

SOME OBSERVATIONS ON AUTUMNAL BEHAVIOR OF THE CALIFORNIA PINE GROSBEEK

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The California Pine Grosbeak (*Pinicola enucleator californica*) is of such limited and local occurrence in the state of California that it was with extreme interest and pleasure that the writer was able to devote several days to observation of their behavior in September of 1940. A number of more or less unsuccessful searches had been made for Pine Grosbeaks at various times in the Lake Tahoe region of the central Sierra Nevada in the summer or fall months in the course of the past ten years. It was not until August 27, 1938, however, that two individuals were noted, perched on top of a red fir a short distance southeast of the Velma Lakes, in Eldorado County. These birds appeared to be feeding on the terminal buds of this tree, but when an attempt was made to approach close to them they flew away.

On September 2, 1940, a flock of six Pine Grosbeaks was seen on top of a tall red fir on the eastern slope of Rubicon Peak, Eldorado County, at about the 8,500 foot level. Shortly after they were seen they flew away, only to return a few minutes later and perch in the upper parts of some red firs in the immediate vicinity. After perching on the tree tops for a few moments they dove into an adjacent extensive alder thicket where, subsequently, a two hour search failed to reveal them. Returning to this same locality on September 5, Pine Grosbeaks were again seen and several hours were devoted to studying their behavior. More observations were made on September 6 in this same region.

Eighteen Pine Grosbeaks were definitely known to be in this immediate area and it was believed at least a half dozen more were present. Their behavior made an accurate total count very difficult. The general region in which the grosbeaks were seen was in the high Canadian Life-zone. The forest cover was composed largely of red fir (*Abies magnifica*) and white pine (*Pinus monticola*), with a scattering of lodgepole pine (*Pinus contorta* var. *murrayana*) and mountain hemlock (*Tsuga mertensiana*) growing on a steep-sided mountain. The canyons which contained watercourses were, at this moderately high elevation, rather shallow and contained dense thickets of mountain alder (*Alnus tenuifolia*). Interspersed among the alders were western mountain ash (*Sorbus sitchensis*), Sierra maple (*Acer glabrum*) and several species of *Ribes*. The presence of the mountain ash was apparently an important factor, perhaps accounting for the presence of the Pine Grosbeaks. The latter fed almost exclusively on the berries of this shrub which were ripe and very numerous. The selection of mountain ash berries for food by Pine Grosbeaks has been noted by others (see Roberts, Birds of Minnesota, 2, 1932: 358; and Edson, Murrelet, 16, 1935: 14).

In coming to feed, the birds usually arrived in groups of two or three, perching on the uppermost parts of tall firs or pines near the alder patches. Call notes were given here for a few minutes; then they would move to a tree adjacent or at least very close to the portion of the thicket selected for feeding, calling again. Sometimes they would move to several trees before arriving at the margin of the thicket. When on the tops of the trees the birds appeared to be quite alert, turning about and looking in all directions. After calling and scrutinizing the immediate vicinity for several minutes, one or two would dive almost vertically downward, with the wings closed, and disappear in the brush. Sometimes they checked their descent by partly opening their wings just before reaching the tops of the bushes. The remaining bird or birds would move to the side of the tree from which the descent was made, call for several moments, then also

dive silently into the undergrowth. Often another small group would arrive within five or ten minutes and repeat the process.

Once the birds were down in the alder thicket they were usually silent. Occasionally, however, when individuals were calling in the trees near by, a similar answer would be given by an individual in the undergrowth. Likewise, one of the latter would sometimes emit a shrill, wheezy note, the significance of which was not determined. The regular call of the grosbeaks, used when they were perched on the tops of the trees or when flying, consisted of a series of three or four notes given together, somewhat remindful of the call note of the Western Tanager (*Piranga ludoviciana*), but possessing, however, more musical quality. The resemblance of the call notes of these two species has also been noted by Hunt (Condor, 23, 1921: 189). The call of the Pine Grosbeak might be phonetically described as *pr-r-r-eet*. The two middle notes are slurred and the accent is on the last note which is higher than the rest. This call is quite ventriloquial in quality. In one instance it was given by a bird that was not more than twenty-five feet from me, and yet when first heard before the individual was seen it was thought to be over one hundred yards away.

Most of the birds that were observed fed in one rather extensive thicket that was about one hundred yards in width and about two hundred and fifty yards in length. Mountain ash was fairly well distributed among the alders and, judging from the presence of discarded hulls and pulp, the birds had at various times fed in most parts of the thicket. Much of the feeding, however, was done just inside the margins. Berries growing along the outer margins as well as those growing high on bushes where they were exposed were seen to be untouched. Feeding individuals usually stayed in the lower or middle portions of bushes.

Although the birds at times appeared somewhat wild and erratic, especially when approached in the forest, they were very indifferent to human presence when feeding. It was not difficult to approach within less than twenty-five feet of feeding grosbeaks, even though the observer had to crash through brush to do so.

Feeding individuals were generally well spaced, two birds rarely feeding from the same bush. When eating, they moved about but little and were extremely quiet, often remaining on one perch for minutes at a time. One individual was seen to consume the seeds of twelve berries without moving from the same perch. The berry was seized in the bill and the seed extracted. The hull was either left on the bush or the berry was pulled entirely off and, after the mandibles crushed through to the seed, the head was given a jerk so as to cast the hull and pulp aside. The ground, vegetation and rocks about where the birds fed was generously spattered with pulp and hulls. An examination of the stomachs of seven birds collected revealed nothing but the seeds of mountain ash, no trace of hull or pulp being present. Upon tasting the berries I found them to be quite bitter and astringent.

Regarding the behavior of the grosbeaks throughout the day, it appeared that feeding was carried on to a greater extent in the late afternoon than during midday or the early afternoon. At 6:15 p.m., on the last day that observations were carried on, a group of ten was seen to fly out of the thicket in which they had been feeding. This was long after sunset. These birds had entered the thicket in small, separate groups in the late afternoon.

The flocks seen were composed of adults and young of the year. Of the seven birds collected two were adult males, one an adult female, and four were young. The adults were more than half way through their molt.

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