

WINTER BIRD POPULATION STUDY: 1989

Habitat	State/ Prov.	Compiler	Plot Size (ha)	Ind. per 40 ha	Num. spp.	Hrs obs.	Yrs study
Broadleaf Forest							
1. Mixed Upland Broadleaf Forest	DC	S.A. Briggs	14.2	240	34	61	30
2. Mature Deciduous Floodplain Forest	MD	D. Gauthey	17.8	177	30	42	38
3. Oak-Maple Bottomland	MA	L.E. Taylor	6.7	44	9	8	8
4. Upland Second-growth Oak-Hickory Forest	MS	H. Moore	10.0	339	25	16	1
5. Isolated Beech-Maple Woods	NY	R. T. Engstrom	13.5	37	9	13	1
6. Beech-Maple Swamp Forest	OH	M.A. Robson	8.3	255	18	10	4
7. Riparian Deciduous Forest	OH	E.J. Tramer	18.0	242	25	26	1
8. Black Willow-White Ash Forest	ON	M.F.G. Clark	13.0	64	11	13	6
9. Sugar Maple-Mixed Hardwood Forest	PA	R.A. Ickes	9.7	163	16	24	6
Broadleaf/Coniferous Forest							
10. Maple-Pine-Oak Second-growth Forest	MA	W.E. Davis, Jr.	11.8	32	15	12	13
11. Upland Mixed Pine-Spruce-Hardwood Plantation	NY	E.W. Brooks	16.6	82	11	12	15
12. Coniferous-Deciduous Forest	ON	M.F.G. Clark	9.2	112	11	13	4
13. Mixed Oak-Pine Forest I	PA	D.A. Gross	6.0	73	9	9	10
14. Mixed Oak-Pine Forest II	PA	D.A. Gross	11.1	47	10	11	10
15. Second-growth Broadleaf-Coniferous Forest	WA	D. Smith	21.5	259	28	17	2
Coniferous Forest							
16. Sand Pine Scrub	FL	C.L. Cink	8.1	197	13	11	2
17. Upland Scotch Pine Plantation	NY	E.W. Brooks	9.3	120	7	10	5
18. Ponderosa Pine-Douglas-fir	WA	T.H. Rogers	11.2	25	10	19	13

WINTER BIRD POPULATION STUDY: 1989 (Continued)

Habitat	State/ Prov.	Compiler	Plot Size (ha)	Ind. per 40 ha	Num. spp.	Hrs obs.	Yrs study
Mixed Habitat (Forest/Non-forest)							
19. Conifer-Brush-Grass Foothills Ecotone	CO	R.G. Beidleman	28.3	26	15	14	6
20. Young White Ash-Red Maple Forest on Lake Shore	NY	G.R. Maxwell	16.2	337	36	15	3
21. Floodplain Forest and Cultivated Bottomland	NY	V.M. Pitzrick	51.8	41	29	11	18
22. Abandoned Upland Pasture	NY	V.M. Pitzrick	8.0	188	17	5	6
Shrubland							
23. Recently Burned Scrubby Flatwoods	FL	C.L. Gink	8.1	340	26	10	2
24. Brushland (Old-field Succession)	IN	J.D. Webster	17.1	131	33	24	7
25. Black Greasewood-Salgrass Association	OR	R.D. Dixon	16.5	26	9	11	2
Wetlands							
26. Coastal Freshwater Marsh	CA	J. Kelly	10.5	678	48	11	4
27. Barrier Beach and Saltwater Estuary	FL	R.W. Loftin	212.5	487	81	24	12
Fields or Cultivated							
28. Mature Citrus Orchard	FL	F.E. Lohrer	13.7	310	20	16	1
29. Brushy Field with Trees and Hill	ON	M.F.G. Clark	6.3	79	9	6	6
30. Field, Ridge, and Shrubby Trees	ON	M.F.G. Clark	6.6	173	15	11	4
31. Mixed Croplands	PA	P.W. Schwalbe	40.5	257	10	3	7
Residential/Urban							
32. Suburban Cemetery	AL	T.A. Imhof	15.0	1984	35	18	8

1. MIXED UPLAND BROADLEAF FOREST

BOSQUE MIXTO DE HOJA ANCHA DE ALTURA

SHIRLEY A. BRIGGS

7605 Honeywell Lane
Bethesda, Maryland 20814

Location: District of Columbia; Washington; Glover-Archbold Park; 38°55'N 77°05'W; Washington West Quadrangle, USGS. **Continuity:** Established 1960; 30 consecutive yrs. **Size:** 14.2 ha. **Description of Area:** See *Aud. Field Notes* 14:502-503 (1960). **Weather:** Mean temperature: 4.2°C (range -5 to 14.4°C). **Coverage:** 60.5 hrs; 22.4 complete coverages; 25 visits (18 mornings, 7 evenings); 20 Dec. to 25 Feb. **Count:** Carolina Chickadee, 22.3 ind./visit (25 visits); Tufted Titmouse, 9.0 (24); American Crow, 8.6 (24); Mourning Dove, 7.0 (24); Downy Woodpecker, 4.8 (24); White-breasted Nuthatch, 4.8 (25); Northern Cardinal, 4.3 (21); House Finch, 4.2 (14); Carolina Wren, 3.5 (21); Red-bellied Woodpecker, 3.3 (21); Rock Dove, 1.8 (10); American Goldfinch, 1.8 (12); White-throated Sparrow, 1.3 (8); European Starling, 1.1 (10); Dark-eyed Junco, 1.1 (13); Hairy Woodpecker, 1.0 (13); House Sparrow, 1.0 (4); Northern Mockingbird, 0.7 (11); Pileated Woodpecker, 0.6 (10); Purple Finch, 0.6 (2); Northern Flicker, 0.5 (8); Red-tailed Hawk, 0.4 (9); Brown Creeper, 0.2 (5); Blue Jay, 0.2 (3); Song Sparrow, 0.2 (4); Black Vulture, 0.1 (1); Turkey Vulture, 0.1 (2); Ring-billed Gull, 0.1 (1); Yellow-bellied Sapsucker, 0.1 (2); Winter Wren, 0.1 (3); American Robin, 0.1 (1); Common Grackle, 0.1 (3); Red-shouldered Hawk, <0.1 (1); Gray Catbird, <0.1 (1). **Total:** 34 species; 85.1 ind./visit; (240 ind./40 ha). **Remarks:** This year's figures are consistent with the numbers and species we have found in recent years, slightly down from last year, but within range. **Other Observers:** Anne Beal, Mary D'Imperio, Ann Feather, Olive Holbrook, Jane Whitaker.

2. MATURE DECIDUOUS FLOODPLAIN FOREST

BOSQUE DECIDUO MADURO INUNDABLE

DICK GAUTHEY

6603 Reynard Drive
Springfield, Virginia 22152

Location: Maryland; Montgomery Co.; Glen Echo; Cabin John Island; 38°58'N, 77°08'W; Falls Church Quadrangle, USGS. **Continuity:** Established 1947; 38 intermittent yrs. **Size:** 17.8 ha. **Description of Area:** See *Aud. Field Notes* 2:155-156 (1948). **Weather:** Mean temperature: 3.7°C (range -2 to 7°C). **Coverage:** 41.7 hrs; 12 visits (all mornings); 7, 11, 16, 20 (3 visits), 24, 28, 29, 31 Jan.; 4, 19 Feb. **Count:** Carolina Chickadee, 26.9 ind./visit (12 visits); Tufted Titmouse, 7.6 (12); Carolina Wren, 6.8 (12); Downy Woodpecker, 5.8 (12); Golden-crowned Kinglet, 4.1 (10); Northern Cardinal, 3.8 (11); European Starling, 3.0 (6); American Crow, 2.9 (7); Red-bellied Woodpecker, 2.4 (11); White-breasted Nuthatch, 2.4 (11); Pileated Woodpecker, 2.1 (12); Brown Creeper, 2.1 (12); American Goldfinch, 1.3 (5); Song Sparrow, 1.2 (4); Mourning Dove, 1.0 (5); Barred Owl, 0.8 (9); Belted Kingfisher, 0.8 (8); Winter Wren, 0.7 (6); Great Blue Heron, 0.6 (6); Hairy Woodpecker, 0.5 (5); Yellow-bellied Sapsucker, 0.4 (5); Common Merganser, 0.3 (2); Red-tailed Hawk, 0.3 (3); Blue Jay, 0.3 (2); Northern Mockingbird, 0.3 (4); Northern Flicker, 0.2 (2); Sharp-shinned Hawk, 0.1 (1); Rock Dove, 0.1 (1); Ruby-crowned Kinglet, 0.1 (1); Yellow-rumped Warbler, 0.1 (1). **Total:** 30 species; 78.6 ind./visit (177 ind./40 ha). **Remarks:** January was particularly warm, 2.5°C warmer than average. Water was open most of the month on the site.

3. OAK-MAPLE BOTTOMLAND

BOSQUE DE ROBLE-ARCE EN TIERRAS BAJAS

LEE E. TAYLOR

28 Bellington Street
Arlington, Massachusetts 02174

Location: Massachusetts; Middlesex Co.; Waltham; Metropolitan State Hospital; 42°24'N 71°12'W; Lexington Quadrangle, USGS. **Continuity:** Established 1982; 8 consecutive yrs. **Size:** 6.7 ha. **Description of Area:** See *Am. Birds* 37:31-32 (1983). **Weather:** Mean temperature: -3.9°C (range -9 to 3°C). **Coverage:** 7.5 hrs; 10 visits (all mornings); 24 Dec.; 7, 8, 14, 16, 28, 29 Jan.; 4, 5, 11 Feb. **Count:** Black-capped Chickadee, 2.0 ind./visit (5 visits); Downy Woodpecker, 1.2 (6); Tufted Titmouse, 1.2 (3); American Crow, 1.1 (1); White-breasted Nuthatch, 0.9 (5); Brown Creeper, 0.5 (4); Golden-crowned Kinglet, 0.2 (1); American Robin, 0.2 (1); Hairy Woodpecker, 0.1 (1). **Total:** 9 species; 7.4 ind./visit (44 ind./40 ha). **Remarks:** Unusually little snow cover this year. Tried for owls two nights, but there was no response.

4. UPLAND SECOND-GROWTH OAK-HICKORY FOREST

BOSQUE SECUNDARIO ROBLE-NOGAL DE ALTURAS

HAL MOORE

1 Lakeside Drive
Vicksburg, Mississippi 39180

Location: Mississippi; Warren Co.; Vicksburg; Lake Park Area; 32°14'N, 90°49'W; Big Black Quadrangle, USGS. **Continuity:** New. **Size:** 10.0 ha (square). **Description of Plot:** Typical managed upland woodland of the Loess Hills. Contains a merchantable stand of high quality timber, averaging 35.6 cm dbh and 24.4 m tall. Forest canopy closed, shrub and ground cover sparse. Trees 7.6 cm dbh and over, based on five 0.04 ha circular plots, 455/ha; total basal area, 17.3 m²/ha. Species comprising 90% of the total number of trees [figures after each give trees/ha, relative density (%), relative dominance (%) and frequency (%), in that sequence]: Winged Elm 99, 22, 19, 100; Bitternut Hickory 59, 13, 8, 100; Sweetgum 49, 11, 4, 80; Black Locust 44, 10, 3, 20; American Basswood 25, 6, 3, 20; dead trees 25, 6, 12, 60; Yellow Poplar 15, 3, 5, 2; Water Oak 15, 3, 11, 40; American Beech 10, 2, 5, 40; Sassafras 10, 2, 7, 20; Red Mulberry 10, 2, 1, 40; Swamp Chestnut Oak 10, 2, 2, 90; Eastern Hophornbeam 10, 2, 2, 40; White Ash 10, 2, 2, 40; Sugarberry 5, 1, 1, 20; Black Cherry 5, 1, 1, 20; Persimmon 5, 1, 1, 20; Red Cedar 5, 1, 1, 20. Trees by diameter size class [figures after each give trees/ha, relative density (%), basal area (m²/ha), and relative dominance (%), in that sequence]: A (7.6-15.2 cm) 247, 54, 2.3, 13; B (15.2-22.9 cm) 79, 17, 2.2, 12; C (22.9-38.1 cm) 84, 19, 6.2, 34; D (38.1-53.3 cm) 44, 10, 7.4, 41. Shrub stems/ha 10,323; ground cover, 43%; canopy cover, 94%; mean canopy height, 24 m (range 12-30). The timber was cut over 10 years previously. **Topography and Elevation:** Deeply dissected Loess soil; 60 to 73 m. **Edge:** The plot is largely surrounded by oak-hickory forest. However, the plot is bordered on the W side by an asphalt road and 24 ha lake. The lake is 60 to 183 m from the plot with houses along the lake. Two Loblolly Pine plantations touch the boundary on the E and S boundaries. **Water:** One deeply dissected intermittent stream along the E boundary. **Weather:** Mean temperature: 6.6°C (range -2 to 18.3°C). **Coverage:** 16.2 hrs; 10 visits (all mornings); 14 Dec.; 16, 22, 23, 25, 28 Jan.; 9, 23, 24, 25 Feb. **Count:** Tufted Titmouse, 17.5 ind./visit (10 visits); Red-bellied Woodpecker, 17.3 (10); Yellow-rumped Warbler, 8.8 (9); Carolina Chickadee, 8.5 (10); Carolina Wren, 7.5 (10); Ruby-crowned Kinglet, 3.3 (9); Hermit Thrush, 3.2 (9); Northern Cardinal, 3.1 (8); American Crow, 3.0 (8); Downy Woodpecker, 2.8 (9); Yellow-bellied Sapsucker, 1.6 (8); Pileated Woodpecker, 1.6 (6); Golden-crowned Kinglet, 1.2 (5); Northern Flicker, 1.1 (5); Blue Jay, 1.0 (5); Red-shouldered Hawk, 0.8 (4); American Goldfinch, 0.6 (2); Black Vulture, 0.4 (3); American Woodcock, 0.3 (2); Brown Creeper,

0.3 (3); Cedar Waxwing, 0.3 (1); Eastern Bluebird, 0.2 (2); Brown Thrasher, 0.2 (2); Barred Owl, 0.1 (1); White-throated Sparrow, 0.1 (1). **Total:** 25 species; 84.8 birds/visit (339 ind./40 ha).

5. ISOLATED BEECH-MAPLE WOODS

BOSQUE AISLADO DE HAYA-ARCE

R. TODD ENGSTROM

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159 Sapsucker Woods Road
Ithaca, New York 14850*

Location: New York; Tompkins Co.; Ithaca; Sapsucker Woods (West); 42°29'N, 76°27'W; Ithaca East Quadrangle, USGS. **Continuity:** New. **Size:** 13.5 ha. **Description of Plot:** See Breeding Bird Census this issue. **Weather:** Mean temperature: 1°C (range -6.6 to 9°C); little snow on ground during 7 of 9 visits. **Coverage:** 13 hrs; 9 visits (all mornings); 15, 17, 20, 22, 23, 25, 29 Jan.; 1, 7 Feb. **Count:** Black-capped Chickadee, 5.1 ind./visit (6 visits); American Crow, 2.0 (4); White-breasted Nuthatch, 1.9 (7); Downy Woodpecker, 1.1 (7); Hairy Woodpecker, 1.1 (6); Pileated Woodpecker, 0.8 (7); Tufted Titmouse, 0.2 (1); Red-bellied Woodpecker, 0.1 (1); House Finch, 0.1 (1). **Total:** 9 species; 12.4 ind./visit (37 ind./40 ha). **Remarks:** Unusually little snow during the count period. **Acknowledgments:** Thanks to Susan Minges for help during the counts.

6. BEECH-MAPLE SWAMP FOREST

BOSQUE PANTANOSO DE HAYA-ARCE

MICHAEL A. ROBSON

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Ada, Ohio 45810*

Location: Ohio; Hardin Co.; Ada; Moore-Shadley Woods; 40°43'N, 83°48'W; Alger Quadrangle, USGS. **Continuity:** Established 1974; 4 intermittent years. **Size:** 8.3 ha. **Description of Plot:** See *Am. Birds* 29:760-761 (1974). **Weather:** Mean temperature: 1.8°C (range -9 to 16°C). **Coverage:** 10 hrs; 10 visits (2 mornings, 8 afternoons); 9, 13 Dec.; 3, 7, 10, 14, 17, 31 Jan.; 4, 8 Feb. **Count:** House Sparrow, 10.3 ind./visit (7 visits); European Starling, 8.1 (2); White-breasted Nuthatch, 6.5 (10); Tufted Titmouse, 5.9 (10); Carolina Chickadee, 5.6 (9); Downy Woodpecker, 5.4 (10); Dark-eyed Junco, 2.6 (7); Blue Jay, 1.6 (6); Song Sparrow, 1.5 (6); Northern Cardinal, 1.3 (5); Brown Creeper, 0.9 (5); Red-bellied Woodpecker, 0.7 (5); American Crow, 0.7 (2); American Tree Sparrow, 0.6 (1); Mourning Dove, 0.5 (2); Hairy Woodpecker, 0.5 (4); Red-tailed Hawk, 0.1 (1); Great Horned Owl, 0.1 (1). **Total:** 18 species; 52.9 ind./visit (255 ind./40 ha). **Remarks:** Three feeders in the area contained sunflower seeds; one contained animal fat.

7. RIPARIAN DECIDUOUS FOREST

BOSQUE DECIDUO RIVEREÑO

ELLIOT J. TRAMER

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The University of Toledo
Toledo, Ohio 43606*

Location: Ohio; Lucas Co.; Waterville; "Old Canal Lands"; 41°28'N, 83°46'W; Grand Rapids Quadrangle, USGS. **Continuity:** New. **Size:** 18.0 ha. **Description of Plot:** See

Breeding Bird Census this issue. **Weather:** Mean temperature: 2.3°C (range -3 to 9°C). **Coverage:** 25.9 hrs; 11 visits (all mornings); 19, 28 Dec.; 1, 7, 13, 18, 30 Jan.; 1, 12, 17, 25 Feb. **Count:** House Finch, 26.6 ind./visit (11 visits); Mourning Dove, 26.2 (11); American Crow, 6.7 (5); Downy Woodpecker, 5.9 (11); White-breasted Nuthatch, 5.8 (11); House Sparrow, 5.2 (9); Dark-eyed Junco, 4.6 (11); Black-capped Chickadee, 4.4 (11); American Goldfinch, 4.1 (11); Tufted Titmouse, 3.3 (11); Golden-crowned Kinglet, 3.0 (11); Brown Creeper, 2.5 (11); Hairy Woodpecker, 2.1 (11); Northern Cardinal, 2.1 (11); Blue Jay, 1.9 (8); Carolina Wren, 1.2 (6); Song Sparrow, 1.0 (8); Red-bellied Woodpecker, 0.9 (10); Cooper's Hawk, 0.5 (5); Brown-headed Cowbird, 0.4 (1). European Starling, 0.3 (3); Sharp-shinned Hawk, 0.2 (2); Red-tailed Hawk, 0.1 (1); American Kestrel, 0.1 (1); White-throated Sparrow, 0.1 (1). **Total:** 25 species; 109 ind./visit (242 ind./40 ha). **Remarks:** Six species (Mourning Dove, European Starling, Brown-headed Cowbird, American Goldfinch, House Finch, and House Sparrow) were seen primarily at or near feeding stations and rarely elsewhere on the plot. Large flocks of American Crows (high abundance rank, low frequency) fed and loafed on the river ice, and occasionally foraged on the ground within the plot. Numbers of the other species were fairly consistent throughout the period.

8. BLACK WILLOW-WHITE ASH FOREST

BOSQUE DE SAUCE NEGRO-SAUCE BLANCO

MICHAEL F.G. CLARK

27 Skyline Drive
Dundas, Ontario L9H 3S3

Location: Ontario; Region of Hamilton-Wentworth; Dundas; 43°16'00"N, 79°55'30"W. **Continuity:** Established 1984; 6 consecutive yrs. **Size:** 13 ha. **Description of Area:** See *J. Field Ornithol.* 60(suppl.):9 (1989). **Weather:** Mean temperature: 1.8°C (-10 to 3.5°C). **Coverage:** 13 hrs; 8 visits (6 mornings, 2 afternoons); 3, 22, 26 Dec.; 14, 21 Jan.; 18 (2 visits), 25 Feb. **Count:** Black-capped Chickadee, 10.5 ind./visit (8 visits); European Starling, 3.9 (3); Downy Woodpecker, 2.5 (7); White-breasted Nuthatch, 1.8 (7); American Goldfinch, 0.8 (4); Northern Cardinal, 0.5 (4); Great Blue Heron, 0.3 (1); Red-tailed Hawk, 0.3 (2); Hairy Woodpecker, 0.1 (1); Brown Creeper, 0.1 (1); Song Sparrow, 0.1 (1). **Total:** 11 species; 20.8 ind./visit (64 ind./40 ha). **Remarks:** Species numbers and the total bird count were down, perhaps because of the preceding summer's excessive dryness and the below normal winter precipitation. The species count (11) was the lowest for the 6 years of coverage (next lowest: 15), and the overall individual total (166) was the second lowest. While bark-foragers were again the most frequent and heaviest plot users, creeper, and woodpecker totals hit a six-year low. Of some interest was a Red-tailed Hawk scavenging a dead Great Blue Heron on Dec. 26.

9. SUGAR MAPLE-MIXED HARDWOOD FOREST

BOSQUE MIXTO DE MADERAS DURAS-ARCE DE ALMIBAR

ROY A. ICKES

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Washington, Pennsylvania 15301

Location: Pennsylvania; Washington Co.; Washington; 40°08'N 80°11'W; Washington East Quadrangle, USGS. **Continuity:** Established 1983; 6 intermittent yrs. **Size:** 9.74 ha. **Description of Area:** See *Am. Birds* 37:55-56 (1983). **Weather:** Mean temperature: -1.6°C (range -4 to 1°C). **Coverage:** 24 hrs; 8 visits (all mornings); 2, 3, 7, 9, 10, 11, 13, 14 Jan. **Count:** Tufted Titmouse, 9.9 ind./visit (8 visits); White-breasted Nuthatch, 8.9 (8); Downy Woodpecker, 5.1 (8); Carolina Chickadee, 4.9 (8); Red-bellied Woodpecker, 3.4 (8); Black-capped Chickadee, 3.3 (8); Hairy Woodpecker, 0.9 (5); Northern Cardinal, 0.8 (3); Blue Jay, 0.6 (4); Brown Creeper, 0.6 (5); Pileated Woodpecker, 0.5 (4); American Crow, 0.4

(2); Ruffed Grouse, 0.1 (1); Northern Flicker, 0.1 (1); Carolina Wren, 0.1 (1); Hermit Thrush, 0.1 (1). **Total:** 16 species; 39.6 ind./visit (163 ind./40 ha). **Remarks:** The mean number of individuals per visit for every regularly occurring species was within one individual of its 6-year average. The Hermit Thrush was a new species for the plot. The 7-year species total is 24. **Acknowledgments:** Thanks to Ernest Abernathy for the use of his property and to Edward Sweet and my ornithology class for their help in the field.

10. MAPLE-PINE-OAK SECOND-GROWTH FOREST

BOSQUE SECUNDARIO DE ARCE-PINO-ROBLE

WILLIAM E. DAVIS, JR.

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Boston, Massachusetts 02215*

Location: Massachusetts; Norfolk Co., Town of Foxboro conservation land, off Willow and E. Sts.; 42°04'N, 71°11'30"W. Mansfield Quadrangle, USGS. **Continuity:** Established 1977; 13 consecutive yrs. **Size:** 11.8 ha. **Description of Area:** See *Am. Birds* 31:50-51 (1977). **Weather:** Ground bare on 8 visits; snow cover on other visits ranged from 2 to 7.6 cm. Mean temperature: -4°C (range -10 to 1°C). Weather data for Boston, about 30 km N, supplied by U.S. Nat'l Weather Service: for Dec., Jan. and Feb. temperature departures from normal were respectively -0.5, 2.7, and -0.1°C; rainfall equivalent precipitation departures were respectively -8.79, -8.59, and -3.02 cm. **Coverage:** 12 hrs; 12 visits (all mornings); 18, 19, 27, 29 Dec.; 1, 3, 16, 22 Jan.; 4, 10, 11, 18 Feb. **Count:** Black-capped Chickadee, 3.3 ind./visit (8 visits); Cedar Waxwing, 1.8 (1); White-breasted Nuthatch, 1.3 (7); Tufted Titmouse, 0.8 (4); Downy Woodpecker, 0.5 (5); Brown Creeper, 0.3 (3); American Robin, 0.3 (1); Red-tailed Hawk, 0.2 (2); Ruffed Grouse, 0.2 (2); Hairy Woodpecker, 0.2 (1); Carolina Wren, 0.2 (1); Golden-crowned Kinglet, 0.2 (2); American Goldfinch, 0.2 (1); American Crow, 0.1 (1); Dark-eyed Junco, 0.1 (1). **Total:** 15 species; 9.3 ind./visit (32 ind./40 ha). **Remarks:** The largest mixed species foraging flock contained 6 chickadees, 2 nuthatches, and 2 goldfinches. Crows were heard or seen near the plot on 5 visits. The number of species recorded per hour of observation was 1.2; the number of individuals sighted per hour was 9.7.

11. UPLAND MIXED PINE-SPRUCE-HARDWOOD PLANTATION

PLANTACIONES MIXTAS DE PINO-ABETO MADERAS DURAS EN ALTURA

ELIZABETH W. BROOKS

*1435 Waterwells Road
Alfred Station, New York 14803*

Location: New York; Allegany Co.; Alfred; Philips Creek State Reforestation Tract; 42°8'N, 77°45'W; Andover Quadrangle, USGS. **Continuity:** Established 1974; 15 intermittent years (only 1988 omitted). **Size:** 16.6 ha. **Description of Plot:** See *Am. Birds* 28:699-700 (1974). **Weather:** Mean temperature: -1.8°C (range -11 to 6°C); Jan. average temperature (-2.6°C) was 2.7° warmer than normal. January snowfall (18.4 cm) was 18 cm less than normal. **Coverage:** 11.9 hrs; 8 visits (all mornings); 29, 31 Dec.; 2, 5, 11, 18, 24, 29 Jan. **Count:** Black-capped Chickadee, 19.1 ind./visit (8 visits); Red-breasted Nuthatch, 6.6 (8); White-breasted Nuthatch, 2.0 (8); Golden-crowned Kinglet, 1.9 (8); Brown Creeper, 1.5 (7); Blue Jay, 0.9 (5); Ruffed Grouse, 0.6 (5); Downy Woodpecker, 0.5 (4); Hairy Woodpecker, 0.4 (2); Barred Owl, 0.3 (2); Pileated Woodpecker, 0.1 (1). **Total:** 11 species; 33.9 ind./visit (82 ind./40 ha). **Remarks:** Highest number of chickadees ever recorded; total number of

Red-breasted Nuthatches tied highest number ever; no winter finches; weather was unusually mild with never more than 4 cm snow cover.

12. CONIFEROUS-DECIDUOUS FOREST

BOSQUE DE CONÍFEROS-DECIDUO

MICHAEL F.G. CLARK

27 Skyline Drive
Dundas, Ontario L9H 3S3

Location: Ontario; Region of Hamilton-Wentworth; Dundas; 43°14'10"N, 80°02'00"W. **Continuity:** Established 1986; 4 yrs. **Size:** 9.2 ha. **Description of Plot:** See *J. Field Ornithol.* 60(suppl.):11 (1989). **Weather:** Mean temperature: 0.1°C (range -6.5 to 3.5°C). **Coverage:** 13.1 hrs; 8 visits (6 mornings, 2 afternoons); 19, 31 Dec.; 2, 28, 29 Jan.; 4, 19, 25 Feb. **Count:** Black-capped Chickadee, 19.1 ind./visit (8 visits); White-breasted Nuthatch, 2.8 (8); Brown Creeper, 0.9 (3); Downy Woodpecker, 0.8 (5); American Crow, 0.6 (2); Northern Cardinal, 0.5 (3); Blue Jay, 0.4 (2); Hairy Woodpecker, 0.3 (2); Dark-eyed Junco, 0.3 (2); Great Horned Owl, 0.1 (1); American Robin, 0.1 (1). **Total:** 11 species; 25.8 ind./visit (112 ind./40 ha). **Remarks:** Black-capped Chickadee total surpassed last year's exceptional high of 146. At times chickadees moved rather rapidly through plot in waves of 16-20 birds, atypically feeding very high in trees. Total for all birds was second lowest for plot coverage (4 yrs). Species total (11) is near plot average.

13. MIXED OAK-PINE FOREST I

BOSQUE MIXTO DE ROBLE-PINO I

DOUGLAS A. GROSS

Ecology III, Susquehanna Biological Laboratory
R.D. 1, U.S. Rt. 11
Berwick, Pennsylvania 18603

Location: Pennsylvania; Luzerne Co.; Wapwallopen; Council Cup Forest; Pennsylvania Power and Light Company; 41°04'N, 76°07'W; Sybertsville Quadrangle, USGS. **Continuity:** Established 1980; 10 consecutive yrs, but this is first publication. **Size:** 6.0 ha. **Description of Plot:** See *Am. Birds* 33:70 (1979). **Weather:** Clear on 4 counts, overcast on 2 counts, partly cloudy on 1 count. Temperatures ranged from -10.0 to 4.5°C. Winds usually calm, reaching 10 kph on one count. No snow cover on 5 counts, light coating on 1 count, 2.5 cm on 1 count (27 Feb.). An unusually dry, snowless winter. **Coverage:** 9 hrs.; 7 visits (all mornings); 18, 30 Dec.; 16, 23 Jan.; 7, 17, 27 Feb. **Census:** Black-capped Chickadee, 3.4 ind./visit (5 visits); Tufted Titmouse, 2.7 (6); White-breasted Nuthatch, 2.0 (7); Downy Woodpecker, 1.1 (6); Golden-crowned Kinglet, 0.6 (2); Pileated Woodpecker, 0.4 (3); American Crow, 0.3 (1); Brown Creeper, 0.3 (1); Ruffed Grouse, 0.1 (1). **Total:** 9 species; 11 ind./visit (73 ind./40 ha). **Remarks:** Chickadee and titmouse populations seemed to collapse in February. On 2 counts I saw chickadees only during last 5 minutes of count. The American Crows were frequently overhead and appeared to be a resident family.

14. MIXED OAK-PINE FOREST II

BOSQUE MIXTO DE ROBLE-PINO II

DOUGLAS A. GROSS

Ecology III, Susquehanna Biological Station
R.D. 1, U.S. Rt. 11
Berwick, Pennsylvania 18603

Location: Pennsylvania; Luzerne Co.; Beach Haven; TR419 Forest; Pennsylvania Power and Light Company; 41°05'N, 76°08'W; Berwick Quadrangle, USGS. **Continuity:** Estab-

lished 1980; 10 consecutive yrs, but this is first publication. **Size:** 11.1 ha. **Description of Plot:** See *Am. Birds* 33:70 (1979). **Weather:** Clear on 3 counts, overcast on 1 count, mostly cloudy on 1, mostly clear on 1, and overcast turning to sleet and snow on 1 count. Temperatures ranged from -7.5 to 7.5°C (relatively warm). No snow cover on any counts except the slight amount accumulated during one count. An exceptionally dry, snowless winter. **Coverage:** 11 hrs.; 7 visits (all mornings); 17, 29 Dec.; 13, 20 Jan.; 1, 10, 24 Feb. **Census:** Black-capped Chickadee, 4.3 ind./visit (6 visits); Tufted Titmouse, 2.7 (7); White-breasted Nuthatch, 1.4 (6); Brown Creeper, 1.0 (4); Downy Woodpecker, 0.9 (3); American Crow, 0.9 (2); Golden-crowned Kinglet, 0.9 (2); Carolina Wren, 0.4 (3); Northern Cardinal, 0.4 (3); Hairy Woodpecker, 0.3 (2). **Total:** 10 species; 13.1 ind./visit; 47 ind./40 ha. **Remarks:** Chickadee and titmouse populations seemed more scattered than past years, especially in late January and February. Kinglet populations nosedived from previous winter densities.

15. SECOND-GROWTH BROADLEAF-CONIFEROUS FOREST

BOSQUE SECUNDARIO DE HOJA ANCHA-CONÍFEROS

DORY SMITH

120 Olympic View Avenue South
Sequim, Washington 98382

Location: Washington; Clallam Co.; Sequim; Dungeness Recreation Area; $48^{\circ}08'N$, $123^{\circ}12'W$, Dungeness Quadrangle, USGS. **Continuity:** Established 1988; 2 consecutive years. **Size:** 21.5 ha. **Description of Plot:** See *J. Field Ornithol.* 60(suppl.):18 (1989). **Weather:** Mean temperature: 3.6°C (range -4 to 6°C). **Coverage:** 17 hrs; 10 visits (all mornings); 23, 28 Dec.; 4, 10, 18, 20, 22 Jan.; 5, 11, 20 Feb. **Count:** Pine Siskin, 49.6 ind./visit (6 visits); Golden-crowned Kinglet, 39.5 (10); Dark-eyed Junco, 11.5 (6); Song Sparrow, 7.0 (10); Ruby-crowned Kinglet, 5.3 (10); Rufous-sided Towhee, 4.9 (10); Red-breasted Nuthatch, 4.3 (10); Chestnut-backed Chickadee, 3.5 (8); Fox Sparrow, 3.2 (8); Varied Thrush, 1.9 (5); Black-capped Chickadee, 1.8 (5); Bewick's Wren, 1.5 (10); Red Crossbill, 1.3 (3); Winter Wren, 1.1 (7); Steller's Jay, 0.6 (4); American Robin, 0.6 (3); California Quail, 0.2 (2); Mourning Dove, 0.2 (1); Downy Woodpecker, 0.2 (2); Northern Harrier, 0.1 (1); Cooper's Hawk, 0.1 (1); Ring-necked Pheasant, 0.1 (1); Red-breasted Sapsucker, 0.1 (1); American Crow, 0.1 (1); Common Raven, 0.1 (1); Bushtit, 0.1 (1); Northern Shrike, 0.1 (1); Purple Finch, 0.1 (1). **Total:** 28 species; 139.1 ind./visit (259 ind./40 ha). **Remarks:** Varied Thrushes increased in numbers following severe weather in early February, which drove them down from higher elevations. Fox sparrows and Pine Siskins were much more plentiful throughout the autumn and winter throughout the region. There was a noticeable drop in accipiter numbers (accipiters being the primary predator of birds in this plot) in this part of Clallam County, reflected in the drop from 3 in 1987-1988 to 1 in 1988-1989 in the study plot. There are two feeders along the E edge of the plot.

16. SAND PINE SCRUB

MATORRAL DE PINO COSTANERO

CALVIN L. CINK AND FRED E. LOHRER¹

Biology Department
Baker University
Baldwin City, Kansas 66006

Location: Florida; Highlands Co.; Lake Placid; Archbold Biological Station; $81^{\circ}20'23''N$, $27^{\circ}11'20''W$; Childs Quadrangle, USGS. **Continuity:** Established 1970; 2 intermittent years. **Size:** 8.1 ha. **Description of Plot:** See *Aud. Field Notes* 24:559 and 561. **Weather:** Mean temperature: 14.5°C (range 9.4 to 18.3°C). **Coverage:** 11 hrs; 8 visits (7 mornings, 1 evening); 21, 22, 23, 26 Jan.; 6, 7, 13, 14 Feb. **Count:** Rufous-sided Towhee, 22.3 ind./visit (8 visits); Carolina Wren, 7.0 (8); Blue Jay, 2.3 (6); Pine Warbler, 1.6 (3); Great Crested Flycatcher, 1.4 (6); White-eyed Vireo, 1.3 (5); Yellow-rumped Warbler, 1.1 (4); Ruby-crowned Kinglet,

1.0 (5); Brown Thrasher, 0.9 (4); Red-bellied Woodpecker, 0.5 (4); Downy Woodpecker, 0.3 (2); Cooper's Hawk, 0.1 (1); Whip-poor-will, 0.1 (1). **Total:** 13 species; 39.8 ind./visit (197 ind./40 ha). **Remarks:** Total density of birds on the plot was considerably less (197 vs 390/40 ha) than when it was last censused in 1970. Species numbers were about half what they were in 1970 (13 vs 25). There are no immediate explanations for the decline, though it has been noted that many mature Sand Pines (5–10%) have died and fallen over in the last 10 years (Fred Lohrer, pers. obs.). **Acknowledgments:** My thanks to Glen Woolfenden for showing me the location of the study plot and to James Layne for the use of equipment for remeasuring and marking the grid.

¹ Archbold Research Station, P.O. Box 2057, Lake Placid, Florida 33852.

17. UPLAND SCOTCH PINE PLANTATION

PLANTACIÓN EN ALTURA DE PINO ESCOCÉS

ELIZABETH W. BROOKS

1435 Waterwells Road
Alfred Station, New York 14803

Location: New York; Allegany Co.; Alfred; Foster Plantation; 42°07'N, 77°45'W; Andover Quadrangle, USGS. **Continuity:** Established 1984; 5 intermittent years (only 1988 omitted). **Size:** 9.3 ha. **Description of Plot:** See *Aud. Field Notes* 23:743–744 (1969). **Weather:** Mean temperature: -4.9°C (range -7 to -2°C). **Coverage:** 9.8 hrs; 8 visits (all mornings); 26, 30 Dec.; 1, 3, 10, 14, 22, 25 Jan. **Count:** Black-capped Chickadee, 19.6 ind./visit (8 visits); Ruffed Grouse, 2.4 (8); Wild Turkey, 2.1 (6); Golden-crowned Kinglet, 1.4 (5); Blue Jay, 1.0 (7); Red-breasted Nuthatch, 0.9 (5); Brown Creeper, 0.6 (5). **Total:** 7 species; 28 ind./visit (120 ind./40 ha). **Remarks:** Study period was exceptionally mild and snow-free. Snow cover never exceeded 3 cm in depth. Record number of chickadees were recorded. **Acknowledgments:** Appreciation to Tom and Kathy Kent, Phil Foster, and Cynthia Clements for permission to use the study area.

18. PONDEROSA PINE-DOUGLAS-FIR

BOSQUE DE PINO PONDEROSA-PINABETE DE DOUGLAS

THOMAS H. ROGERS

E. 10820 Maxwell
Spokane, Washington 99206

Location: Washington; Spokane Co.; Dishman; Dishman Hills Natural Area; 47°39'N, 117°17'W; Spokane Quadrangle, USGS. **Continuity:** Established 1976; 13 consecutive years. **Size:** 11.2 ha. **Description of Plot:** See *Am. Birds* 30:1051–1052 (1976). **Coverage:** 18.9 hrs; 9 visits. **Count:** Red-breasted Nuthatch, 3.9 ind./visit (9 visits); Red Crossbill, 1.3 (8); Ruffed Grouse, 0.7 (6); Common Raven, 0.3 (2); Black-capped Chickadee, 0.2 (1); White-breasted Nuthatch, 0.2 (2); Black-billed Magpie, 0.1 (1); Mountain Chickadee, 0.1 (1); Pygmy Nuthatch, 0.1 (1); Evening Grosbeak, 0.1 (1). **Total:** 10 species; 7.1 ind./visit (25 ind./40 ha).

19. CONIFER-BRUSH-GRASS FOOTHILLS ECOTONE

ECOTONO EN FALDA DE LA MONTAÑA
DE CONÍFERO-BREÑAL Y YERBAS

RICHARD G. BEIDLEMAN

Department of Biology
Colorado College
Colorado Springs, Colorado 80903

Location: Colorado; El Paso Co.; Colorado Springs; Cheyenne Mountain High School Environs; 38°48'N, 104°52'W Colorado Springs Quadrangle, USGS. **Continuity:** Estab-

lished 1964, 6 intermittent years. **Size:** 28.3 ha. **Description of Plot:** See *Aud. Field Notes* 18:401-402 (1964). **Weather:** Mean temperature: 0°C (range -7 to 7°C). **Coverage:** 14.1 hrs.; 10 visits (9 mornings, 1 afternoon); 28 Dec.; 2, 8, 15, 22, 29 Jan.; 11, 19, 26 Feb.; 5 March. **Census:** Black-billed Magpie, 4.7 ind./visit (9 visits); Scrub Jay, 4.3 (9); Dark-eyed Junco, 2.2 (4); Pine Siskin, 2.0 (4); Black-capped Chickadee, 1.8 (7); Common Raven, 0.7 (5); Steller's Jay, 0.5 (4); Mountain Chickadee, 0.5 (3); American Crow, 0.3 (1); White-breasted Nuthatch, 0.2 (2); Brown Creeper, 0.2 (2); Red-tailed Hawk, 0.1 (1); Downy Woodpecker, 0.1 (1); Northern Flicker, 0.1 (1); Rufous-sided Towhee, 0.1 (1). **Total:** 15 species; 18.1 ind./visit (26 ind./40 ha). **Remarks:** Over the quarter-century since the first winter-bird study here, the site has not changed ecologically except that the brushland is more dense. However, recent housing developments to the N have heavily impacted similar habitats. Species recorded were those of previous winters; but the Dark-eyed Junco, always the most abundant in the past, was reduced in numbers. Indeed, the census period, unlike past winters, was characterized by a dearth of bird diversity (15 species compared with a five-winter average of 24) and activity; on half of the trips there were four or fewer species encountered. On the other hand, there was greater mammal activity in the area than ever before. Snow cover was much deeper than ever before, making field work difficult and covering potential food for ground-feeding birds such as juncos and towhees. **Other Observers:** Reba E. Beidleman.

20. YOUNG WHITE ASH-RED MAPLE FOREST ON LAKE SHORE

BOSQUE JOVEN DE FRESNO BLANCO-ARCE
ROJO EN ORILLAS DE LAGOS

GEORGE R. MAXWELL

RD 1 Box 179C

Red Creek, New York 13143

Location: New York; Wayne Co.; Fair Haven; Blind Sodus Bay; Metzger Road; 43°20'N, 76°44'W; Oswego Quadrangle, USGS. **Continuity:** Established 1987; 3 consecutive years. **Size:** 16.2 ha. **Description of Plot:** See *J. Field Ornithol.* 60(suppl.):17 (1989). **Weather:** Mean temperature: 2.3°C (range -4°C to 5°C). **Coverage:** 15 hours; 10 visits (3 mornings, 7 afternoons); 5, 10, 25 Dec.; 1, 10, 14, 16, 17, 18, 19 Jan. **Count:** Ring-billed Gull, 37.0 ind./visit (8 visits); House Finch, 22.8 (10); House Sparrow, 20.1 (10); Canada Goose, 10.9 (4); Black-capped Chickadee, 9.2 (10); American Goldfinch, 6.8 (10); Mourning Dove, 6.0 (9); Blue Jay, 3.7 (10); Tufted Titmouse, 1.8 (10); American Tree Sparrow, 1.7 (8); Northern Cardinal, 1.6 (9); White-breasted Nuthatch, 1.5 (10); Red-breasted Merganser, 1.4 (2); American Crow, 1.4 (8); Hooded Merganser, 1.2 (2); Downy Woodpecker, 1.2 (8); Common Merganser, 1.0 (2); Herring Gull, 1.0 (1); Ruffed Grouse, 0.9 (4); Purple Finch, 0.8 (4); European Starling, 0.7 (4); Great Black-backed Gull, 0.6 (4); Dark-eyed Junco, 0.6 (3); Gadwall, 0.5 (1); Sharp-shinned Hawk, 0.4 (4); Red-bellied Woodpecker, 0.3 (3); Song Sparrow, 0.3 (3); Great Blue Heron, 0.2 (1); Hairy Woodpecker, 0.2 (1); Ring-necked Duck, 0.1 (1); Common Goldeneye, 0.1 (1); American Kestrel, 0.1 (1); Great Horned Owl, 0.1 (1); Pileated Woodpecker, 0.1 (1); Brown Creeper, 0.1 (1); American Robin, 0.1 (1). **Total:** 36 species; 136.5 ind./visit (337 ind./40 ha). **Remarks:** This year's count had the largest number of species of the 3 counts conducted thus far. Three species, Mallard, Evening Grosbeak, and Pine Siskin, were absent this year, but were present in large numbers in previous years.

21. FLOODPLAIN FOREST AND CULTIVATED BOTTOMLAND

BOSQUE INUNDABLE Y TIERRAS CULTIVADAS

VIVIAN M. PITZRICK

*Amity Lake**Belmont, New York 14813*

Location: New York; Allegany Co.; Scio; Maybee Plot; 42°10'N, 77°59'W; Wellsville Quadrangle, USGS. **Continuity:** Established 1971; 18 intermittent years. **Size:** 51.8 ha. **Description of Plot:** See *Am. Birds* 25:644-645 (1971). **Weather:** Mean temperature: -6.23°C (range -16.7 to 1.7°C). **Coverage:** 10.9 hrs; 8 visits; 10, 17, 30, 31 Dec.; 2, 7, 15 (partial), 20 (partial), 21 Jan. **Count:** Mourning Dove, 12.8 ind./visit (6 visits); Rock Dove, 7.3 (1); American Goldfinch, 4.3 (6); American Crow, 4.1 (8); House Sparrow, 3.1 (4); Black-capped Chickadee, 2.9 (7); House Finch, 2.9 (5); American Tree Sparrow, 1.8 (4); Blue Jay, 1.4 (6); European Starling, 1.4 (2); Dark-eyed Junco, 1.4 (3); Herring Gull, 1.0 (3); Belted Kingfisher, 1.0 (7); Common Merganser, 0.9 (1); Brown-headed Cowbird, 0.9 (1); Great Blue Heron, 0.8 (4); American Black Duck, 0.8 (3); Downy Woodpecker, 0.6 (4); White-breasted Nuthatch, 0.5 (3); Northern Cardinal, 0.5 (2); Song Sparrow, 0.5 (4); Mallard, 0.4 (1); Hairy Woodpecker, 0.4 (2); Red-winged Blackbird, 0.4 (1); Red-tailed Hawk, 0.1 (1); Pileated Woodpecker, 0.1 (1); Brown Creeper, 0.1 (1); Golden-crowned Kinglet, 0.1 (1); Purple Finch, 0.1 (1). **Total:** 29 species; 52.5 ind./visit (41 ind./40 ha). **Remarks:** Comparing 1989 with the 1971-1988 average (in parentheses): total species 29 (26); mean birds/visit: 52.5 (173); Am. Crow, 4.1 (61); and excluding crow and Snow Bunting, 48.4 (112). The bird population this year, lowest since the first year of the study, may be a reflection of a loss of feeders near the plot and the lack of corn gleanings and top dressings on the plot. Since inception of this study in 1971, Evening Grosbeak was absent for only the second time, Brown Creeper had not appeared since 1977 and Golden-crowned Kinglet appeared only in 1985. **Acknowledgments:** Grateful appreciation to Doris Burton for help on one visit and to Calvin Maybee for permission to use his property.

22. ABANDONED UPLAND PASTURE

PASTIZAL DE ALTURAS ABANDONADO

VIVIAN M. PITZRICK

*Amity Lake**Belmont, New York 14813*

Location: New York; Allegany Co.; Scio; Saunders Plot; 42°13'N, 77°59'W; Wellsville North Quadrangle, USGS. **Continuity:** Established 1984; 6 consecutive years. **Size:** 8.0 ha. **Description of Plot:** See *Am. Birds* 39:119 (1985). **Weather:** Mean temperature: -3°C (range -15 to 10°C). **Coverage:** 5.3 hrs; 8 visits (all morning, except for one partial afternoon visit); 14 Dec.; 9, 10, 11, 16, 17, 18, 24 (partial) Jan.; 1 (partial), 11 (partial) Feb. **Count:** Cedar Waxwing, 15.6 ind./visit (2 visits); House Finch, 8.4 (5); Black-capped Chickadee, 4.0 (7); American Tree Sparrow, 2.6 (3); Dark-eyed Junco, 2.0 (2); Blue Jay, 1.6 (5); Northern Cardinal, 0.8 (3); Downy Woodpecker, 0.5 (3); American Crow, 0.4 (3); White-breasted Nuthatch, 0.4 (2); American Goldfinch, 0.4 (2); Purple Finch, 0.3 (2); Red-tailed Hawk, 0.1 (1); Mourning Dove, 0.1 (1); Great Horned Owl, 0.1 (1); Hairy Woodpecker, 0.1 (1); Eastern Bluebird, 0.1 (1). **Total:** 17 species; 37.5 ind./visit (188 ind./40 ha). **Remarks:** Eastern Bluebird and House Finch are new for the plot. Evening Grosbeak was absent for the first time since inception of this study. Remains of a bird-killed Blue Jay were found in the snow on one visit. (Wing marks in snow but no tracks leading to kill.) **Acknowledgments:** Thanks to Raymond Pitzrick for help on the owling evening and to Gail and Victor Funk for permission to use their property.

23. RECENTLY BURNED SCRUBBY FLATWOODS

MATORRAL DE PINO COSTANERO

CALVIN L. CINK AND FRED E. LOHRER¹

*Biology Department
Baker University
Baldwin City, Kansas 66006*

Location: Florida; Highlands Co.; Lake Placid; Archbold Biological Station; 81°21'20"N, 27°11'00"W; Childs Quadrangle, USGS. **Continuity:** Established 1970; 2 intermittent years. **Size:** 8.1 ha. **Description of Plot:** See *Aud. Field Notes* 24:559-561. **Weather:** Mean temperature: 12.9°C (range 9.4 to 16.1°C). **Coverage:** 9.9 hrs; 8 visits (7 mornings, 1 evening); 19, 20, 21, 24, 25, 27, 30 Jan.; 2 Feb. **Count:** Rufous-sided Towhee, 30.0 ind./visit (8 visits); Common Yellowthroat, 9.0 (8); Palm Warbler, 7.0 (8); Scrub Jay, 3.0 (8); Northern Flicker, 2.3 (8); Chipping Sparrow, 2.3 (6); Yellow-rumped Warbler, 2.0 (8); Northern Bobwhite, 1.8 (8); American Robin, 1.5 (6); Red-bellied Woodpecker, 1.4 (8); Pine Warbler, 1.3 (4); Downy Woodpecker, 1.1 (6); Eastern Bluebird, 1.0 (1); Loggerhead Shrike, 0.9 (6); Blue Jay, 0.8 (6); Northern Mockingbird, 0.8 (6); White-eyed Vireo, 0.5 (4); Common Ground-Dove, 0.4 (2); Ruby-crowned Kinglet, 0.4 (3); Gray Catbird, 0.4 (3); Brown Thrasher, 0.4 (3); Blue-gray Gnatcatcher, 0.3 (2); Eastern Meadowlark, 0.3 (2); Eastern Phoebe, 0.1 (1); Carolina Wren, 0.1 (1); House Wren, 0.1 (1). **Total:** 26 species; 68.8 ind./visit (340 ind./40 ha). **Remarks:** Fires have burned several portions of the plot since 1967. A small corner, equal to several acres was burned in 1967, 60-70% was burned in May of 1977 and 40% was burned in September of 1984. **Acknowledgments:** My thanks to Glen Woolfenden for showing me the location of the study plot and to James Layne for the use of equipment for remeasuring and marking the grid.

¹ Archbold Research Station, P.O. Box 2057, Lake Placid, Florida 33852.

24. BRUSHLAND (OLD-FIELD SUCCESSION)

BREÑAL EN AVANZADA SUCESIÓN

J. DAN WEBSTER

*Hanover College
Hanover, Indiana 47243*

Location: Indiana; Jefferson Co.; Madison; Clifty Falls State Park; 38°45'11"N, 85°24'52"W at NW corner of plot; Clifty Falls Quadrangle, USGS. **Continuity:** Established 1976; 7 intermittent years. **Size:** 17.1 ha. **Description of Plot:** See *Am. Birds* 36:38 (1982). **Weather:** Mean temperature: 3.6°C (range -1 to 10°C). Snow cover absent on 9 visits; 5 cm on 1; patchy on 1. No precipitation during visits except for a drizzle for a half hour once. **Coverage:** 24 hrs; 8 complete coverages; 11 visits total (7 mornings, 2 afternoons, 2 evenings); 22, 26, 31 Dec.; 2, 5, 10, 13, 17, 19, 24, 27 Jan. **Count:** Northern Bobwhite, 7.3 ind./visit (5 visits); Northern Cardinal, 7.0 (7); White-throated Sparrow, 7.0 (8); House Finch, 5.8 (7); Eastern Bluebird, 3.9 (5); Dark-eyed Junco, 2.8 (2); Purple Finch, 2.5 (5); Blue Jay, 2.3 (8); Carolina Chickadee, 2.3 (7); American Goldfinch, 2.1 (5); American Crow, 2.0 (5); American Robin, 1.4 (4); Song Sparrow, 1.1 (7); Northern Flicker, 1.0 (6); Carolina Wren, 1.0 (4); Northern Mockingbird, 1.0 (7); Downy Woodpecker, 0.9 (6); Mourning Dove, 0.8 (4); Rufous-sided Towhee, 0.8 (4); Tufted Titmouse, 0.6 (4); Yellow-rumped Warbler, 0.6 (2); Fox Sparrow, 0.4 (3); Pileated Woodpecker, 0.3 (2); Brown Creeper, 0.3 (2); Sharp-shinned Hawk, 0.1 (1); Red-tailed Hawk, 0.1 (1); Eastern Screech-Owl, 0.1 (1); Great Horned Owl, 0.1 (1); Long-eared Owl, 0.1 (1); Red-bellied Woodpecker, 0.1 (1); Yellow-bellied Sapsucker, 0.1 (1); Ruby-crowned Kinglet, 0.1 (1); American Tree Sparrow, 0.1 (1). **Total:** 33 species; 55.9 ind./visit (131 ind./40 ha). **Remarks:** The White-tailed Deer population

is dense. In previous WBPS and BBC reports, this plot was called "Old Field with Brush Patches." **Other Observer:** Dwight Chamberlain.

25. BLACK GREASEWOOD-SALTGRASS ASSOCIATION

ASOCIACIÓN DE "GREASEWOOD-SALTGRASS"

RITA D. DIXON

804 Sixth Street
La Grande, Oregon 97850

Location: Oregon; Union Co.; La Grande; 45°17'N 117°58'W; Conley Quadrangle, USGS. **Continuity:** Established 1988; 2 consecutive years. **Size:** 16.5 ha. **Description of Plot:** See *J. Field Ornithol.* 60(suppl.):20 (1989). **Weather:** Mean temperature: -7.9°C (-20 to 4°C). **Coverage:** 11 hrs; 9 visits (7 mornings, 2 afternoons); 16, 27, 28 Jan.; 4, 5, 9, 11, 12, 17 Feb. **Count:** Gray Partridge, 5.4 ind./visit (6 visits); Common Raven, 2.8 (8); Ring-necked Pheasant, 0.9 (3); Northern Shrike, 0.3 (3); Western Meadowlark, 0.3 (2); Rough-legged Hawk, 0.2 (2); Short-eared Owl, 0.2 (1); Black-billed Magpie, 0.2 (1); Northern Harrier, 0.1 (1). **Total:** 9 species; 10.6 ind./visit (26 ind./40 ha). **Remarks:** A flock of over 150 Canada Geese flew over on 17 February. The weather was extremely severe this year. There were several days with strong winds that caused impassable drifts and the study area could not be reached to survey. **Acknowledgments:** I wish to thank Mr. C. Ehrman Bates for allowing me free access to his land, and Dr. Evelyn L. Bull for providing measuring devices.

26. COASTAL FRESHWATER MARSH

PANTANO COSTANERO DE AGUA DULCE

JOHN KELLY

Cypress Grove Preserve
P.O. Box 753
Marshall, California 94940

Location: California; Marin Co.; Marshall; Livermore Marsh; 38°10'N, 122°54'W; Tomales Quadrangle, USGS. **Continuity:** Established 1986; 4 consecutive years. **Size:** 10.5 ha. **Description of Plot:** See *J. Field Ornithol.* 60(suppl.):64 (1989). Arroyo Willows are increasing, covering 3-5% of the middle marsh in patches 2-5 m high. The upper (NE) third of the study area is covered approximately 50% by rushes with 20-25% of the upper marsh area covered with standing water. **Weather:** Mean temperature: 7.6°C (range 5 to 10°C). **Coverage:** 10.8 hrs; 8 visits (all mornings); 20, 25, 27 Jan.; 10, 15, 20, 24, 27 Feb. **Count:** Canvasback, 44.1 ind./visit (8 visits); Ruddy Duck, 17.0 (8); American Coot, 13.4 (8); Marsh Wren, 12.9 (8); Song Sparrow, 12.6 (8); Bufflehead, 10.6 (8); Black-crowned Night-Heron, 10.4 (8); Red-winged Blackbird, 9.8 (8); American Wigeon, 7.1 (7); Common Snipe, 6.0 (8); White-crowned Sparrow, 4.0 (3); Mallard, 3.1 (8); Ruby-crowned Kinglet, 3.0 (8); Golden-crowned Sparrow, 2.4 (5); Cinnamon Teal, 2.0 (3); Wrentit, 1.9 (7); Ring-necked Duck, 1.6 (6); Greater Scaup, 1.6 (3); Common Yellowthroat, 1.6 (6); Black Phoebe, 1.5 (8); Tree Swallow, 1.3 (1); Lincoln's Sparrow, 1.1 (5); House Finch, 1.1 (2); Pied-billed Grebe, 1.0 (5); Anna's Hummingbird, 0.8 (4); Lesser Scaup, 0.6 (3); Yellow-rumped Warbler, 0.6 (2); Gadwall, 0.5 (2); Common Goldeneye, 0.4 (2); Allen's Hummingbird, 0.4 (2); Belted Kingfisher, 0.4 (3); Brown Towhee, 0.4 (2); Great Blue Heron, 0.3 (2); Northern Flicker, 0.3 (1); American Robin, 0.3 (2); Loggerhead Shrike, 0.3 (2); Fox Sparrow, 0.3 (2); Western Meadowlark, 0.3 (1); Osprey, 0.1 (1); Northern Harrier, 0.1 (1); Sharp-shinned Hawk, 0.1 (1); Cooper's Hawk, 0.1 (1); California Quail, 0.1 (1); Dunlin, 0.1 (1); Glaucous-winged Gull, 0.1 (1); Scrub Jay, 0.1 (1); Bewick's Wren, 0.1 (1); European Starling, 0.1 (1). **Total:** 48 species; 177.9 ind./visit (678 ind./40 ha). **Re-**

marks: Black-crowned Night-Herons occupied a winter roost in the lower (SW) marsh bulrushes, with a high count of 17 individuals (not during a regular count period). Roosting flocks of 500–1000 Red-winged Blackbirds occupied the lower (SW) marsh bulrushes in the evenings. Count totals of Red-winged Blackbirds represent individual males exhibiting early territorial behavior. All Common Yellowthroats observed were males, apparently occupying stable winter territories. Marsh Wrens occupied a larger proportion of the study area than during the breeding season, extending into the upper (NE) third of the marsh. **Acknowledgments:** This work was supported by Chevron USA, Inc., San Francisco, California, and Aububon Canyon Ranch, Stinson Beach, California.

27. BARRIER BEACH AND SALTWATER ESTUARY

ESTUARIOS DE AGUA SALADA Y PLAYAS DE BARRERA

ROBERT W. LOFTIN

*University of North Florida
4567 St. John's Bluff Road South
Jacksonville, Florida 32216.*

Location: Florida; Duval Co.; Mayport; North Jetties Area; 30°25'N, 81°25'W; Mayport Quadrangle, USGS. **Continuity:** Established 1978; 12 consecutive yrs. **Size:** 212.5 ha. **Description of Area:** See *Am. Birds* 33:47–48 (1979). **Weather:** Mean temperature: 12.5°C (range 3.3 to 24.4°C). **Coverage:** 24 hrs; 8 visits (4 mornings, 4 afternoons); 1, 14, 21 Dec.; 5, 13, 29 Jan.; 10, 25 Feb. **Count:** Laughing Gull, 742.5 ind./visit (8 visits); Herring Gull, 341.8 (8); Ring-billed Gull, 217.9 (8); Black Skimmer, 206.3 (8); Royal Tern, 154.6 (8); Sanderling, 101.5 (8); Brown Pelican, 97.4 (8); Western Sandpiper, 84.6 (8); Dunlin, 82.3 (8); Short-billed Dowitcher, 70.4 (8); Lesser Scaup, 62.6 (2); Semipalmated Plover, 60.4 (8); Forster's Tern, 46.5; Ruddy Turnstone, 45.9 (7); Double-crested Cormorant, 37.4 (8); Red-breasted Merganser, 34.5 (8); Great Black-backed Gull, 28.6 (8); Yellow-rumped Warbler, 24.9 (8); Common Grackle, 24.6 (8); Black-bellied Plover, 22.6 (8); Bonaparte's Gull, 13.8 (7); Northern Gannet, 10.8 (3); Fish Crow, 7.4 (2); Mourning Dove, 7.0 (7); Song Sparrow, 5.9 (8); Willet, 4.3 (8); European Starling, 4.3 (4); Piping Plover, 3.9 (6); Red-winged Blackbird, 3.1 (5); Great Blue Heron, 3.0 (7); Great Egret, 3.0 (8); Caspian Tern, 2.8 (7); Red Knot, 2.5 (3); Northern Mockingbird, 2.3 (8); Savannah Sparrow, 2.3 (5); Horned Grebe, 2.1 (5); Northern Cardinal, 1.6 (6); Rufous-sided Towhee, 1.4 (5); Swamp Sparrow, 1.3 (5); Turkey Vulture 1.1 (4); Clapper Rail, 1.1 (4); Common Ground-Dove, 1.1 (5); Loggerhead Shrike, 1.1 (5); Snowy Egret, 1.0 (3); Sandwich Tern, 1.0 (3); Belted Kingfisher, 1.0 (6); Ruby-crowned Kinglet, 1.0 (6); Gray Catbird, 0.8 (4); Boat-tailed Grackle, 0.8 (5); Tricolored Heron, 0.5 (4); Hooded Merganser, 0.5 (4); Osprey, 0.5 (3); Marbled Godwit, 0.5 (4); House Wren, 0.5 (4); Palm Warbler, 0.5 (3); Common Loon, 0.4 (2); Northern Harrier, 0.4 (3); American Oystercatcher, 0.4 (3); Greater Yellowlegs, 0.4 (2); Lesser Yellowlegs, 0.4 (2); Carolina Wren, 0.4 (2); Sharp-tailed Sparrow, 0.4 (2); Little Blue Heron, 0.3 (2); Wood Stork, 0.3 (1); Bufflehead, 0.3 (2); Red-tailed Hawk, 0.3 (1); Marsh Wren, 0.3 (1); Orange-crowned Warbler, 0.3 (1); Field Sparrow, 0.3 (1); Reddish Egret, 0.1 (1); American Wigeon, 0.1 (1); Harlequin Duck, 0.1 (1); American Kestrel, 0.1 (1); Wilson's Plover, 0.1 (1); Killdeer, 0.1 (1); Lesser Black-backed Gull, 0.1 (1); Blue-gray Gnatcatcher, 0.1 (1); White-eyed Vireo, 0.1 (1); Common Yellowthroat, 0.1 (1); Seaside Sparrow, 0.1 (1); White-throated Sparrow, 0.1 (1). **Total:** 81 species; 2588.4 ind./visit (487 ind./40 ha). **Remarks:** This was a very warm winter in the study area. Temperatures ranged from -4.4 to 29.4°C. Temperatures in December were about normal, but January was 4.1°C above normal and February was 1.9°C above normal. Herring Gulls, which were far more numerous in the study plot last year than the 10-year mean, returned to about normal this year. Laughing Gulls were high again this year, continuing a trend that started in 1985. The mean number of Laughing Gulls in the plot during the first seven years was 177. The mean for the last five years is 761. Black Skimmers, which were down last year, rose to normal numbers in 1989. Sanderling and Western Sandpiper showed some increase over the depressed numbers of last year, but were still below the 10-year mean. Dunlin, on

the other hand, were severely depressed with 82.3 ind./visit vs. the 10-year mean of 266.
Other Observers: Robert Richter and Jim Wheat.

28. MATURE CITRUS ORCHARD

CULTIVOS DE CITROSAS

FRED E. LOHRER

Archbold Biological Station

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Lake Placid, Florida 33852

Location: Florida; Highlands Co.; Lake Placid; Buck Island Ranch; 27°08'N, 81°12'W; Brighton NW Quadrangle, USGS. **Continuity:** New. **Size:** 13.7 ha (341 m E-W × 402 m N-S). **Description of Plot:** The study plot is in the NE portion of a 68 ha orange and grapefruit orchard and is bounded by 5 rows of trees on the N, 6 rows of trees on the E and by many rows on the W and S. The trees are 23 years old. Only orange trees occur in the study plot. The orchard is surrounded by miles of improved pastures, with scattered Live Oaks and Cabbage Palms, in all directions. The nearest citrus orchards are 2.5 km E and 5 km N. The orchard is criss-crossed with ditches. Ditches (1900 m) and their grassy banks comprise 20% of the plot. The 4–5 m tall trees, in N-S rows, form a solid hedge of vegetation with no understory. The rows are separated by 2.5 m of low (0.3 m) herbaceous vegetation. The same rows were walked in each census; starting points were reversed in consecutive censuses. **Weather:** Mean temperature: 14°C (range 11 to 17°C). All 7 counts were on calm mornings with normal temperatures. Three were done on foggy mornings, a common winter event, and 4 were done on clear mornings. **Coverage:** 16 hrs; 7 visits (all mornings); 18, 20, 31 Jan.; 3, 15, 17, 21 Feb. **Count:** Palm Warbler, 25.0 ind./visit (7 visits); Northern Cardinal, 21.1 (7); Yellow-rumped Warbler, 12.3 (7); Blue Jay, 11.3 (7); White-eyed Vireo, 7.6 (7); Ruby-crowned Kinglet, 7.0 (7); Red-winged Blackbird, 7.0 (6); Blue-gray Gnatcatcher, 5.1 (7); Mourning Dove, 2.3 (6); Red-shouldered Hawk, 1.4 (6); Eastern Phoebe, 1.3 (5); Common Ground-Dove, 1.1 (5); American Crow, 1.0 (4); Brown Thrasher, 1.0 (3); House Wren, 0.6 (4); Common Yellowthroat, 0.4 (2); Swamp Sparrow, 0.3 (2); Great Blue Heron, 0.1 (1); Red-bellied Woodpecker, 0.1 (1); American Robin, 0.1 (1). **Total:** 20 species; 106.3 ind./visit (310 ind./40 ha). **Remarks:** Fruit on the plot was picked halfway through the study period and food refuse from the picking crews apparently attracted crows and blackbirds. Birds recorded only from the ditches were Great Blue Heron, House Wren, Common Yellowthroat, and Swamp Sparrow. White-eyed Vireos used ditches and the orchard. All other species were only in the orchard. During the study period numbers of Yellow-rumped Warblers decreased from 20s to 10s and numbers of Palm Warblers increased from 20s to 30s. Brown Thrashers were detected on the last 3 counts only and sang continually on those days. Perhaps this census should be done in December and January to avoid early migration movements (warblers) or early onset of breeding activity (thrasher). White-eyed Vireos were hardly vocal on foggy mornings but no other distinct effect from fog was noted. Red-winged Blackbirds occurred in flocks. Gnatcatchers and kinglets seemed to forage together. During January outside the orchard, Red-shouldered Hawks occurred in pairs, called frequently, and were observed copulating, but in the plot they were silent and 3 of the 4 sightings identifiable to age were of immatures. Mockingbirds sang throughout the census period from trees in the pasture along the north boundary of the orchard but were not detected on the study plot. This is Contribution No. 1 from the John D. MacArthur Agro-ecology Research Center of Archbold Biological Station.

29. BRUSHY FIELD WITH TREES AND HILL

BREÑAL CON ARBOLES Y COLINAS

MICHAEL F.G. CLARK

27 Skyline Drive

Dundas, Ontario L9H 3S3

Location: Ontario; Wentworth Co.; Dundas; Olympic Drive Field; 43°16'N, 79°57'W; Quadrangle, USGS. **Continuity:** Established 1984; 6 consecutive years. **Size:** 6.3 ha. **De-**

scription of Plot: The unpublished 1984 WBPS has a complete description. The low (4.3 m) sand hill in the central-W sector has been almost totally excavated. Some excavation has occurred to one side of the second hill (9.1 m) in the same sector. Bank Swallows and a kingfisher now nest there. The raised central area has been extended by intermittent dumping. It now covers approximately one tenth of the plot area, but has been at least 50% re-colonized by grasses and herbs. **Weather:** Mean temperature: -1.1°C (range -12 to 12°C). No snow cover on six visits. **Coverage:** 6.1 hrs; 8 visits (4 mornings, 4 afternoons); 3, 22, 26 Dec.; 21, 31 Jan.; 9, 15, 23 Feb. **Count:** American Tree Sparrow, 5.4 ind./visit (5 visits); Mourning Dove, 4.4 (4); Dark-eyed Junco, 1.6 (1); American Goldfinch, 0.5 (1); American Kestrel, 0.1 (1); Belted Kingfisher, 0.1 (1); Downy Woodpecker, 0.1 (1); Horned Lark, 0.1 (1); House Sparrow, 0.1 (1). **Total:** 9 species; 12.5 ind./visit (79 ind./40 ha). **Remarks:** The shorter, less dense but heavily seeded herbs, likely made plot attractive to granivores (97% of all birds; 6/9 species), especially Mourning Doves. Mild temperatures and less severe winter winds may also have favored granivores. The Mourning Dove totals more than doubled the previous high (16). American Tree Sparrow totals were second highest for plot coverage (6 yrs); they appeared to be roosting in the much thicker SE willow sector. Total number of individuals was above average; the species total was about average. New species to the plot included an early Horned Lark (Feb. 15) and the Belted Kingfisher. The kingfisher was seen entering a hole on 9 Feb. and likely overwintered.

30. FIELD, RIDGE, AND SHRUBBY TREES

CAMPOS, COLINAS Y ARBUSTOS

MICHAEL F.G. CLARK

27 Skyline Drive
Dundas, Ontario L9H 3S3

Location: Ontario; Region of Hamilton-Wentworth; Dundas; $43^{\circ}14'45''\text{N}$, $79^{\circ}54'00''\text{W}$. **Continuity:** Established 1986; 4 consecutive yrs. **Size:** 6.6 ha. **Description of Plot:** See *J. Field Ornithol.* 60(suppl.):14 (1989). **Weather:** Mean temperature: -0.2°C (range -8 to 6.5°C). **Coverage:** 10.9 hrs; 8 visits (7 mornings, 1 afternoon); 10, 24, 28 Dec.; 7, 28 Jan.; 4, 11, 22 Feb. **Count:** American Tree Sparrow, 7.0 ind./visit (7 visits); Dark-eyed Junco, 5.1 (5); Black-capped Chickadee, 4.3 (5); European Starling, 4.3 (1); Northern Cardinal, 2.9 (6); Blue Jay, 1.3 (5); House Finch, 1.0 (2); White-winged Crossbill, 0.9 (1); American Goldfinch, 0.6 (4); American Crow, 0.4 (1); Northern Mockingbird, 0.4 (3); Red-tailed Hawk, 0.1 (1); Downy Woodpecker, 0.1 (1); Hairy Woodpecker, 0.1 (1); Ruby-crowned Kinglet, 0.1 (1). **Total:** 15 species; 28.5 ind./visit (173 ind./40 ha). **Remarks:** The 15 species and 228 individuals were the highest totals for the 4-year coverage. Heavy herbal, bramble and low shrub growth, provided ample shelter and food for the ground-granivores mostly frequenting the plot (55%). Other factors contributing to the high totals may have been less than average snowfall (-6.3 cm) and higher temperatures (1.6°C) for the study period. The great majority of birds were detected in the NE sector where low shrub growth is dense and a steep hill protects against winds. The nearness of the plot to the suburbs likely adds some species to the plot, such as House Finch, mockingbird, and some cardinals.

31. MIXED CROPLANDS

CULTIVOS MIXTOS

PAUL W. SCHWALBE AND GLENN A. P. SCHWALBE

546 Wilson Street
Jersey Shore, Pennsylvania 17740

Location: Pennsylvania; Clinton Co.; Avis; $41^{\circ}10'31''\text{N}$ $77^{\circ}17'34''\text{W}$; Jersey Shore Quadrangle, USGS. **Continuity:** Established 1983; 7 consecutive yrs. **Size:** 40.5 ha. **description of Area:** See *Am. Birds* 38:56-57 (1984). Soybean residue (18.5 ha), corn crop residue (14.3

ha), short grass (7.7 ha). **Weather:** Mean temperature: 1.0°C (range -6.1 to 4.4°C). **Coverage:** 2.9 hrs; 11 visits (9 mornings, 2 afternoons); 28, 31 Dec.; 7, 14, 16 (2 visits), 18, 26, 27, 30 Jan.; 2 Feb. **Count:** Rock Dove, 175.9 ind./visit (7 visits); European Starling, 80.9 (5); Northern Flicker, 0.9 (2); American Crow, 0.8 (4); Mourning Dove, 0.7 (3); Northern Harrier, 0.4 (4); American Kestrel, 0.4 (3); Red-tailed Hawk, 0.3 (3); Sharp-shinned Hawk, 0.1 (1); Rough-legged Hawk, 0.1 (1). **Total:** 10 species; 260.5 ind./visit (257 ind./40 ha). **Remarks:** The doves seem to be using the fields for daytime roosting and courtship as well as for feeding. The Northern Flickers were in the corn residue on both occasions.

32. SUBURBAN CEMETERY

CEMENTERIO SUB-URBANO

THOMAS A. IMHOF

1036 Pike Road
Birmingham, Alabama 35218

Location: Alabama; Jefferson Co.; Birmingham; Oakland Cemetery; 33°29'N, 86°54'W; Bessemer Quadrangle, USGS. **Continuity:** Established 1978; 8 intermittent yrs. **Size:** 15 ha. **Description of Area:** See *Am. Birds* 34:18-19 (1980). **Weather:** Mean temperature: 11°C (range 3 to 24°C). **Coverage:** 18 hrs; 18 visits (all mornings); 1 Dec.-26 Feb. **Count:** Common Grackle, 536.1 ind./visit (18 visits); Rock Dove, 48.3 (18); House Sparrow, 40.3 (18); House Finch, 32.9 (18); European Starling, 29.4 (18); Mourning Dove, 17.5 (18); American Robin, 5.7 (18); Blue Jay, 4.7 (18); Northern Cardinal, 4.6 (18); Northern Mockingbird, 4.3 (18); Tufted Titmouse, 4.1 (18); Brown-headed Cowbird, 3.9 (4); Carolina Chickadee, 2.0 (18); White-throated Sparrow, 1.7 (17); Northern Flicker, 1.2 (12); Red-bellied Woodpecker, 1.1 (18); American Crow, 1.0 (5); Red-tailed Hawk, 0.8 (13); Cedar Waxwing, 0.8 (1); Rufous-sided Towhee, 0.6 (11); Red-winged Blackbird, 0.5 (9); Golden-crowned Kinglet, 0.4 (6); Killdeer, 0.3 (4); White-breasted Nuthatch, 0.3 (5); Ruby-crowned Kinglet, 0.3 (6); Brown Thrasher, 0.3 (6); Downy Woodpecker, 0.2 (3); Brown Creeper, 0.2 (3); Song Sparrow, 0.2 (3); American Goldfinch, 0.2 (2); Red-headed Woodpecker, 0.1 (1); Yellow-bellied Sapsucker, 0.1 (1); Carolina Wren, 0.1 (1); Yellow-rumped Warbler, 0.1 (1); Field Sparrow, 0.1 (2). **Total:** 35 species; 744.1 ind./visit (1984 ind./40 ha). **Remarks:** Golden-crowned Kinglet was common in hardwoods on the plot, but its usual winter habitat in this region is pines. Purple Finch was unrecorded during the count.