

**228. ALPINE-SUBALPINE ECOTONE, RIDGETOP.**—Location: Washington; Whatcom Co.; North Cascades Nat'l Park, Sourdough Ridge, 8 km by trail NNE of Diablo; 48°43'N, 121°6'30"W; Ross Dam Quadrangle, USGS. Continuity: New. Size: 32.3 ha = 79.7 acres (irregular, length 2 km, width 120 m - 250 m, surveyed with compass and rangefinder). Description of Plot: 80% is treeless, extensive rocky (gneiss) outcroppings with low growing alpine vegetation, primarily Mountain Heather (*Phyllodoce empetriformis*, *Cassiope mertensiana*), Dwarf Huckleberry (*Vaccinium deliciosum*), Crowfoot (*Leutkea pectinata*), and Black-headed Sedge (*Carex nigricans*). The dominant canopy trees in the remaining 20% of the plot are Subalpine Fir (*Abies lasiocarpa*). Most prominent in the understory is Mountain Ash (*Sorbus* spp.). A quantitative survey (applying correction, see AB 34:22, 1980) of the forested portion gave the following results: Trees 3-in. diameter and over, based on five 0.1 acre circular samples, 208/acre; total basal area 35.4 ft<sup>2</sup>/acre. Species comprising 100% of the total number of trees: Subalpine Fir, 164, 78, 90, 100; Mountain Hemlock

(*Tsuga mertensiana*), 42, 20, 9, 60; Alaska Cedar (*Chamaecyparis nootkatensis*), 4, 2, 1, 20. Trees by diameter size class: A (3-6 in.) 144, 69, 7.2, 20; B (6-9 in.) 38, 18, 5.7, 16; C (9-15 in.) 16, 8, 6.4, 18; D (15-21 in.) 10, 5, 9.0, 26; G (33-40 in.) 2, 1, 7.1, 20. Shrub stems/acre 19,700; ground cover 82%; canopy cover 25%; average canopy height 21 ft (range 16-32). In the center of the study plot is a Nat'l Park Service fire lookout, manned during the study period by the first author, and visited by 80 hikers using a trail which bisects one-quarter of the study area. Over 80% of the study plot was snow-covered on July 1. During July numerous snowmelt creeks and small ponds formed, and by Aug. 14 little snow remained. Edge: Bordered on the N and E by treeless rock-heather slopes and steep cliff walls; on the S and W by subalpine meadows and forests. Topography: Rolling ridgetop, running NW-SE with slopes facing all directions. Elevation: 5560-6100 ft. Weather: Variable, clear and sunny to intermittent fog and rain. Temperatures: 4-17°C, winds 1-15 mph. Coverage: July 3, 5-6, 9, 12-13, 17-20, 24, 27, 31; Aug. 7, 9, 14; 0530-1130 or 1800-2100, PST. Total hours: 55. Census: Gray-crowned Rosy Finch, 5 (15, 6); Fox Sparrow, 5; Water Pipit, 4 (12, 5); Dark-eyed Junco, 4; White-tailed Ptarmigan, 3 (9, 4); Hermit Thrush, 3; Blue Grouse, 2; Red-breasted Nuthatch, 2; Red-shafted Flicker, 1; Townsend's Solitaire, 1; Yellow-rumped Warbler, 1. Total: 11 species; 31 territorial males or females (96/km<sup>2</sup>, 39/100 acres). Visitors: Golden Eagle, Am. Kestrel, Band-tailed Pigeon, Pygmy Owl, Black Swift, Rufous Hummingbird, Com. Raven, Clark's Nutcracker, Mountain Chickadee, Chestnut-backed Chickadee, Am. Robin, Cedar Waxwing, Townsend's Warbler,

Black-headed Grosbeak, Evening Grosbeak, Purple Finch, Pine Siskin.—SUSAN K. SKAGEN, 419 N. Township, Sedro Woolley, WA 98284, and RICHARD L. KNIGHT, Nongame Wildlife Program, Wash. Dept. of Game, 600 N. Capitol Way, Olympia, WA 98504.

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30); Great Crested Flycatcher, 5 (62, 25); Blue Jay, 4 (49, 20); Downy Woodpecker, 3 (37, 15); E. Wood Pewee, 3; Black-capped Chickadee, 3; Tufted Titmouse, 3; Kentucky Warbler, 3; Cardinal, 3; Yellow-billed Cuckoo, 2; Red-bellied Woodpecker, 2; Brown-headed Cowbird, 2; Summer Tanager, 2; Mourning Dove, 1; Chuck-will's-widow, 1; Whip-poor-will, 1; Hairy Woodpecker, 1; White-breasted Nuthatch, 1; Brown Thrasher, 1; Wood Thrush, 1; Scarlet Tanager, 1; Rose-breasted Grosbeak, 1; Red-headed Woodpecker, +; Com. Grackle, +. Total: 24 species; 50 territorial males (618/km<sup>2</sup>, 250/100 acres). Visitors: Red-tailed Hawk, Great Horned Owl, Barn Swallow, Com. Crow, Louisiana Waterthrush, Am. Goldfinch. Remarks: Nests found: Yellow-billed Cuckoo, Whip-poor-will, Downy Woodpecker, E. Wood Pewee, Brown Thrasher, Wood Thrush, Red-eyed Vireo (3).



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## The Last Word

We think it is time to pay tribute to A.H. Clausus, of Carey, Ohio, whose Breeding Bird Census 105, Disturbed Oak—Hickory Forest, Pine Stand, Edge and Pond boasts the longevity record for all our published studies. This year is its 42nd since 1937: only the war year of 1943 was missed. In other years, Clausus arranged his army furloughs to allow for census work. We were interested in A.H. Clausus as a person, and a letter of inquiry was met with a fascinating but overlong-to-print account of the history of the Camp Falling Rock studies, with a bit of personal history and the photo-



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graph herewith included. Briefly, "Gus" Claugus, a graduate of Dennison University with an M.A. degree from Ohio State is a retired science teacher. Actually, he says, he began taking Breeding Bird Censuses at the Camp in 1927, as a senior in high school. To our suggestion that soon he would celebrate his 50th published census he responded that it "remains for the gods of random events to determine.

His census at the Camp is part of a lifetime, intensive study of all the fauna and flora of the campgrounds; many of his records are rare or first records for Ohio. Except for the years Claugus was

a counselor at the Camp, his home was always more than 100 miles from his study plot, involving many round trips each year. The combined BBC records for Ohio, which he is presently analyzing, now document 17,000+ pairs of breeding birds categorized for forest type, densities, areas, species, family richness, hours, locations, and census-takers. "I was never bitten by a copperhead, never fell over a cliff, and only once encountered real danger when a baby tornado struck the area and felled a 10-inch (dbh) pine beside me. Slightly below me several acres of timber were blown down in one tremendous whoosh."

The 1978 photograph shows A.H. Claugus preparing distance markers for census workers for use at another Ohio site. *Photo/Jeff White.*

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