

Harvey, S. S. Nicolay, David K. Parshall, Gerald B. Straley, and Florence S. Wagner in making this study.

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A MIGRATION OF *VANESSA CARDUI* (NYMPHALIDAE)

Recently, in arranging a 25 year collection of Manitoba butterflies, a short series of eight specimens of *Vanessa cardui* (Linnaeus) was located in the writer's collection. Two are dated 4 June 1952; five are dated 5 June 1952 and one is dated 7 June 1952. These are small specimens as compared to locally emerged autumn specimens.

The above eight specimens (a ninth has just been found in the Sam Waller Museum at The Pas from the same series and collection dates) were netted from among dozens that were flying at shoulder height from the east into the northwest. This is against the prevailing winds in this part of Canada.

The migration started on the first of June 1952 and continued for the next seven days. The flight was a light one and the specimens are in remarkably good condition. The flight went through the eastern part of the town of four thousand people. One of two butterflies could be seen crossing a town block at any one time. They would also come in spurts of three or four and then there would be pauses when none would be seen. The flight was most pronounced at about 1600 hours. The butterflies then flew lower and into the setting sun. The flight ended at the end of the week as suddenly as it had started.

Vanessa cardui cannot survive our severe winters this far north in Canada. The autumn generation here is produced from spring migrants. In some years not one *V. cardui* is seen all summer. Those that are locally produced in August are very large and brilliantly marked.

The migration of 1962 was of continental dimensions and reached The Pas. It was locally abundant and coincided with the blooming of the dandelions in the first week of June. In this regard it resembled the 1952 local flight.

There is, however, a vast difference between specimens of the two flights separated by a 10-year period. In the 1952 flight the specimens were small, well marked and fresh looking. Specimens of the 1962 flight were large, much worn and tattered and were in greater numbers than the 1952 flight. In 1962 almost every dandelion had its butterfly. No directional flight was noted. They suddenly appeared in vast numbers in The Pas area and gradually became more and more tattered. The flight died out naturally here, not moving elsewhere. The local autumn flight is at best a small one in most years. There are not as many thistles around as there were in the 1950's. The use of herbicides along roadsides possibly accounts for this. A day's collecting in the fall produces a few specimens of *Vanessa cardui* in the best of years.

The 1952 June migration, strangely enough, did not produce a large autumn flight. This was expected and proved a disappointment when it failed to materialize.

It is probable that the remarkable heat wave, breaking all previous records, on 19 April 1952, influenced insect movements locally. At The Pas the heat persisted for three days, "bringing out" many species of noctuid moths in large numbers. Rare species appeared in numbers that have not been taken since.

The temperature rose to 80°F... producing a sultry night. This is unheard of in these parts in April. It resembled an August night before a storm! These weather conditions may have initiated the *Vanessa cardui* migration some weeks later.

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