TABLE 2—Location and Number of Attacks by the Poplar Borer on Trembling Aspen in Sample Plots in the Thompson and Nicola Valleys, 1961.

| Location   | No. attacked | Av. no. attacks j                 |  | per tree section                   |                                   | Av. no. attacks                               |
|--|--------------|-----------------------------------|--|------------------------------------|-----------------------------------|---|
|  | trees        | Clear bole                        |  | Crown                              |                                   | per infested                                  |
|  | examined     | Lower Upper                       |  | Lower Upper                        |                                   | tree  |
| Kamloops<br>Knutsford<br>Cache Creek<br>Quilchena<br>Merritt | 26<br>20     | $1.3 \\ 0.4 \\ 0.6 \\ 0.6 \\ 0.7$ | $\begin{array}{c} 4.6 \\ 4.5 \\ 2.2 \\ 1.3 \\ 2.7 \end{array}$ | $17.7 \\ 5.9 \\ 2.7 \\ 1.4 \\ 0.8$ | $8.1 \\ 0.7 \\ 0.4 \\ 0.3 \\ 0.1$ | $\begin{array}{c} 32\\12\\6\\4\\4\end{array}$ |

observed on aspens growing in coniferous forests.

Five plots were established in the Thompson and Nicola valleys to record the number and size of trees attacked (Table 1), and the number and location of attacks on individual trees (Table 2).

No aspen trees under three inches d.b.h. were attacked and a preference was shown for trees in the five to eight inch d.b.h. class. A few trees as large as 15 inches d.b.h. were attacked.

In four of the five plots, the highest number of attacks occurred in the lower crown where often large branches were attacked. The next highest number of attacks was found on the upper clear bole, except in the Kamloops plot. In general, most attacks were concentrated near or included the first three or four large branches of the lower crown.

Some poplar borer attacks have been found on apparently healthy aspen trees, but in most of the Thompson and Nicola Valley infestations the poplar borer is associated with a carpenter worm, believed to be *Prionoxystus robiniae* (Peck), and has attacked aspen trees weakened by other pests such as satin moth, *Stilpnotia salicis* (L.).

## Reference

Peterson, L. O. T. 1945. Some aspects of poplar borer, Saperda calcarata Say, (Cerambycidae) infestations under parkbelt conditions. Contribution No. 2528. Division of Entomology, Department of Agriculture, Ottawa.

## Additional Notes on Nymphalis californica Bdv.

This is a sequel to my contribution regarding this species up to January 1961 (Proc. Entom. Soc. Brit. Columbia 58: 32, 1961).

On March 13, 1961, two specimens were seen on a sheltered hillside at Royal Oak on Vancouver Island. From then on it was often seen up to May 18, after which it disappeared from my notice.

No migratory tendency was observed until about May 18 when a definite drift to the northeast against a light northeast wind was clearly marked. They were flying in ones and twos at widely spaced intervals. Occasionally one would alight on a lilac flower or, on higher ground, on manzanita, soon to resume their northeastward journey.

Dates and localities include: Mt. Finlayson, May 16; Little Saanich Mountain, May 17; and the Langford district May 18. A few stragglers were reported from the general area up to May 21.

In the past this butterfly has disappeared from Vancouver Island after each visit, but showed up again in numbers from September 11, 1961. Evidently it is going to duplicate last season's record.

I have no information as to where it spent the period between May 21 and September 11, 1961, or whether it spent the larval stage on any plant other than Ceanothus, which is absent in this district; or whether it migrated from the mainland as usually seems to be the case.

-George A. Hardy, Provincial Museum (Rtd.), Victoria, B.C.