

NOTES AND OBSERVATIONS.

EXCURSION OF THE VANCOUVER NATURAL HISTORY SOCIETY.—On Saturday, August 31, and Sunday, September 1, the members of the Vancouver Natural History Society held their annual excursion for the study of the local alpine flora, the slopes and valleys of Grouse and Dam mountains being the objectives.

The season was so far advanced that many of the plants found in previous years were past flowering and were in fruit.

During the evening of the first day the members had an opportunity of becoming familiar with quite a number of different trees, as for instance the Sitka spruce of so much value at the present time for aeroplane work, red alder, Sitka alder, dogwood, wild cherry, giant cedar, white pine, douglas fir, hemlock, yew tree in fruit, besides a number of willows and shrubs constituting the undergrowth of the forest.

Next morning by 8.30 the party was on the trail again. On account of the rather open nature of the mountain along the bluffs, there were numerous specimens found, including ferns, saxifrages, pentstemons and other rock-loving plants. The plateau was reached about 11 a.m. Here the vegetation was of an entirely different character; instead of a covering of salal was a covering of red and white false heathers, some belated specimens of both were found in flower. The underbrush was composed of white rhododendron, copper bush, two or three species of large, luscious blueberries like grapes, and mountain ash with beautiful clusters of coral-red fruits in a background of dull green.

Proceeding by the lake and over the peak of Grouse, the members continued to the slopes of Dam mountain, where they found further alpine or sub-alpine specimens, including the marsh marigold, false hellebore (a poisonous plant), mountain flea-bane, arnica, grass of Parnassus, with its beautiful white flowers, Alpine speedwell often called forget-me-not, and the Sitka valerian, but one of the most interesting was a little moss-like flowering plant, *Hippuris montana*, or mountain mare's tail, which is recorded as found on flats along Glacier Creek in the Selkirks, and also in Strathcona Park, Vancouver Island. The plant is so small that individual specimens are readily overlooked, but there are several large patches on both Grouse and Dam mountains.

Lunch and rest was enjoyed on the summit of Dam mountain, from which an extensive view of the surrounding country was obtained, from Mt. Baker, with its glacier-covered northern slopes to the mountains of Vancouver Island, and the mountainous country to the north.

After lunch a number of the more seasoned climbers ascended Goat mountain and were rewarded by the discovery of Toimie's saxifrage, *Saxifrage Tolmei*, a small fleshy leaved species usually found in regions of glaciers and perpetual snow. This year, however, the snow was practically all gone, there being only a small patch at the base of Crown mountain.

Numerous birds, butterflies and other insects were observed during the outing.—J. D.

TRANSFORMATIONS.—Bide-a-Wee Island, Blue Sea Lake, Que., July, 1918.—One morning lately at breakfast, in our open-air dining-room, we heard a slight thud on the ground. We went to see the cause. Various were the explanations of the strange looking object we found. One was: "A dragon-fly has a beetle." Another: "A bug has a darnin needle." It took some time to grasp the true explanation, so swift were the contortions of the mystery. It was a large, splendid dragon-fly struggling to emerge from a small, repulsive-looking black case, which shortly before had been a dragon-fly nymph. How was it possible for that large, great, gorgeous creature, with its gauzy, shimmering wings, and brilliant black-green-gold body, to be enclosed in that small blackish object? After emerging, it rested on a branch of a tree for some hours, then after a few short trials it flew off strongly, into the nearby woods.

Bide-a-Wee Island, Blue Sea Lake, Que., July, 1917.—One morning this summer, while we were out on the water, suddenly we noticed its surface was almost covered with what looked like dead minnows. Mrs. Wisewoman explained that there had probably been a disease that had attacked the baby fishes, and their lifeless bodies had risen to the top. Next evening at sunset we were again on the water. That time we suddenly noticed that there was life in the thought-to-be dead little bodies. The surface was fairly quivering with motion. Out of these bodies shad-flies were struggling to emerge. Some came out gaily after a few convulsive efforts. Others had to try again and again, each time sinking back into the water, but at last they rose triumphant.

As we looked at the gauzy wings quivering and sparkling in the sunset rays and then down at the old, forlorn, shrivelled-up cases, we marvelled again over the wonder of Nature's creation.—M. E. C.

One of the results of the European war was a great shortage of dyes because the German supply was cut off. In 1917, the United States made enough to supply 75 per cent of their needs, and of