FIELD NOTES

THE FOODPLANT OF *ERYNNIS PACUVIUS*

Although the foodplant and early stages of many of the *Erynnis* are known, such is not the case with *Erynnis pacuvius* Lintner, whose early life is still a mystery to entomologists.

While not overly common in Boulder County, Colorado, *E. pacuvius* is found in some numbers in a couple of general areas. It was while collecting in one of these areas, specifically the old Railroad Grade between Glacier Lake and Sunset on June 20, 1954, in company with LINCOLN and JANE BROWER, that I had my only opportunity to observe a female *E. pacuvius* about to oviposit. On a rather steep, open, grassy hillside I watched as a female hovered about and beneath the brambly branches of a shrub belonging to the New Jersey Teas. This was later identified for me by WILLIAM WEBER, Professor of Botany at the University of Colorado, as *Ceanothus fendleri* Gray.

Observing carefully the spots at which the female seemed to be ovipositing, I shortly discovered two single eggs attached to the twigs themselves. Gathering the branches containing these eggs I returned to the car. It was my intention to rear the species, but subsequent developments of this particular day made it such a hectic one that the eggs were lost in the shuffle. It is reasonable though, to believe that *Ceanothus fendleri* is the foodplant and not just an oviposition site, inasmuch as *E. pacuvius* seems to be limited to the areas where *Ceanothus* is plentiful.

I am in hopes that the coming summer will enable me to establish beyond doubt the fact that this is the true foodplant.

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FURTHER REMARKS ON THE HABITS OF *NYMPHALIS MILBERTI*

In a short note on the habits of *Nymphalis milberti* (*Lep. News* 4: 13; 1950) I described the manner in which these insects appear in the early spring after hibernation, much more commonly than during the summer. It seems to me that anything from the literature which sheds further light on this question would deserve mention in *The Lepidopterists' News*. We cannot all read all the available papers, and usually these things are come across only by accident.

I was recently privileged to read Dr. E. B. FORD'S fine book *Butterflies*. I have found there reference to several British butterflies which start hibernating in July, soon after emergence (p.103). One of the species mentioned is *Aglais urticæ*. From the excellent color photos in the book, I cannot make out any external difference between this butterfly and our *Nymphalis milberti*. I do not think that we should place too much importance on the difference in genus names. Often there is not very close cooperation between workers on opposite sides of the Atlantic. I have seen *N. milberti* referred to as *Aglais milberti*, though I have not been able to learn when or why the name was altered. There is another European species, *Nymphalis polychloros*, which seems, in the same way, to be the counterpart of our *N. californica* Bdv. HOLLAND writes of *N. californica* (he uses *Vanessa*) "It somewhat closely resembles the European *V. urticæ*". This seems to be the result of a muddle, not unusual I believe, with HOLLAND.

While on the subject I would like to add some more comments on my article referred to above. Since writing this I have increased my knowledge of the butter-

flies dealt with. I stated then that I had seen *N. milberti* before hibernation only in September. In recent years I have often seen them in July, but still only a fraction of the spring population. I am sure now that *N. milberti* specimens taken at 6000 ft. on Mt. Arrowsmith, in late July, are hibernated individuals which have only just been liberated by melting snow drifts.

I have also realized now that *Vanessa cardui* L. cannot "breed and thrive here once established", as I once supposed. Because spring migrants arrive very early, and may come on two successive years, to the casual observer the population appears to have wintered here. Dr. FORD states, a conclusion that I had begun to suspect for myself, that *V. cardui* cannot hibernate. Once a migration reaches a latitude where there is a definite winter, their offspring are doomed, unless perhaps they can return south, as *Danaus plexippus* is said to do.

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A NOTE ON *LIMENITIS ASTYANAX* ON NANTUCKET

Most of my life till 1952 was spent on Nantucket, the outermost of the islands off southern New England. During that time and including several visits during the summer through 1945, I never saw a specimen of *Limenitis astyanax* Fab. nor any form of *L. arthemis* Drury on the Island. Yet Dr. FRANK M. JONES found *L. astyanax* quite common on neighboring Marthas Vineyard as early as 1913, and during summer residence on Cape Cod the past eight years, I have found it present there, though because I have not spent much time on daylight collecting, I can say nothing about its relative abundance.

The latter part of August 1954 I spent three days on Nantucket and was surprised to see several specimens of *L. astyanax,* enough at any rate to conclude that the species has become definitely established sometime during the past ten years.

On the Vineyard, JONES found most specimens referable to the "astyanax" form, with occasional examples of "albofasciata", "proserpina", "atlantis", and "viridis". In Barnstable, limited collecting has turned up only "astyanax" and "viridis". On Nantucket, the few specimens seen sufficiently closely for a long enough look seemed to be mostly "viridis", possibly the "astyanax" form, but certainly with no suggestion of white.

It seems rather surprising that it has taken so many years for *L. astyanax* to find its way to Nantucket. Possibly it has been there in the past, but if so, there should be no reason why it should have disappeared, as the supply of acceptable foodplants is ample. Weather conditions are not appreciably different on Nantucket from those on the Vineyard or Cape; in fact the winters are a very few degrees milder. Perhaps the water barrier has intervened.

The water barrier between the Cape and Nantucket at its least is about ten miles, though effectively it is more like twenty-five because there are long, sandy points reaching out like fingers from either shore, both unsuitable for the support of *L. astyanax.* From the Vineyard to Nantucket, open water is only six miles, but again the gap is effectively much greater because the nearest section of the Vineyard is sandy and rather barren, and the small, stepping-stone islands west of Nantucket offer almost no foodplant to provide for a gradual eastward migration. Consequently it might mean a matter of fifteen miles between adequate feeding grounds. Whether this is a serious hindrance in establishing a colony, I leave to the more ardent students of the subject.

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