

BREEDING BIRD CENSUS: 1990 (Continued)

Habitat	State/ Prov.	Compiler	Plot Size (ha)	Terr. per 40 ha	Num. spp.	Hr obs.	Yr study
Broadleaf Forest							
21. White Ash-Red Maple Forest	NY	G.R. Maxwell	16.2	172	29	10.0	5
22. Riparian Deciduous Forest	OH	E.J. Tramer	18.0	349	41	20.3	2
23. River Floodplain Broadleaf Forest	OH	W.E. McGill	18.0	167	30	12.0	2
24. Oak-Maple Ridge-Top Forest	PA	L. Goodrich	19.4	87	22	24.2	8
25. Oak-Maple Slope Forest	PA	L. Goodrich	16.9	101	21	25.3	8
26. Upland Oak-Red Maple Forest	RI	W.R. Eddleman	10.1	374	26	31.1	1
27. Mesophytic Forest I	VA	M.G. Smith	6.1	400	18	13.0	9
28. Mesophytic Forest II	VA	M.G. Smith	6.1	449	17	13.8	9
Needleleaf Forest							
29. Old-Growth Mixed Coniferous-Red Fir Forest Transition	CA	J. Davis	42.3	277	30	103.0	6
30. Ponderosa Pine Forest	CO	L. Hering	8.1	143	12	24.1	26
31. Heavily Thinned White Spruce Plantation	ME	J.K. Markowsky	4.1	448	25	20.0	6
32. Mature Red Spruce Forest	ME	T.P. Skaling	16.0	171	28	26.0	2
33. Mature Spruce-Fir Forest	ME	P.A. Duley	10.0	246	18	17.8	1
34. Mature Spruce Forest	ME	K.L. Crowell	4.0	110	12	4.8	4
35. Young Spruce Forest	ME	K.L. Crowell	4.5	306	20	9.3	10
36. Jack Pine Forest	MI	E. McLaren	16.0	72	13	21.5	6
37. Upland Christmas Tree Farm	NY	E.W. Brooks	10.7	196	15	18.5	8
38. Upland Scotch Pine Plantation	NY	E.W. Brooks	9.3	176	22	12.3	22
39. Mature White Pine Forest	RI	W.R. Eddleman	10.1	320	21	35.6	1
Broadleaf/Needleleaf Forest							
40. Grazed Oak-Pine Woodland	CA	K. Purcell	29.7	167	21	83.0	6
41. Ungrazed Oak-Pine Woodland	CA	K. Purcell	29.7	152	25	85.8	6
42. Ponderosa Pine-Scrub Oak Forest	CO	P.K. Coomber	13.8	400	22	23.0	10
43. Climax Hemlock-White Pine with Transition Hardwoods	CT	A. Magee	10.5	369	33	13.5	24

28. MESOPHYTIC FOREST II

BOSQUE MESOFÍTICO II

MICHAEL G. SMITH

*Route 3, Box 301
Elkton, Virginia 22827*

Location: Virginia; Green Co.; Elkton; Pocosin Mission Plot; 38°24'N, 78°29'W; Fletcher Quadrangle, USGS. **Continuity:** Established 1981, 9 yr. **Size:** 6.1 ha. **Description of Plot:** See *J. Field Ornithol.* 60 (suppl.):33 (1989). Plot lies on the E side of the Blue Ridge Mountains and is composed of Northern Hardwood Forest that has not been logged for 50 yr. A fire road bisects the census plot. **Weather:** Mean temperature 14.4°C (range 4–24°C). Rainfall was above average and temperatures were below average in May. Temperatures and rainfall during June were average. **Coverage:** 13.8 h; 12 visits (9 morning, 3 evening); 18, 23, 27, 29, 30, 31 May; 6, 7, 8, 10, 11, 17 June. **Census:** American Redstart, 15.0 territories (98/40 ha); Ovenbird, 9.5 (62; 1N); Red-eyed Vireo, 8.0 (52); Veery, 6.5 (43); Eastern Wood-Pewee, 5.0 (33); Cerulean Warbler, 5.0; Scarlet Tanager, 4.0 (26); Acadian Flycatcher, 3.5 (23); Wood Thrush, 3.5 (1N); Rufous-sided Towhee, 3.0 (20); Tufted Titmouse, 2.0; Rose-breasted Grosbeak, 2.0; Solitary Vireo, 1.0; Black-throated Blue Warbler, 0.5; Hairy Woodpecker, +; White-breasted Nuthatch, +; Blackburnian Warbler, +. **Total:** 17 species; 68.5 territories (449/40 ha). **Visitors:** Yellow-billed Cuckoo, Ruby-throated Hummingbird, Red-bellied Woodpecker, Downy Woodpecker, Pileated Woodpecker, Common Raven, Chickadee sp., Cedar Waxwing, Worm-eating Warbler, Indigo Bunting, Brown-headed Cowbird, American Goldfinch. **Remarks:** Gypsy Moth caterpillars defoliated 50% of the plot. Small Cedar Waxwing flocks were observed feeding on the caterpillars. There was a 29% drop in coverage hours from the 4-yr average. The percent deviation in breeding Wood Thrushes from the four yr mean was -72%. **Acknowledgments:** Thanks to Kathleen Finnegan, Elwood Fisher, Diane Holsinger, Betty Rosson, Carrie Stanovick, and Charles Ziegenfus for the plot layout and vegetation survey. Also thanks to the personnel of the Shenandoah National Park for their cooperation in the study.

29. OLD-GROWTH MIXED CONIFEROUS-RED FIR FOREST TRANSITION

BOSQUE MADURO DE TRANSICIÓN MIXTO DE CONÍFEROS-PINABETE ROJO

JEFFREY DAVIS, RODERICK H. MACDONALD & MICHAEL W. SHERMAN

*Pacific Southwest Experiment Station
2081 E. Sierra Avenue
Fresno, California 93710*

Location: California; Fresno Co.; Wishon Village; Teakettle Experimental Forest; 36°57'N, 119°2'W; Patterson Mountain N Quadrangle, USGS. **Continuity:** Established 1985; 6 yr. **Size:** 42.3 ha. **Description of Plot:** See 1985 BBC. **Weather:** Mean temperature 4.5°C (range -2–6°C). Weather conditions were generally fair except for a storm 26–27 May which left snow on the ground through 29 May. Precipitation was above average for this time of the yr. **Coverage:** 106 h; 12 visits (mornings); 21, 22, 23, 30, 31 May; 1, 7, 8, 11, 15, 18, 19 June. **Census:** Golden-crowned Kinglet, 81.5 territories (77/40 ha); Fox Sparrow, 50.5 (48); Red-breasted Nuthatch, 21.5 (20; 11N); Dusky Flycatcher, 16.5 (16; 2N); Brown Creeper, 16.0 (15; 2N); Dark-eyed Junco, 15.0 (14; 8N); Mountain Chickadee, 10.5 (10; 6N); Western Tanager, 10.5; Hammond's Flycatcher, 9.5 (9; 2N); MacGillivray's Warbler, 9.0 (8); Hermit Warbler, 8.5 (8); Yellow-rumped Warbler, 7.0 (7); Mountain Quail, 5.5 (5); White-headed Woodpecker, 5.5 (6N); Steller's Jay, 5.0 (5); American Robin, 4.0 (4); Red-breasted Sapsucker, 3.5 (3; 4N); Solitary Vireo, 3.0 (3); Hermit Thrush, 2.0; Evening Grosbeak, 1.5; Pileated Woodpecker, 1.0; Winter Wren, 1.0; Townsend's Solitaire, 1.0 (1N); Green-tailed Towhee, 1.0; Northern Pygmy-Owl, 0.5; Band-tailed Pigeon, 0.5; Vaux's

Swift, 0.5; Hairy Woodpecker, 0.5 (1N); Northern Flicker, 0.5; Common Raven, 0.5 (1N). **Total:** 30 species; 293.5 territories (278/40 ha). **Visitors:** Sharp-shinned Hawk, Calliope Hummingbird, Olive-sided Flycatcher, Western Wood-Pewee, Western Flycatcher, Clark's Nutcracker, White-breasted Nuthatch, House Wren, Warbling Vireo, Chipping Sparrow, Pine Siskin, Lesser Goldfinch, Cassin's Finch. **Remarks:** All boundary territories were computed as 0.5. **Acknowledgments:** We wish to acknowledge Tracy Tennant and D. Parker Backstrom who were inadvertently omitted as observers on this plot in 1989. This effort is part of a study of bird monitoring techniques being conducted by Dr. Jared Verner, USDA Forest Service.

30. PONDEROSA PINE FOREST

BOSQUE DE PINO PONDEROSA

LOUISE HERING

5000 Butte, Vista Village, #145
Boulder, Colorado 80301

Location: Colorado; Boulder Co.; Boulder; Enchanted Mesa; 40°20'N, 105°16'W; Boulder Quadrangle, USGS. **Continuity:** Established 1965; 26 yr. **Size:** 8.1 ha. **Description of Plot:** See *Aud. Field Notes* 8:372 (1954). **Weather:** Mean temperature 15.6°C (range 10–25°C). **Coverage:** 24.1 h; 12 visits (11 mornings, 1 afternoon); 22 March; 14 April; 3, 12, 21, 22 May; 1, 6, 13, 22 June; 5, 23 July. **Census:** Western Wood-Pewee, 6.0 territories (30/40 ha); Pygmy Nuthatch, 5.0 (25); Broad-tailed Hummingbird, 3.0 (15); American Robin, 3.0 (1N); Chipping Sparrow, 3.0; Mourning Dove, 2.0; Violet-green Swallow, 2.0; Hairy Woodpecker, 1.0; Mountain Chickadee, 1.0; Solitary Vireo, 1.0; Brown-headed Cowbird, 1.0; Lesser Goldfinch, 1.0. **Total:** 12 species; 29 territories (143/40 ha). **Visitors:** Northern Flicker, Clark's Nutcracker, Western Tanager, House Finch, Black-headed Grosbeak, Black-billed Magpie, Steller's Jay, White-breasted Nuthatch, Pine Siskin. **Remarks:** The nesting population for this season was smaller than for 1989. Raiding of nests by Black-billed Magpies and Steller's Jays was minimal compared to 1982 after the forest was thinned. Few young were observed on the plot suggesting poor nesting success overall. **Acknowledgments:** Thanks to Vera Evenson for doing one survey and for her encouragement.

31. HEAVILY THINNED WHITE SPRUCE PLANTATION

PLANTACIÓN MADURA DE ABETO BLANCO

JULIET K. MARKOWSKY

1 Edgewood Drive
Orono, Maine 04473

Location: Maine; Penobscot Co.; Old Town; University Forest, Block C-4; 44°57'N, 68°41'W; Orono Quadrangle, USGS. **Continuity:** Established 1985; 6 yr. **Size:** 4.1 ha. **Description of Plot:** See *J. Field Ornithol.* 60 (suppl.):35 (1989). Two-thirds of the plantation was cut over during the winter of 1989-1990. Large (38-53 cm) White Spruce and White Pine were removed, as were parts of the understory. **Weather:** Mean temperature 12°C (range 4–17°C). Temperatures and precipitation during May and June were about average for the season. **Coverage:** 20 h; 10 visits (8 mornings, 1 evening); 16, 21, 24 May; 4, 12, 15, 20, 23, 27, 28 June. **Census:** Black-throated Green Warbler, 5.0 territories (49/40 ha); Northern Parula, 4.0 (39); White-throated Sparrow, 4.0; Black-capped Chickadee, 3.0 (29); Golden-crowned Kinglet, 3.0; Blackburnian Warbler, 3.0; Eastern Wood-Pewee, 2.0; Red-breasted Nuthatch, 2.0; Magnolia Warbler, 2.0; Black-and-white Warbler, 2.0; Ovenbird, 2.0; Hairy Woodpecker, 1.0; Northern Flicker, 1.0; Great Crested Flycatcher, 1.0; Blue Jay, 1.0; Brown Creeper, 1.0; Winter Wren, 1.0; Solitary Vireo, 1.0; Red-eyed Vireo, 1.0; Nashville Warbler, 1.0; Yellow-rumped Warbler, 1.0; Pine Warbler, 1.0; Bay-breasted Warbler, 1.0; Canada Warbler, 1.0; Purple Finch, 1.0. **Total:** 25 species; 46 territories (449/40 ha). **Visitors:**