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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