Discoveries

News & views from Discovery Southeast — *Fall 1995*

Southbound: deciphering fall migration

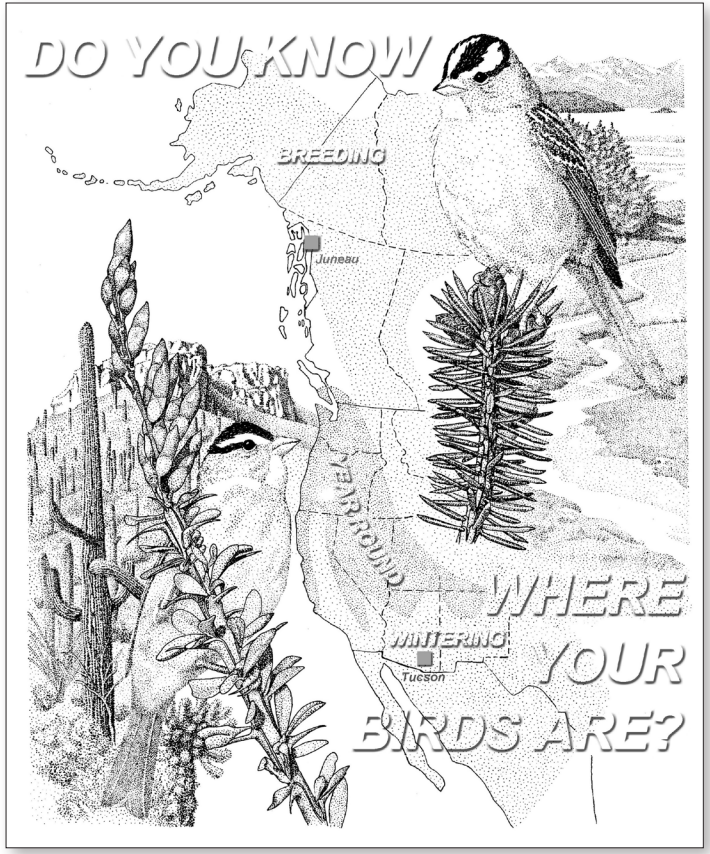
Richard Carstensen

The first robin of spring stands out like a neon sign. But the last one of autumn often goes unnoticed. Dwindling numbers of southbound land and water birds draw less attention in drizzly October than on their April northbound journey. The snows of November chase the last migrants from Alaska. By December even the swagger of ravens seems feigned.

Ravens may be the intellectual heavyweights of the bird world, but I credit their smaller songbird relatives with more pleasurable solutions to the Alaskan winter. Across the northern coniferous forests about 80% of the breeding species, and 94% of the individuals, fly south each fall. These neotropical migrants include most of our swallows, flycatchers, thrushes, and warblers. The Alaskan bird fauna is especially heavy with '*neotrops*,' and some of the species we like to call "ours" may spend as few as 3 months here.

Such statistics have been useful in justifying my recent winter trips to Mexico

In this issue



Upper scene: White-crowned sparrow (Gambel's subspecies) nests in dwarf birch scrubland from Chilkat Pass northward. It passes through Southeast Alaska in spring and fall. • **Lower scene**: Sonoran desert wintering grounds near Tucson, Arizona, perched on ocotillo stem.

Pictured at a September gathering to welcome new Board and Staff are Board members (from left to right): Cathy Pohl, John Lindback, Bruce Gifford, Linda Van Houten, Stephanie Hoag, Bob Briggs, Lynn Humphrey, and Susan Jordan. Not pictured are Board members Annie Calkins, Carol Griffin, Bob Janes, and Joe Powers.

Board welcomes new members

Susan Goes

Discovery Foundation extends a warm welcome to the 7 new members who joined our Board of Directors in September 1995. As a non-profit organization, we rely heavily on the generous service and leadership of community volunteers. In addition to strategic planning and policy development responsibilities, Board members take on the challenges of the annual membership campaign and spring auction. Lynn Humphrey, the current Board President, comments that "*our programs in the schools would simply not be possible without the talents and commitment of the Board!*"

New Directors in 1995-96 are: Carol Griffin, Stephanie Hoag, Susan Jordan, Connie Keithahn, John Lindback, Joe Powers, and Linda Van Houten. We are delighted to have them on board.

We also wish to acknowledge the service of the following individuals whose Board terms concluded in 1994-95: Sue Baxter, Koren Bosworth, Paul Grant, Marilyn Holmes, Peter Metcalfe, Dorothy Webster, and Dawn Wolfe. We extend a particularly big thank-you to outgoing Board President Dawn Wolfe, whose strong leadership during a critical time kept the dream of this organization alive.

Southbound *continued*

and southern Arizona. I endured 17 rainy Juneau winters before admitting that movements of rufous hummingbirds deserved consideration. After all, how can I pretend to understand Alaska's neotrops without also observing them in the dry 75°F January heat of an acacia scrub forest above Guadalajara?

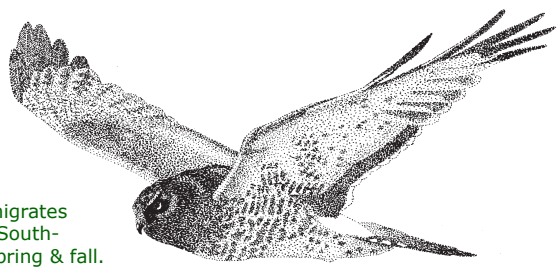
Actually, I've been one of the slowest of Juneau's birding set to develop a hankering for travel. When I assigned myself the intriguing task of writing this article, one of the anticipated rewards was catching up with the dozen or so professional birders who work in Southeast Alaska. Spreading my notes out by the phone, I began dialing.

"Mary Willson? No, she's in California. She'll be in town for a week soon, but then she heads back south to Chile."

"Gus van Vliet? Out of state until late October."

"Hello, this is Bob Armstrong's answering machine. . ." Oh yeah, on vacation . . .

"Brad Andres? Sorry. He's in



Northern harrier migrates through Southeast in spring & fall.

Rufous hummingbird captured at Cathy Pohl's banding station near Hoonah. Temperate highland winter range of this species centers around my sister Tina's mile-high home in Guadalajara, Jalisco.

Cape May, New Jersey."

Cape May is a migratory bottleneck, a point on the east coast that concentrates neotropical birds and birders. Even ornithological business is conducted there; researchers hold their workshops and symposia in glamorous places like Cape May and Baja.

Fortunately, I was not the only birder left in Alaska. Seeking information on migratory hawks, I called Phil Schempf, a raptor biologist at the US Fish and Wildlife Service's (FWS) Juneau office. Phil says most raptors move up and down our mainland coast, rather than island-hopping through the Archipelago. Southbound hawks like to ride thermals over the ridgetop meadows and tundra. This fall, USFWS biologists conducted 6 raptor censuses on Heintzleman Ridge, southeast of Mendenhall Valley, where 20 to 30 hawks may be seen in an afternoon. Last year, Jack Hodges recorded 80 in 2.5 hours. Sharp-shinned hawks are most common, but kestrels, merlins, harriers and goshawks also appear, along with occasional rough-legged hawks and golden eagles.

I see more southbound birds on clear days, and assumed migrants were selecting for northerly tail winds. Phil says it may be more significant that those relatively few clear days *release* birds that have been pinned down by the steady succession of autumn storms. Such a migratory pulse was also witnessed several times in Yakutat this fall by songbird researcher Todd Trapp.

Between late July and early October, Todd helped FWS project leader Brad Andres conduct the second year of migration monitoring in Yakutat. Nearly invisible mist nets (12 x 2.6m, 30mm mesh) are erected daily at sunrise, from which entangled small birds are removed and fitted with leg bands. Data on age, sex and morphology are collected. The most common species at the Yakutat migration station have been Lincoln's sparrows, hermit thrushes, orange-crowned warblers,

News for coffee-drinking bird lovers

Coffee beans are big business in Mexico, Central and South America. In traditional plantations, coffee bushes form a shade-loving understory beneath biologically diverse forests. Unlike other regional monocultures like sugar cane and cattle fields, these structurally complex plantations offerexcellent shelter for overwintering birds from North America.

Unfortunately, the mega-coffee companies mostly buy beans from newly-developed hybrid plants grownin full sun. Sun coffee plantations offer habitat only for the most disturbancetolerant birds. Sun plantations are pesticide and fertilizer dependent, and hasten soil erosion. But take heart! If you are among the legion of recent converts to cappuccino and espresso, odds are fairly high that some of your dollars support growers of old-fashioned, gourmet shade coffees. A few coffee companies are even promoting supposedly ecofriendly blends as a marketing strategy.

Juneau's Grady Saunders, owner of Heritage Coffee Company, takes these claims with a grain of salt. He cautions that if you're serious about buying shade coffee, a "*certified organic*" label is not enough. Because coffee beans rarely pass directly from grower to retailer, but are mediated by co-ops and brokers, few blends now carry a shadegrown guarantee. If enough coffee drinkers care, that will change.

Which local birds use coffee plantations? The Swainson' s thrush, Wilson's warbler and western tanager are known to use mature plantations in Guatemala. The orange-crowned warbler also uses plantations but tolerates a wider range of disturbed habitats. For more information on this subject, see the November 1994 issues of Audubon and Smithsonian magazines. Or have a latte with Grady!

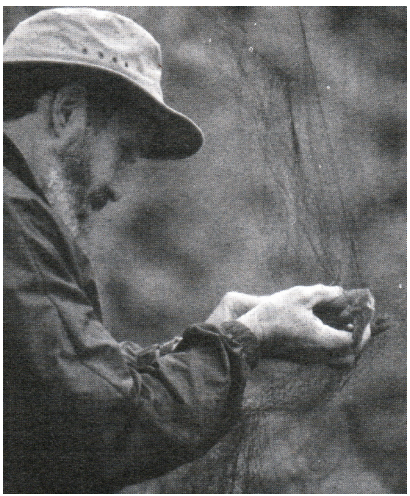
ruby-crowned kinglets, and Oregon juncos. In 1994, 75% were hatch-year birds, but fewer young were seen in 1995. Yakutat's capture rate is exceptional among Alaskan migration stations, probably because of the funneling effect of its narrow strip of lowlands, boxed between ocean and icefields.

Todd Trapp agrees with Phil Schempf's observation that birds tend to flush through Southeast Alaska in pulses following periods of bad weather. After Typhoon Oscar, which dumped over 6 inches on Yakutat in 24 hours this September, the first clear day set a new catch record. Todd's crew banded 128 birds, mostly hermit thrushes. On the following days, catches dropped to 40, then 18, then 15.

Bird research projects are suddenly underway in almost every resource agency, a response to frightening population declines in many neotropical species. An international and multi-agency group called Partners in Flight—*Aves de las Americas* shares data and coordinates research on non-game, migratory land birds. Boreal Partners in Flight is the Alaska/Yukon working group. While the only formal songbird migration monitoring within Southeast Alaska is the 2-year-old project at Yakutat, other bird studies are being established that will shed light on questions such as "*where do our birds go?*"

More directly, these studies ask "*are any of our Southeast Alaskan migrants in trouble?*" Vulnerable species targeted in Alaskan studies include olive-sided flycatcher, Swainson's thrush, warbling vireo, and northern waterthrush. For most migrants we can only guess whether apparent declines are linked more closely to problems of wintering or breeding ranges. A program called MAPS (Monitoring Avian Productivity and Survivorship) addresses this concern. The Forest Service has MAPS stations at Juneau, Hoonah, Yakutat and Misty Fjords, where birds are captured, banded, and examined repeatedly through the breeding season, to assess reproductive success and overwinter survival.

In June 1994, at her USFS Chichagof Island MAPS station, my partner Cathy Pohl caught a hermit thrush that had been banded in October 1993 at Big Sur, California. Swan authority Jim King has banded mallards born near his Sunny Point home that were later shot in Washington State, and one ambitious duck traveled as far as Mississippi. But the chances of distant band recoveries, especially for smaller non-game birds, are less than one in 300. A new genetic technique is now being tested on Wilson's warblers at San Francisco State University which, if successful, could speed the process of matching breeding and wintering populations. DNA is extracted and sequenced from a small piece of tissue attached to a few feathers collected from mist-netted birds.



Volunteer Jim Fowler untangles a mist-netted bird at Cathy Pohl's MAPS station near the Glacier Visitor Center.

Perhaps more than any other natural science, ornithology has benefited from the work of amateurs. An example is the Audubon Society's Christmas Count, when some 40,000 volunteers throughout the continent add to a record that extends in some locations back to the turn-of-century. On the migratory front, Deb Rudis, USFWS, coordinated a similar volunteer count this spring on International Migratory Bird Day. Ten Juneau birders helped her census Mendenhall Valley and mouth of Eagle River.

Personal records kept for decades by devoted birders are also invaluable. The term "*amateur*" fits Richard Gordon only in its root meaning (*to love*). His Juneau bird notes go back to the 1960's, and while many neotropical species seem to have fluctuated from year to year, Rich has detected no steadily downward trends in locally breeding migrants. If true, birds of our region belong to a privileged minority, though one to whom the future is by no means assured.

Education and public involvement are key to the Partners in Flight conservation strategy. Dozens of Juneauites have learned bird ID and natural history through the class taught for two years at the University of Alaska Southeast by wildlife biologist Judi Falk of the Forest Service. One of Judi's goals in this course is to train volunteers for banding, owling, murrelet studies, and listening surveys for breeding birds. She was invited to speak about her outreach program at this fall's Partners in Flight International Workshop.

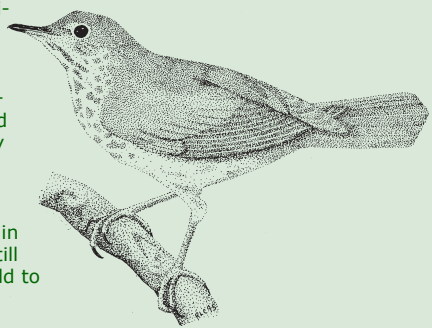
I only got to talk with Judi briefly. She was packing her binoculars for the flight to Cape May.

Swainson's thrush migration

Sharon Blick

Slightly smaller than a robin, the Swainson's thrush is brown-backed with a spotted white breast. Spending summers in spruce forests throughout Alaska, Canada, and the western and northeastern states, it feeds on insects and berries. Each pair builds a cup-shaped nest and lays an average of four eggs. Their eggs are more likely to be eaten by crows near an urban area like Juneau that provides good crow habitat. The young birds, or fledglings, may leave the nest before they can fly well, but they don't need to be rescued; the parents will find them and feed them on the ground.

These birds migrate up to 8,000 miles in only a couple of months, going as far south as Bolivia in South America. They depend on finding forest habitats in which to rest andfeed along the way. Like many migrating song birds, they fly atnight and become confused by, andsomehow attracted to, tall lightedtowers and buildings, often crashing into them and dying. Swainson's thrushes spend the winter in old-fashioned coffee farms and tropical rainforests where they may follow marching army ants andeat the bugs that the ants scare up. In addition to habitat loss (from conversion of forested coffee plantations to low-growing, unshaded bushes), they may suffer from use of dangerous pesticides such as DDT which are banned in the U.S. but are still made here and sold to other countries.



Two centuries on Duck Creek *Richard Carstensen*

1750 Mendenhall Glacier reached its farthest down-valley position of the last 13,000 years. Duck and Jordan Creeks were strong rivers gushing from the ice face, building up the valley floor with new sediment. The Mendenhall floodplain probably resembled today's Chilkat valley, with flood-tolerant cottonwood forests and early-seral spruce patches on slightly higher ground. But overall, land was isostatically depressed, ~10 feet lower than today, and not yet rising appreciably. The future Mendenhall Mall site was right on the beach. Auk people called this place *ta.cuwe*.

1910 The newly-formed Mendenhall River was now the only glacial channel. Part of its load settled in the emerging Mendenhall Lake, so the river cut downward and eventually could no longer overflow onto its abandoned floodplain. Duck and Jordan Creeks flowed clear, fed only by groundwater and storm runoff. On lower Duck Creek, century-old spruces replaced cottonwoods on the now inactive floodplain . Land was rising, probably at close to the modern rate of ~0.6 inches per year. At stream mouth, meadows of tall herbs covered former tidal marsh with hundreds of acres of prime wildlife habitat, increasingly shared with cows.

1962 Although the upper valley was still largely undeveloped, most human alterations to Duck Creek had already occurred. At the headwaters, Mendenhaven displaced flow westward. Much of the middle section was dredged, and at the airport the lower creek passed through a large borrow pit. Duck Creek's clearwater days were over. The Glacier Valley School site was clearcut, while other places were high-graded, such as the area marked *selectively cut* at left center of panel. Duck Creek itself was devastated, but its watershed still contained fine habitat for all but the shyest wildlife.

1997 Duck Creek channel has been moved little since 1962 but road crossings (counting both forks) have increased from 18 to 39, and most of the creek is now within stone's throw of a road or house. Pavement and roofs send storm runoff directly into the creek, which exaggerates flood hazards even though much of the creek now goes dry during low flows. Only shreds of original forest and wetland remain, and these patches are mostly isolated from the channel, making it hard for wildlife to use the stream, which has the least remaining natural habitat of any. watershed in Southeast Alaska

Created under EPA>ADEC funding for our Water Watch program.