LITERATURE CITED


COLLECTING AND OBSERVING THYMELICUS LINEOLA FORM “PALLIDA” (HESPERIIDAE) IN NEW JERSEY

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Since the discovery of Thymelicus lineola Ochsenheimer in Ontario in 1910, this butterfly has become distributed over most of the northeastern United States. In many localities it has become abundant; however, no recent paper mentions the capture of the form “pallida.” The first individual of “pallida” collected at Lakehurst, New Jersey was on July 1, 1967 by B. Ziegler and myself. Strangely, this site is about the last one in the area where lineola has established itself.

Dr. and Mrs. dos Passos and I went to this locality June 21, 1968 to search for this pale skipper. The collecting site is about 15 acres of grassland bordered on three sides by highways and on the other by woods. Several small patches of milkweed (Asclepias), dogbane (Apocynum), and daisies (Compositae) are found there. At this time only about a tenth of all the flowers were in bloom. Individuals of I. lineola were swarming over the whole area. Wherever there was a milkweed in bloom as many as a dozen individuals could be found feeding. Not a single “pallida” was found among them; I did not catch a single individual on milkweed. The first “pallida” were caught on dogbane and among grasses. Mrs. dos Passos then noted that the “pallida” were easily distinguishable when visiting the composite flowers, since most were feeding with expanded wings. Taking her advice we collected thirty specimens in two hours. When their wings are folded it is more difficult to identify “pallida” since the underside of normal lineola is also pale. The difference is also evident with individuals in flight.
It is characteristic of pallida not to mingle with normal lineola. They have never been seen flying or feeding together but were caught singly and always at some distance from typical lineola. A similar observation was reported by Clench (Lepid. News, 1948, 2: 105), who stated “pallida was never observed in the areas where lineola was most common, but rather seemed to appear only in areas of lesser abundance.”

I retained eight females alive for oviposition. These, with several males, were kept in a large screen cage with a flower pot of witch or quack grass, Agropyron repens L., and a jar with daisies and clover for nectar. Kneeling in front of the cage with a large magnifying glass I searched for eggs for two days without finding any. Repeating this unsuccessfully on the third day I decided to kill the females, which appeared to be in excellent condition. Later I noticed that their abdomens appeared thinner than when put in the cage, and therefore I reexamined the pot of grass carefully. To my surprise I found one egg on a dead oak leaf on the bottom of the pot and then a dozen more in the folds of dead grass leaves lying on the bottom. Only one egg was oviposited on a green blade of grass. Working my way up to the top of the thick, hollow grass stems I found the tips had cracks where I had cut them with a dull knife because they were too long for the cage. Only by pressing on these tips could the two-inch long cracks be noticed. In two of these cracks most of the eggs were deposited in long rows. In one I found 30 eggs and in another 25. About seventy eggs were found where none could be seen at first. Probably more eggs would have been oviposited if the females had been kept alive longer. How they were able to lay their eggs inside the grass stems through the almost invisible cracks is a puzzle to me.

We were so preoccupied with collecting adults “pallida” that we did not look for eggs in the field. Pengelly (1965, Proc. Entomol. Soc. Ont. 95 (1964): 102) reports that among various species of grasses collected in the field, most eggs of T. lineola were found on redtop (Agrostis alba L.), and timothy (Phleum pratense L.) and were deposited under the blades of grass where they enclose the stem between the three lowest nodes. According to my observations in New Jersey, “pallida” has slightly different ovipositing habits than typical T. lineola. Most “pallida” eggs were found in the uppermost parts of the stem; none were found below between the nodes of the grass.

Thymelicus lineola “pallida” eggs are white, smooth and elongate. For several weeks and almost full-grown larva with large head could be seen through the egg’s hole, giving the impression of an early emergence, but like typical lineola, they hibernate in the egg stage.