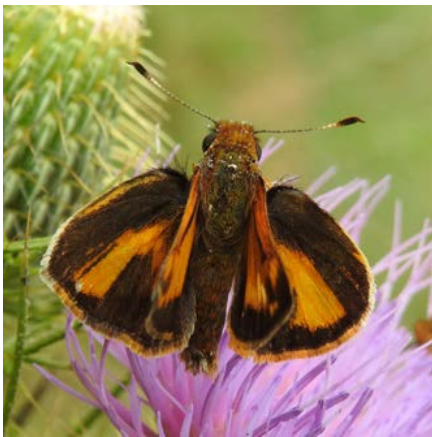


Fig. 4. *Lon zabulon* mosaic gynandromorph (HW dorsal view) showing mainly male characteristics.

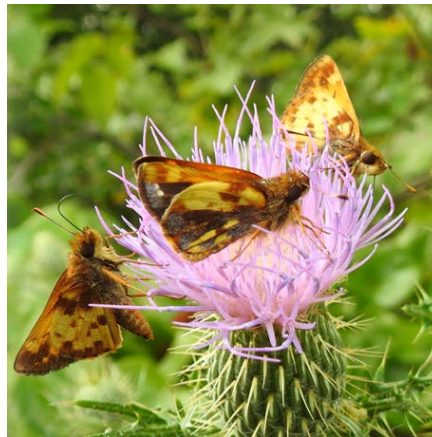


Fig. 5. *Lon zabulon* comparison of mosaic gynandromorph individual with two normal males.

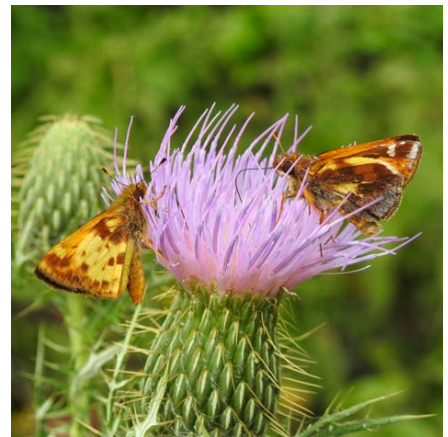


Fig. 6. *Lon zabulon* comparison of mosaic gynandromorph individual with a normal male.

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