

The Changing Seasons

... a quiet fall to reflect on the form and substance of Regional Reports

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THIS SEASON WAS AN EXCEPTIONALLY AVERAGE FALL, SEEMINGLY with little to summarize. Thus, it seems appropriate to discuss some ancillary issues in detail this fall. Last fall I attempted to computerize records for some of the species mentioned in the various Regional Reports. I was so pleased with the result that I threatened to extend my effort to all records this fall. Well, I did it. Sometimes the wording in reports forced me to combine several records into a "summary record" and I also ignored all landbird records from Hawaii because none occurred elsewhere. I was forced to omit the Northeastern Maritime Region from the data base because only a rough draft was available but significant records are mentioned below. Still, I found over 5900 records of birds in this season's Regional Reports for *American Birds*. What is in this data set?

First, the substance . . .

The Season

Most severe weather this fall was of the prolonged unseasonal variety—hot spells and cold snaps—rather than of strong storm systems. August tended to be wet except on the Pacific coast, somewhat warmer than normal in the West and cooler in the East. September was very wet with flooding in the East except on the Atlantic coast, with cool temperatures in the West and the Northeast but very hot in the Southeast. October was dry in both the Northwest and Northeast, and hot in the Northwest and Southeast. November was wet, except on the Pacific coast, very cold at least briefly at mid-month in the extreme North but about average elsewhere.

This was not a fall for tropical storms. Only three reached the mainland this fall, in contrast to last fall. Hurricane *Charley* formed off the coast of South Carolina August 15,

intensified and moved northwest to cross Cape Hatteras, North Carolina, midday August 17. It then turned northeast and was centered over the mouth of the Chesapeake Bay early August 18 and out to sea well south of Nantucket Island, dissipating rapidly, by the end of that day. This path is not propitious for transporting vagrant birds. Band-rumped Storm-Petrels were abundant and a White-tailed Tropicbird was off Oregon Inlet, North Carolina, August 15, and Cory's, Greater, Manx and Audubon's shearwaters and Wilson's Storm-Petrels were recorded far off Virginia Beach August 16, while Red-necked Phalaropes, Parasitic Jaegers and Bridled and Sooty terns were found on shore in coastal Virginia. A Roseate Tern at Back Bay National Wildlife Refuge, Virginia, August 17; Cory's Shearwater and Wilson's Storm-Petrel on shore on Long Island, New York, with the latter species also on the lower Hudson River, New York, and at Back Bay National Wildlife Refuge, Virginia, and a Bridled Tern at Ocean City, Maryland, August 18 were part of the aftermath of *Charley*, as perhaps were Caspian Tern at Mountain Lake, New Jersey, an Arctic Tern at Cape May, New Jersey, and unusually high numbers of Black Terns at Mecox Bay on outer Long Island. Many records of expected migrants, especially shorebirds, came from this same range of dates and places.

Tropical storm *Paine* entered southwest Texas from the Pacific coast of Mexico October 2 and moved northeast toward Missouri and Arkansas, where it disintegrated by October 6. I found 44 records of migratory birds from this general area during this period, none of which were likely to have been transported by the storm. The most promising candidates were a late Mississippi Kite in Randall County, Texas, October 5 and a Couch's Kingbird in Brazoria County, Texas, October 6. All the other records more likely were of "normal" migrants that were grounded or concentrated by the rainfall that accompanied this storm.

Tropical storm Roslyn traced a similar path to reach southwest Texas October 22, but moved east farther south into Alabama and Mississippi, where it dissipated by October 26. The 19 contemporaneous records from this general path again included no birds absolutely transported by the storm. However, while October is always a good time to find such vagrants there, it may be more than coincidental that several records of western vagrants—an Inca Dove, four Vermilion Flycatchers, a Scissor-tailed Flycatcher, a Bewick's Wren, and an Audubon's Warbler—from Alabama and Louisiana were concurrent with the storm's passing as was a Sage Thrasher in Kendall County, Texas.

Waterbirds

Seabirds got poor coverage on the Atlantic coast this season, primarily due to weather inclement for birders. There were more tropicbirds than usual, including a Red-billed at Martha's Vineyard, Massachusetts, viewed by multitudes. On the Pacific coast only a few warm-water birds appeared north of the border this fall. Parakeet Auklet off the Oregon coast was the most notable alcid report.

Ten reports of Pacific Loons came from the eastern one-half of the continent, and most of the remainder were inland in the western one-half. Brown Pelican and, especially, Double-crested Cormorant populations continue to increase. The latter is sure to come into increasing conflict with fisheries managers as more of these fish-eating birds appear on our waters.

Relatively few southern herons and long-legged herons moved north this fall. A yellow-legged Great Egret in North Carolina shows coloration more frequent in the nominate Eurasian race. In the West, Little Blue Herons were far north in Idaho and New Mexico. Tricolored Herons wandered north to Pennsylvania, Illinois, Minnesota, and New Mexico. Reddish Egrets were found inland in central Texas and on the Atlantic as far north as North Carolina. Yellow-crowned Night-Herons were far out of range in New Mexico and in the Dakotas. The saga of *Plegadis* ibises in the Prairie Provinces Region continues to unfold this season, and two Roseate Spoonbills in Kansas were outdistanced by one at Defiance, Ohio, the state's first. There were no Wood Storks far from usual centers of abundance this fall.

Waterfowl numbers generally were unexceptional but movements in November tended to be pronounced. Fulvous Whistling-Ducks wandered north along the Atlantic seaboard to North Carolina, with an isolated report from upstate New York. Greater White-fronted Geese were widespread in the East, and records of Ross' Goose from the Atlantic coast south to the Chesapeake Bay area and from the Mississippi River valley continue to accumulate, but no temporal trend was evident this fall. Eurasian Wigeon were reported inland in Ontario, Minnesota, Illinois, and Wyoming only. Harlequin Ducks from Wisconsin, Minnesota, Manitoba, and Saskatchewan were in the hiatus area between the eastern Canadian and western montane populations. Scoters moved south across the entire continent on a fairly even front, but were somewhat less numerous inland this year than in recent falls.

Sandhill Cranes were widely reported in the East, where they are unusual, and in the West, where regular. Whooping Cranes reached a new modern population high of 105 birds at Aransas National Wildlife Refuge with 29 wintering in New Mexico this fall, but there still was no indication that the transplanted western birds are even attempting to reproduce.

Shorebird reports showed few consistent patterns, and not as many great rarities were reported as is often the case. Observers anticipating a taxonomic split in Lesser Golden-Plover (*fulva* from *dominica*) are discussing both in western Regional Reports; no matter what the A.O.U. decides, the two forms are distinct enough that trying to separate them in the field is probably worthwhile. Baird's Sandpipers were unusually numerous in the Northeast. There is a general feeling that Buff-breasted Sandpipers are declining in numbers in the eastern part of their migration route, but this may be a return to normalcy after a period of unusual abundance. The 22 inland reports of Red Phalaropes were somewhat fewer than usual. Larids were similarly quiet, with few outstanding records and somewhat fewer inland reports of oceanic species such as jaegers, Sabine's Gulls, and Black-legged Kittiwakes than has been typical of recent years. Much in contrast to last fall, there were only ten inland Laughing Gull records in the East this season.

Raptors

Eastern hawk watches generally reported good numbers of raptors. Black Vultures strayed as far northeast as Prince Edward Island. Black-shouldered Kites continued to increase in the Southeast, and good numbers of Golden Eagles, Merlins, and Peregrine Falcons were reported from the Northeast. A Cooper's Hawk at Hawk Cliff, Ontario, banded as a juvenile in 1974 was recovered this fall. Northern Goshawks generally were scarce at the southern edge of their nesting range or beyond. Rough-legged Hawks arrived very early in the Midwest and had penetrated far south by the end of season but were not especially common anywhere. A Peregrine Falcon banded in western Greenland was recovered near Charleston, West Virginia. Gyrfalcons dispersed to southern Canada, with very early reports from Long Point, Ontario, and Miller Beach, Indiana; the latter would also constitute a first state record provided it didn't get an assist from humans.

Snowy Owls were reported from the Northeast only, where they staged a pretty good flight that extended south to South Carolina and Virginia by mid-October and to Missouri by early December. There are more data on the expanding Barred Owl population in the Northwest in this issue. Check out the Boreal Owl migrating by car at Yellowstone National Park and the Burrowing Owl at Rooney's Bar, Omaha, Nebraska! None of the other owls yielded especially notable records, although small numbers of the boreal species were found south of their usual ranges in southeastern Canada. Northern Shrikes were widespread across the northern United States, with early arrivals in mid-continent.

Irruptives

Lewis' Woodpeckers were unusually common in southwestern lowlands by the end of the season with one far out of range in Newfoundland. Like last fall, there was a light incursion of Gray Jays along the north shore of the Great Lakes and the St. Lawrence River. Clark's Nutcrackers were widespread in western lowlands this fall, with one straying east to Minnesota in mid-September. Mountain Bluebirds were unusually common in the lowlands of California, New Mexico, and South Dakota but a male on Miquelon Island, off Newfoundland was the only one mentioned elsewhere. Townsend's Solitaires were common in the lowlands over much of the West, and four reports came from east of the

100th meridian, two from Ontario being the easternmost Red-breasted Nuthatch numbers were moderate on both coasts and not quite as high in the interior. Varied Thrushes strayed east to New York and Georgia, where they arrived exceptionally early; they were not reported in the West except in southern California. Bohemian Waxwings staged a light flight across the continent, foreshadowed by early records from Utah, Minnesota, and Wisconsin and nesting records as far east as Nova Scotia and perhaps even Newfoundland.

Winter finches generally appeared in moderate numbers, with several early records but with little geographic pattern and frequently little holding power—many species were scarce by late November. We now know that early arrivals of Lapland Longspurs in Pennsylvania, Ohio, and Wisconsin, and of Snow Buntings in Ohio and the Middle Atlantic Coast Region did not forecast a severe winter, and neither species had moved exceptionally far south by the season's end. The only finches widespread in the West were Evening Grosbeaks and perhaps Cassin's Finches. Few crossbills were found anywhere. Pine Siskins were numerous in the Northeast and middle Atlantic areas only. Early Common Redpoll records for October came from Ohio, South Dakota, and southern Ontario.

Rarities

This was not a stellar fall for finding vagrant birds. Thirty-one putative first state or provincial records, several of which already have been mentioned, were obtained for 30 species. Only three rarities were really outstanding. The Solander's Petrel from Lihue, Hawaii, could be the first substantiated A.O.U. area record if this summer's photographs from California are not definitive; *Pterodroma* petrels are difficult to identify even in the hand! The Wedge-tailed Shearwater photographed off Pt. Pinos, California, furnished the first record north of Mexico, and the Sulphur-bellied Flycatcher photographed at Presqu'île Provincial Park, Ontario, provided the first record for Canada as well. Not quite in the same category was yet another unsubstantiated Black-browed Albatross sighting from our side of the north Atlantic, this time from the Cabot Straits; every substantiated albatross record from our side has been of Yellow-nosed Albatross.

There were 483 records of birds normally widespread in the eastern one-half of the continent that came from the western one-half. Among the more notable waterbirds were the firsts of Piping Plover for Oregon and (if one can be sure it was not a Rock Sandpiper) Purple Sandpiper for Saskatchewan. A Dovekie in the Pacific Ocean off Umiat Island, Alaska, was not far from the small population that nests in the Bering Straits. Black-billed Cuckoo, the state's first Chuck-will's-widow, Ruby-throated Hummingbird, Yellow-bellied Flycatcher, Wood Thrush from California; White-eyed Vireo from Arizona; and firsts for Blackburnian Warbler in Oregon, Yellow-throated Warbler in North Dakota, Pine Warbler in Oregon and Arizona, Rose-breasted Grosbeak in Alaska and Sharp-tailed Sparrow in Washington state were the most noteworthy, though not always the most surprising, landbird records.

There were 387 records of western birds east, including a White-faced Ibis in New Jersey, first Ross' Goose for Kentucky and Tennessee, a Prairie Falcon on the Tennessee/Arkansas boundary, Mew Gull in Ontario (and across the border into New York, where it would be a first) and Wisconsin, California Gull in New York and Louisiana, and a

Burrowing Owl at Thunder Bay, Ontario. The best hummingbirds were a single Calliope from Texas and Louisiana, an Allen's from Texas and an amazing Broad-tailed from Illinois; about one dozen other *Selasphorus* hummers were reported in the East from Massachusetts to North Carolina. An 11 year-old Broad-tailed Hummingbird at Gothic, Colorado, though not out of range, was just as notable for its longevity. This fall few Scissor-tailed Flycatchers and only three Say's Phoebes were east of the Mississippi River, where Western Wood-Pewees from Florida and Louisiana, and Ash-throated Flycatchers northeast to Virginia were more unusual flycatcher records. A Steller's Jay in Vermont has precedent in an old record from Quebec; both may have had human assistance. A Clark's Nutcracker from Minnesota, Mountain Bluebird from Miquelon Island, and Townsend's Solitaire from Ontario apparently were outliers from incursions farther west, but 13 Varied Thrushes mostly from the Northeast, a Massachusetts Bewick's Wren and Rock Wren from Iowa, Illinois, New York (another first) and Minnesota cannot be similarly explained. The few western warblers east included the first Virginia's for Missouri and Black-throated Gray for Kentucky.

There were a few records of birds that probably arrived from Mexico but almost none of birds that probably came from the Caribbean or South America. Notable were additional records of Muscovy and Masked ducks in Texas and an Olivaceous Cormorant that spent most of fall in Illinois. A "Caribbean Coot" in Arizona is more easily explained if one assumes that white-shielded birds are morphs, geographically variable in frequency, of American Coot. Common Black-Hawks and the "first credible" record of a White-tailed Hawk appeared in New Mexico, Zone-tailed Hawk and Purple Gallinule in California and another Purple Gallinule in Quebec. Several White-winged Doves on the Gulf coast were as far east as Fort Jefferson National Monument and one strayed far northeast to Massachusetts. An Inca Dove was in Utah and a Ruddy Ground-Dove and various parrots perhaps all of dubious origin were in south Texas. Most notable of eight Groove-billed Ani reports was one from California, where an incredible tale of Broad-billed Hummingbird records also unfolded this fall. Ontario's Sulphur-bellied Flycatcher noted above was the tropical bird farthest astray, while the Vermilion Flycatcher in South Dakota, and relatively few Tropical Kingbirds on the Pacific coast as far north as Washington and a Couch's Kingbird from Florida all had precedents. A first Rufous-backed Robin from New Mexico was perhaps overdue, but I thought it a bit brash to list two Aztec Thrushes from Arizona without boldfacing them. A Curve-billed Thrasher again appeared in Wisconsin, and the Yellow-green Vireo, probably a distinct species after all, from northern California was topped by Canada's second from British Columbia. A Gray-crowned Yellowthroat from Texas may have occasioned the first believable report in years, and a Painted Redstart from Nevada was even more notable because that Nevada is in Missouri!

Paleartic species were little in evidence. One perhaps could trace the migration of a Barnacle Goose from Alaska to California between October 12 and November 22, but is it the same bird found at Herschel Island and northern British Columbia in August and September? And do we really think that migratory birds will lose their instinctive urge to migrate just because they may have spent time in an aviary? The Tufted Duck was noted only on the Pacific coast, where Washington's first Steller's Eider at Pt. Wilson slightly bridges the gap between prior records from British Columbia and California. Mongolian Plovers produced three records from Alaska and one from Louisiana. Eurasian Dotterels appeared in Alaska and California and Bar-tailed Godwits

in Alaska and near Puget Sound on almost the same dates, the first species in September and the latter in October. Vagrant *Calidris* sandpipers included a Little Stint in New Jersey and a first Rufous-necked Stint for Alberta. Sharp-tailed Sandpipers appeared on the Pacific coast only, while of a scattering of Curlew Sandpiper records, only those in Illinois and the St. Lawrence estuary in Quebec were away from the coast. Ruffs were more frequently reported, with inland records from Illinois, Indiana, Texas, New Mexico's first, southern California, southern Ontario, and southern Quebec. Little Gulls in Manitoba and Alberta connect Great Lakes/Atlantic coast with Pacific coast records. Common Black-headed Gulls far west in Alaska and Washington and inland on Lake Erie in Ontario and Ohio and at Niagara Falls were the only ones away from the north Atlantic. The many reports of Lesser Black-backed Gulls ranged east to the Mississippi River drainage, south to the Gulf coast; they now are almost common in the Middle Atlantic Coast Region. A Slaty-backed Gull appeared briefly in southern British Columbia, and a White-winged Tern augmented the Virgin Islands' list. Northern Wheatears were reported only from the Northeast, Yellow Wagtail and Red-throated Pipit only from California, and Brambling only from Alaska. Finally, a Eurasian Tree Sparrow in Manitoba was of controversial but probably dubious origin.

The Data Base

I now turn to matters more of form than of substance. An ornithological record minimally tells what, where, when, how many and why an observation was reported. In creating my data base I entered the species name, the locality, the date, a count when given, and general comments to accommodate these items. I found it necessary to augment this list of items before I was done.

I entered records of 613 species (18 more appear in Ha-

wai) plus a few hybrids and records of birds identified to genus only. The species that occur annually in North America but which were not reported this fall are:

Black-capped Petrel, Ashy Storm-Petrel, Brown Bobby, Pelagic and Red-faced cormorants, Spectacled Eider, California Condor, Plain Chachalaca, Black Francolin, Blue and Sage grouse, Willow and Rock ptarmigan, Greater and Lesser prairie-chickens, Scaled and Mountain quail, Limpkin, Black Turnstone, Surf-bird, Red-legged Kittiwake, Ivory Gull, Elegant and Aleutian terns, Brown Noddy, Kittlitz's Murrelet, Least, Crested, Whiskered, and Rhinoceros auklets, Atlantic and Horned puffins, Red-billed Pigeon, Spotted and White-tipped doves, Whiskered Screech-Owl, Buff-collared Nightjar, Violet-crowned and Costa's hummingbirds, Ringed Kingfisher, Golden-fronted, Ladder-backed, Nuttall's, and Strickland's woodpeckers, Northern Beardless-Tyrannulet, Dusky-capped Flycatcher, Rose-throated Becard, Green and Gray-breasted jays, Yellow-billed Magpie, Northwestern and Mexican crows, Mexican Chickadee, Siberian Tit, Plain Titmouse, Brown-headed Nuthatch, Arctic Warbler, Wrentit, Bendire's, Crissal, California and LeConte's thrashers, White Wagtail, Water Pipit, Hutton's and Black-whiskered vireos, Colima, Golden-cheeked, Grace's, and Red-faced warblers, Hepatic Tanager, Pyrrhuloxia, Olive Sparrow, Brown Towhee, Botteri's, Rufous-winged, Rufous-crowned, Brewer's and Sage sparrows, Yellow-eyed Junco, Tricolored Blackbird, Boat-tailed Grackle, Hooded, Spot-breasted, Audubon's, and Scott's orioles.

Many of these are rare and/or local species whose absence is not surprising. A few are widespread, common birds. On average, a species is mentioned fewer than 10 times, but the frequency distribution is quite skewed. Only 46 species were mentioned at least 25 times (Table 1), or an average of once per region. Broad-winged Hawks and Lesser Golden-Plovers were mentioned most often.

Table 1. Most frequently mentioned species in this year's fall Regional Reports with number of records (Northeastern Maritime Region excluded).

Species	Records	Species	Records
Broad-winged Hawk	56	Pacific Loon	33
Lesser Golden-Plover	56	Double-crested Cormorant	33
American White Pelican	50	Parasitic Jaeger	33
Sandhill Crane	50	Sharp-shinned Hawk	32
Baird's Sandpiper	47	Golden Eagle	32
Hudsonian Godwit	44	Marbled Godwit	32
Common Loon	43	Sanderling	32
Peregrine Falcon	43	Semipalmated Sandpiper	31
Tundra Swan	42	Great Egret	30
Osprey	41	Ruff	30
Buff-breasted Sandpiper	41	Little Gull	30
Franklin's Gull	41	Dickcissel	30
Sabine's Gull	41	Surf Scoter	28
Red-necked Phalarope	40	Merlin	28
Stilt Sandpiper	39	Red-throated Loon	27
Cattle Egret	38	Ross' Goose	27
Lesser Black-backed Gull	38	White-rumped Sandpiper	27
Red Crossbill	36	Black-bellied Plover	26
Evening Grosbeak	35	American Avocet	26
Greater White-fronted Goose	34	Horned Grebe	25
Swainson's Hawk	34	Snow Goose	25
Ruddy Turnstone	34	Caspian Tern	25
Red Knot	34	Common Tern	25

Other than occasional skepticism about records, species' names caused few problems. Most of the confusion resulting from recent changes in nomenclature seems to have been resolved.

Last year I indicated a need for a standardized, easy-to-remember coding system to simplify the entry of bird names. The software I used made using such a code unnecessary because the program could propagate identical, consistent names (and species sequence numbers) as I added records to the data set. However, I still feel that a good coding system is needed, because the only widely disseminated, standardized code (A.O.U. Check-list numbers) is not, in my opinion, easy to remember. I have begun an attempt, which I will describe elsewhere.

I found the *Check-List of North American Birds: United States and Canada including Hawaii* (Tuscon Audubon Society 1985) invaluable for putting species in checklist order. It lists every species numbered in proper Check-list order. I entered this number after the species' name and let my computer sort unordered reports into checklist order.

I appended three other pieces of information about each record to allow me to select records by non-taxonomic criteria. These items crudely correspond to the avifauna to which the species belongs, a rough description of its feeding ecology, and the type of record involved. The categories that I used for "avifauna" were: Caribbean (23 entries); Eastern (1407); Holarctic (1359); Mexican (1840); Nearctic (1656); Palearctic (230); Tropical (96); and Western (940). Some birds come from more than one source but I usually didn't have time to indicate such cases as I entered data. A few birds, seabirds in particular, do not fit any of these categories well. In such cases all records of a species were assigned to the single category which seemed most applicable. For the "ecotype" I used the categories: aerial (451 entries); cyclic (212, a somewhat arbitrarily defined group consisting primarily of cardueline finches); fish-eater (723); herbivore (629); insectivore (949); omnivore (100); pelagic (304); raptor (663); swimmer (555); and wader (1309). The six record type categories were: abundant or maxima (1306 entries); early or arrivals (277); late or departures (584); present (1058, used for records that I couldn't otherwise classify), scarce (207) and vagrant (2409). The last classification was less useful than I had anticipated, either because many temporally anomalous dates (usually early dates) were not so identified or because so many anomalous dates were reported that normal dates appeared odd in comparison. I had similar problems last year. This year the avifaunal classification proved the most useful and the "ecotype" the least useful, probably because so many records still needed multiple classification. This might change next fall when a different set of circumstances might apply.

Localities caused far more problems. I found references to 2081 localities, interpreted more or less liberally. That is, I counted a dam and its lake or reservoir, and counties and a homonymous town, village or city in that county such as Madison County versus Madison as separate localities when both were explicitly mentioned. Of these localities, 295 were specific to a county only. I also made just over 300 entries that were summaries of a species for a state, province or region and that were listed as "summary" or just as a compass direction to indicate which part of the geographic unit was meant. Surprisingly, about 20 records had no locality at all probably owing to omission by the observer who submitted the record. Tabulating records in a data base, as I did, is a good way to detect such records, and you don't need a computer to do this either—just a lot of paper.

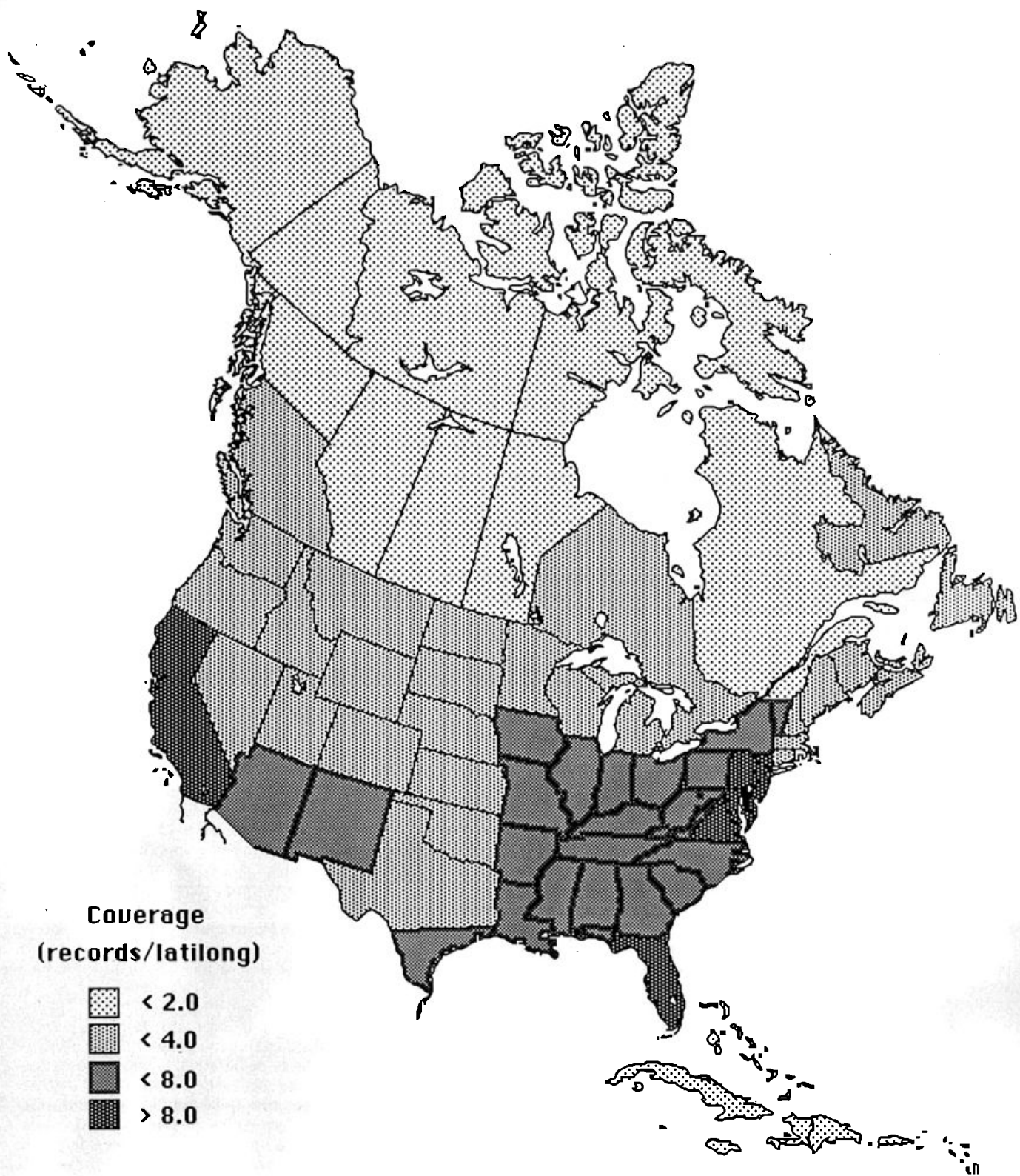
On the scale of *American Birds* Regional Reports, and

for the type of data generally reported here, specific localities are usually more accurate than are needed for analyses. Last year I used a single latitude/longitude for each state or province. This year I tried to place each record within a **latilong**, an area bounded by one degree of latitude and one degree of longitude. These are roughly rectangular blocks about 70 miles high (north-south) by 60 (at 30° latitude) to 50 (at 45°) miles wide. This scale works well for records in *American Birds* (and for most other ornithological records). Furthermore, it provides a simple, unambiguous means to locate every record to within about 30 miles once a nomenclature for latilongs is adopted. In the past, a latilong generally has been named for a geographic locality within it. A more useful nomenclature is obtained by naming each latilong with the unique decimal code number formed by writing the latitude of the latilong, followed by a decimal point, followed by the longitude of the latilong *latitude.longitude*. In North America this code number both identifies each and every latilong and also precisely locates it on the surface of the earth. For the world as a whole, conventions to designate northern versus southern and eastern versus western hemispheres also must be established.

This code number remains slightly ambiguous until one fixes it to a standard position in a latilong. Although a first impulse is to choose one of the four corners, the center of the latilong seems even a better choice. However, the center works best if the boundaries of each latilong are shifted to the 30' lines of latitude and longitude so that the code number really is at the center of a latilong. The advantage of this convention is that the code number of each latilong also indicates a point that is equidistant on average from any randomly selected site within that latilong. The disadvantage of this convention is that no one has done it that way before, which is never a good reason to avoid something. With apologies to all of the "latilong" studies from western North America, I find the advantages to be so great that I would recommend it as the standard nomenclature for latilongs.

If more precision for locating a site is desired, one can begin by dividing the latilong that contains that site into quarters along the degree lines. The quadrant that contains the site could be indicated by appending its compass direction to the latilong number, as in 40.90NE. This locates a site to within about 15 miles. Ornithological distribution data seldom require more than a 0.1° accuracy, which locates a site to within about 4 miles. Should such accuracy be required, the latitude and longitude of a locality should be converted to decimal degrees, the result multiplied by 10 and rounded to the nearest integer, and the resulting integers combined into a decimal number as for the code number of a latilong: i.e., I am writing from Syracuse, New York, at 43°2'N76°6'W, or from 430.761 in latilong 43.76[NW]. Extending this idea to the nearest 0.01° would give a code number that fixes any locality within one-half mile.

I was unable to place 121 localities, representing 191 records, within a latilong. State parks and, especially, state wildlife management areas and local sanctuaries are unlikely to appear on a large scale atlas. Some features are newer than any atlas I had available. For example, neither the Saylorville Reservoir, the most frequently mentioned locality in the Middlewestern Prairie Region, nor Saylorville was in any of my atlases; a more recent map revealed it to be a major reservoir northwest of Des Moines, Iowa. Finally, place names may change as Cape Canaveral became Cape Kennedy and then reverted to its older name. I encourage contributors to provide the latilong for each site that they report, in the event that *American Birds* and re-



gional editors decide to incorporate this information in reports.

The regions differ markedly in the number of latilongs that they include. Table 2 understates this difference because I counted latilongs straddling regional borders twice, making small regions, especially, appear even larger than they are. The regional boundaries reflect an attempt to encompass biogeographically uniform areas constrained by where bird watchers were concentrated 35 or more years ago. The biogeographical differences still persist, but geographic disparity in numbers of observers no longer is as significant as it was then. The regions differ less in the number of avian records that they report (Table 2). An unfortunate side effect of this is that birds are reported in greater geographical detail (i.e., there are more records per unit area) in smaller regions than in larger regions. This is not necessarily bad, but it does weight the unique continentwide view of our birds that *American Birds* provides towards the smaller regions, primarily in the Northeast and California.

Space in Regional Reports is a scarce resource that needs to be used wisely. Providing an even density of coverage of our birds strikes me as a wise way to use it. I suspect that redrawing the regional boundaries may at some time prove practical and have suggested some changes to the Editor. Ideally, no region should be smaller than about 75 latilongs nor larger than about 125 latilongs. Practically, political rather than biological boundaries are the easiest for observers to recognize, and larger regions will have to be a reality especially for the sparsely populated arctic. Unfortunately, the regions which most obviously are candidates for merger

also would yield areas increasingly difficult for a Regional Editor to manage should they be combined. In such cases, regions smaller than 75 latilongs in extent may be the only recourse.

I adopted only a single convention for dates. When a bird made a prolonged stay, I used the date the bird was found as the date for the record and entered the ending date of its stay as a comment, except for a few reports of birds that remained from the summer reporting period. For these records, the date I recorded was the bird's departure date. There were 54 records with dates before or after the fall reporting period, 566 (mostly summaries) with no date, 174 listed only as "early in a month" and 47 listed as "late in month." I didn't encode "mid-month" records in a way that they could be extracted easily from the data base.

The nearly 10% of reports without exact dates are entirely too many. Observers who fail to record and/or to report the exact date (and locality) of their observations needlessly complicate the work of a Regional Editor.

The number of records in my data set, and the information that I could have extracted from it, would have increased substantially if more summary records of species gave precise dates and localities for first and, as appropriate, maxima and last records for the season. The Editor of *American Birds* must decide what the format will be, but it seems to me that a standard format for summarizing records when they are too numerous to list individually is needed. An ideal format will provide a clear indication of the range of dates (and perhaps places) whence records come as well as means to note their quantity.

Of the records with firm dates, 528 were on a Monday,

Table 2. Comparison of Regional Reports.

REGION	Area	Species	Records	Recs./Sp.	Recs./LL.
Alaska	325	53	86	1.62	0.26
Appalachian	48	111	235	2.12	4.90
Central Southern	73	185	341	1.84	4.67
Florida	22	133	213	1.60	9.68
Hawaiian Islands	35	57	86	1.51	2.46
Hudson-Delaware	11	129	261	2.02	23.73
Middle Atlantic Coast	14	171	398	2.33	28.43
Middle Pacific Coast	30	188	352	1.87	11.73
Mountain West	112	148	263	1.78	2.36
Middlewestern Prairie	69	203	362	1.78	5.25
Niagara-Champlain	19	75	93	1.24	4.89
Northeastern Maritime	101	161	348	2.16	3.45
Northern Great Plains	79	105	170	1.62	2.15
Northern Pacific Coast	83	108	227	2.10	2.73
Northern Rocky Mountain- Intermountain	92	126	217	1.72	2.35
Northwestern Canada	300	74	108	1.45	0.36
Ontario	158	183	385	2.10	2.44
Prairie Provinces	265	76	140	1.84	0.53
Quebec	198	71	105	1.48	0.53
Southern Atlantic Coast	30	117	200	1.71	6.67
Southern Great Plains	107	203	382	1.88	3.57
Southern Pacific Coast	21	163	358	2.20	17.05
South Texas	21	107	165	1.54	7.86
Southwest	66	221	441	2.00	6.68
Western Great Lakes	68	119	203	1.71	2.99
West Indies	200	64	104	1.62	0.52
AVERAGE	98	129	240	1.80	6.09

Area in latilongs is approximate, with latilongs on regional boundaries counted for each region into which they extend; species excludes hybrids, subspecies and records to genus only if a cer-

tainly identified congener was reported for the region; number of records includes summary records. Values in italics are estimates from past reports.

493 were on Tuesday, 532 were on a Wednesday, 564 were on Thursday, 658 were on a Friday, 1107 were on Saturday and 1192 were on a Sunday. This ratio is almost exactly the same as I found in the subsample of records that I computerized last fall. We all know why there are more weekend dates than weekday dates. Why don't birders birdwatch on Tuesday?

Cooperative ornithological research and *American Birds*

If the first part of this summary treats the substance of this issue and the second part treats its form, what do we get from this combination? *American Birds* is the vehicle of perhaps the largest cooperative ornithological research project—a study of avian population trends over all of North America—that exists anywhere in the world. It is of great geographic scope and involves hundreds of people. It includes the observations submitted by all of us who contribute to the pages of the seasonal issues. The results of this project are mixed. Documentation of range expansions and contractions, the discovery of eastern birds west and of Palearctic birds in the Nearctic are some of its recent highlights.

While preparing this summary I looked at plots of date versus latitude and longitude for several large subsets of the records, after excluding those with vague dates and no precise latilong. Waterfowl records vaguely produce the expected result that birds move south in the fall, but shorebird records suggested that Aristotle was correct after all! Shorebirds appear to vanish abruptly from all latitudes in late November, no doubt to hibernate at the bottom of lakes and ponds. I jest, but this is not a jesting matter. The records that appear in these pages are biased towards the unusual. One is hard pressed to recover such elementary ideas as "birds fly south in the fall" from them.

American Birds long has been a vehicle for reporting records of rarities. Records Committees organized at local, state and, eventually, national levels seem to be a step toward eliminating inaccurate reports of rarities. Records of rarities are most interesting when they reveal a new pattern and increase our understanding of nature. However, once understood a pattern also means that a record which is part of that pattern isn't so unusual any more. Such records tend to vanish from the pages of *American Birds*, often just when they are of the greatest value. Long term reporting of trends revealed by these records is important even after detailed reporting of records is not feasible. This is another reason to have a standard way to report those tantalizing records that are just too numerous to list individually.

I now will don another hat, visiting Editor of *The Kingbird*, the journal of the Federation of New York State Bird Clubs, and describe two cooperative birding projects run by other organizations that might be adapted to the continental scale of coverage that *American Birds* provides. Cooperative projects that require unfamiliar activities or special effort by birders seldom do well. Both of these projects have another feature in common—they require little or no change in what birdwatchers do, and they need little note keeping beyond a simple checklist of what you observe on each field trip you take.

The first project was devised by Stanley A. Temple while he was at Cornell University. He wondered if population trends could be discerned from the proportion of checklists that were compiled each year which include a given species. The answer seems to be yes. When he moved to Wisconsin, Temple extended this idea to: suppose lots of

checklists from different observers scattered over the state of Wisconsin are accumulated each week. Can we detect population trends from the proportion of lists that contain a given species? Again the answer seems to be yes. The Cornell Laboratory of Ornithology and the Federation of New York State Bird Clubs have begun a similar effort, but ask observers to estimate the highest number of each species observed each week and to record that estimate as one of five abundance classes. It remains to be seen how much more information this style of recording will produce relative to that garnered from simple checklists.

Both checklist projects are possible because a significant part of the data processing is automated. Reporting forms can be read directly into a small computer by machine and there stored and manipulated easily. This is presently beyond the resources of many Regional Editors. However, it might be feasible to compile comparable data by hand for a short list of target species for selected short time periods only. Nomadic, irruptive and perhaps some widespread "Blue-listed" species are good target species for such a project.

The second cooperative project also has roots at the Laboratory of Ornithology. Charles W. Smith once questioned me whether arrival and departure dates such as published in Regional reports of *The Kingbird* (and by analogy in comparable journals) really were worth printing. After much thought and compilation of data previously published in *The Kingbird*, I decided that I wasn't sure. However, I became convinced that the haphazard reporting of such data and the overemphasis on anomalous dates surely reduces any value that they might have. For *The Kingbird*, I decided to compile arrival dates in the spring and departure dates in the fall systematically for a fixed list of common species; I established rules as to what constitutes outlying observations and suggested how contributors might best record these dates, especially departure dates. These lists of species are available for all New York observers and the Regional Editors of *The Kingbird* now are required to report these data each migration season. In time we will assemble a consistent data set. I hope we will be able to show that these data are useful. For *American Birds* finding a suitable list of target species would be infinitely more difficult than was the case for New York, and New York wasn't easy.

I suspect that reporting the results of such a project would produce better detail if the results were reported relative to some type of an expanded latilong grid, such as by 5×5 or 10×10 blocks of latitude and longitude. Either project, or some other idea that a reader might suggest, would be a lot of work for whoever compiles the data, but I suspect that it might be worth the effort. Birding is fun in itself. It is even more fun when you know you are contributing to a bigger effort at the same time.

Finally, I noted that almost one-half of the Regional Reports were prepared on computers. I also know that an increasing number of observers have access to personal computers. As *Kingbird* editor I have been exchanging manuscripts with some of my Regional Editors on magnetic media, and found it to work well though not always without a hitch. Even though my computer is incompatible with that of everyone with whom I deal, I much prefer reworking the electronically transferred manuscripts rather than rekeying them. Many of the issues that must be decided have been raised in this and in last fall's *Changing Seasons*. As for me, the next time I do *The Changing Seasons* I'll probably try once again to put all of the records in my computer as a prelude to writing. I already know that my task would be simplified if copies of Regional Reports prepared on word processors were submitted as unformatted text files on diskettes

along with the formatted printed copy that I get now (I return media fast!), and I would be overjoyed to see a machine readable table of the records that appear in that report. Until then, there is a lot to find in this and in the upcoming issues of *American Birds*. Read and enjoy!

Technical notes

For computer buffs who may be interested, I use an Apple Macintosh Plus computer, but any personal computer capable of handling the database, which grew to about 430K bytes in size, would suffice. The data manager I used, *OverVUE V2.0d* by ProVUE Development Corporation, is exceptionally easy to set up and spared me several hours of data entry; it is a very fast memory resident program and with some very useful "features" that simplified my work greatly and is exceptionally efficient in storing data on disk. For some data analysis and for preparing tables I exported data from the *OverVUE* program into Microsoft Corporation's *Excel* spreadsheet program to expedite date arithmetic and reformatting. Data sets for analysis then were polished with a dumb text editor, *Edit*, released by Apple Computer and moved into D² Software's *MacSpin*, a three-dimensional graphics program superb for qualitative analysis of multivariate data. It took about 1-2 hours, most of which was spent weeding out incomplete records, to review sets of 900 ± records this way. I use Apple Computer's *MacWrite* program for writing because it is sufficient and made liberal use of many of the Macintosh built-ins like the Notepad while combing the data base for information, because it was much faster than trying to devise queries and reports to satisfy the ad hoc questions (i.e., list every record of a Palearctic bird except those which occur annually) that I posed of the data set.

For MS-DOS computers the closest equivalents to these products are: for *OverVUE* use Borland International's *Reflex*; for *Excel* use Lotus Corporation's 1-2-3 (incidentally, these programs can exchange data in 'WKS' format directly) Any editor that produces DOS or ASCII text files will substitute for *Edit*, but I know of no equivalent to *MacSpin*. Borland International's *Sidekick* package mimics some of the Macintosh built-in features. I use a null-modem cable and telecommunications programs to move MS-DOS files to and from a Macintosh computer.

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Abbreviations Frequently Used in Regional Reports

ad adult, Am.: American, c.: central, C: Celsius, CBC: Christmas Bird Count, Cr.: Creek, Com.: Common, Co.: County, Cos.: Counties, et al.: and others, E.: Eastern (bird name), Eur.: European, Eurasian, F: Fahrenheit, fide: reported by, F.&W.S.: Fish & Wildlife Service, Ft.: Fort, imm.: immature, I.: Island, Is.: Islands, Isles, Jct.: Junction, juv.: juvenile, L.: Lake, m.ob.: many observers, Mt.: Mountain, Mts: Mountains, N.F.: National Forest, N.M.: National Monument, N.P.: National Park, N.W.R.: Nat'l Wildlife Refuge, N.: Northern (bird name), Par.: Parish, Pen.: Peninsula, P.P.: Provincial Park, Pt.: Point, not Port, Ref.: Ref-

uge, Res.: Reservoir, not Reservation, R.: River, S.P.: State Park, sp.: species, spp.: species plural, ssp.: subspecies, Twp Township, W.: Western (bird name), W.M.A.: Wildlife Management Area, v.o.: various observers, N,S,W,E,: direction of motion, n., s., w., e.,: direction of location, >: more than, <: fewer than, ±: approximately, or estimated number, ♂: male, ♀: female, ∅: imm. or female, *: specimen, ph.: photographed, †: documented, ft: feet, mi: miles, m meters, km: kilometers, date with a + (e.g., Mar. 4+): recorded beyond that date. Editors may also abbreviate oftencited locations or organizations.