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IS LIMENITIS ARTHEMIS A DOUBLE-BROODED SPECIES?

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In *Butterflies of N. A.*, Vol. 2, Part 8, 1879, I gave the history of *Arthemis*, and stated that it was single-brooded; that the first butterflies of the season appear in the Catskills about the end of June; that they are abundant during July; that the eggs are laid last of July and early in August; that the larvæ from these eggs pass two moults and then go into lethargy in cases of their own construction; that they come from these cases in spring and moult twice before chrysalis. I related my own experience in breeding, and I particularly say that the existence of the species is due to the eggs laid in July and early in August, because eggs laid later than this, *although by females of the same generation of the butterflies*, cannot give larvæ which shall be able to reach the hibernating stage before cold weather sets in.

Mr. Scudder, in a paper read before the Appalachian Club, at Jackson, N. H., July 12th, 1881, and printed in *The Mountain Echo*, 30th July, upon *Arthemis*, under the name of *Basilarchia Arthemis*, gives a very different account of the species, and declares it to be two-brooded. "Twice a year it runs the cycle of its changes As a general rule its first appearance here (in W. Mts.) is between the 16th and 20th of June, and its second late in August. About the middle of August the caterpillars now feeding will be rapidly changing to chrysalis, and in 10 or 12 days afterwards the butterfly will again be on the wing and the cycle recommences."

Mr. Scudder goes on to say: "The history I have now given does not agree with Edwards' account of the insect. He would make it out single-brooded, *having never seen or heard apparently of the September butterflies*"; adding these words in explanation of my error: "and so it probably is (i. e., single-brooded) in the southern part of its range, for all the butterflies taken south of this region of their abundance have been of the first brood; that they have not flown thither from these northern parts is proved