

MIGRATION OF *NYMPHALIS CALIFORNICA*
IN WASHINGTON (NYMPHALIDÆ)

During the week of July 16 to 22, 1961, an immense migration of the butterfly *Nymphalis californica* was noted in the high mountain country of the State of Washington. Reports indicate that on all the major mountain passes in the state this butterfly was in such great numbers as to slow traffic and clog radiator grills. The greatest numbers were observed at an altitude between 3500 ft. and 4000 ft. although reports have been received of observations up to at least the 5000 ft. level. This area, at least in the eastern part of Washington, is at about the upper level of the Transition Zone or even the lower part of the Canadian Zone. Yellow Pine, fir, Western Larch, spruce, Jack Pine, poplar, alder, willow, and aspen abound in this area and in the open spaces wild lilac, spirea, and Buck Brush (*Ceanothus thyrsiflorus*) are in bloom then.

On a trip from Oroville to Spokane on July 16, we first saw this butterfly swarming in a large sunlit rock cut on the summit of the pass between Disautel and Nespelem at about 9:30 in the morning. This pass is on Washington state highway 10A. There were mud puddles at the edge of the road and many butterflies were drinking or resting on the ground along the side of the road. There were many dead and feeble ones on the ground but we were unable to determine the cause, whether from the passing cars, fatigue, disease, or some other cause. There did not seem to be any predators or parasites bothering them at the time. We took pictures and gathered specimens at this time and noted that taking them was much easier than is normal. Having no net we merely picked them up from the road side. Their flight was abnormally feeble.

On the return trip on July 20, over Sherman Creek Pass on State Highway 3P we took specimens, although at that time the flight was not nearly so great as it had been early in the week.

I have reports of this butterfly in great numbers on other passes and mountain country in the State of Washington. They were seen on Blewett Pass on July 17, in the Tiffany Lake area of the Okanogan National Forest west of Omak Wash on July 23, and in the Lost Lake and Bonaparte Lake area east of Chesaw, Wash., and north of Wauconda, Wash., at various times during the same week.

On July 24, we returned to the Republic and Swan Lake vicinity and could find no trace of the butterflies. From this fact I believe that this was a migration rather than a large hatch. I was unable to determine in which direction they were migrating.

WESLEY H. ROGERS, Route 1, Oroville, Wash., U. S. A.