

No residue was detected in any of the sprouts except in those treated with Phosdrin and harvested on October 10. In these the inhibition of cholinesterase was 8.3 per cent greater than in the untreated check. The

intervals in days, between last treatment and the October 10 harvest were: Thimet, 25; 12,880, 46; 18,706, 25; Di-syston, 38; Systox, 46; Phosdrin, 18.

### PAINTED LADY, *Vanessa cardui*, on Vancouver Island

This cosmopolitan butterfly was common in Saanich, during 1958. Not since 1952 have I seen it in such numbers. As a matter of fact only a single specimen, in 1957, came to my notice between these dates. In 1958 I first noted it on May 18, and the last date recorded was October 1.

Soon after arriving in the district, from where I do not know, egg laying started on the two species of thistles abundant in the area, namely Canada thistle, *Cirsium canadensis*, and bull thistle, *C. lanceolata*. It seemed to prefer the latter. On June 18 I observed a female hovering about the head of a bull thistle where it was ovipositing so intently that it continued to lay even when I pulled the stem towards me for a closer look. In all, though not necessarily laid by this individual, 12 eggs were found, either on the involucre of the terminal flower head, or on the uppermost leaves just beneath the inflorescence. I snipped off the top of the plant containing the eggs and placed it under a muslin screen. The resulting caterpillars were reared to maturity. Adults emerged on July 17, one month after the eggs were laid.

During the course of the summer larvae in all stages of development were in evidence, varying from light yellowish green to almost completely black. Clumps of thistles soon assumed a bedraggled appearance, the bare leaf stalks festooned with the remnants of the silken cubicles in which the larvae lived or had lived. Pupae were rarely seen, however, as the caterpillars leave the food plant for

less exposed quarters. Once in a while a chrysalis was found hanging within a very open-meshed tent along the leaf stalks of the host plant.

Fresh specimens of adults were common by July 18 and continued to be so well in September.

There is considerable overlapping of broods but with an average of one month for a complete life cycle and a constant succession of ova there could be two or more generations in one season, especially in a long, mild autumn as in 1958. From an economic point of view this is a useful insect, considering the ravages it commits among the thistles.

What becomes of the hosts of individuals seen up to October 1? They must do one of three things: Hibernate; but I have never come across them hereabouts, even early in the spring as in the case of the Mourning cloak and Angle Wing, both of which are known to hibernate. Emigrate; if so it is not noticeable. Or die before winter; here again I have no evidence in support of such a happening.

Most likely they are here in the first place as an overflow from Mexico or some other warm climate. They succeed well enough during the summer in their new haunt, but are unable to withstand the ensuing winter.

R. South in "The Butterflies of the British Isles" 1947 states that North Africa is thought to be the centre for this species, which periodically spreads all over the temperate world, where it thrives for a time but eventually disappears, until another wave of migrants from the original source re-populates its far flung range.

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