THE STILT

BRIDGERLAND AUDUBON SOCIETY

Vol. 16, No. 6 February 1988

MEETING CALENDAR

Monday, February 1: Conservation Committee Meeting, 7:30 p.m., Room 112B, Biology/Natural Resources Building, USU campus.

Thursday, February 11: Regular monthly BAS meeting, 7:30 p.m. in the Logan Library meeting room, 255 North Main, Logan. Al Stokes will present a talk on animal tracks.

Wednesday, February 17: BAS planning meeting, 7:00 p.m. in the Logan Library conference room, 255 North Main, Logan.

FIELD TRIP CALENDAR

This issue of the *Stilt* contains the complete BAS Spring Field Trip calendar as a separate sheet so it can be removed for posting.

AL STOKES TO SPEAK AT BAS MEETING

Al Stokes will talk about animal tracks and tracking at the February BAS monthly meeting on February 11. He will describe how to identify the animal that made the tracks, what it was doing when it made them, and the gait it was using. Additionally, as perhaps the high point of the presentation, Al will create a four-footed animal before your very eyes, using volunteers from the audience, as a means of demonstrating how an animal moves.

Al was first exposed to the challenging art of animal tracking by Olaus Murie, the great naturalist and author of the Field Guide to Animal Tracks. Ever since, Al has found trying to decipher animal signs an absorbing and challenging pastime.

Winter is a splendid time to see tracks, for one can follow the animal over long distances and usually get a feel for what it was doing, be it predator or prey. As a follow-up to Thursday's meeting, Al will conduct a field trip to give people a chance to apply what they learned in the meeting; see the Field Trip Calendar in this issue for details.

SEVENTEEN SYLLABLES

A row of dark pine
on the road between pastures:
a thought, yesterday.

— Pat Gordon

HOTLINE NOTES

The most important hotline reports this month are included in the Christmas Bird Count information elsewhere in this issue of the *Stilt*. These include sightings of an American white pelican, a cinnamon teal and others. The blue jays reported at Mack Park in Smithfield are still in evidence, and Christmas Counters observed a varied thrush and a pygmy owl there as well.

— Scott Cheney

1987 CHRISTMAS BIRD COUNT RESULTS

Thirty-four observers in 12 parties participated in the 1987 Christmas Bird Count on December 19, 1987. They spent a total of 82 party-hours, covered 362 party-miles on foot, in cars, in canoes—and, for the first time, two hours and six miles on ice skates. All told, observers recorded 98 species—one species short of the record 99 species recorded in 1983. Observers saw a total of 20,040 individual birds. Although this is not the highest total number on record, numbers for several individual species were the highest ever observed. Specific results appear in tabular form on a special inclusion in this issue of the *Stilt*.

— Keith Archibald

WELCOME, NEW MEMBERS

Kevin Connors, Logan
Larry J. Jacobsen, Logan
Harry Lahanas, Logan
John Mull, Logan
Fred Prussing, Ogden
Kevin Talbot, Logan
Robert & Sally Jackson, Logan
Scott Jacoby, Logan
Randy Foltz, Logan
Shirlene Haas, Logan
Linda Rawlins, Logan
Ed Sparks, Logan
Darin Goff, Logan
Loretta Lockett, Smithfield
John Sigler, Logan

THANKS, RENEWING MEMBERS

B. Campbell, Logan
Charles Crisafulli, Logan
L. R. Firestone, Logan
Mrs. Robert Johnson, Logan
John S. Kirkley, Dillon, MT
John L. Landeen, Logan
Steve McOmber, Logan
Jack Payne, Corpus Christi, TX
Don Phillips, Atlanta, GA
Chris Riley, Logan
Ellen Spickerman, Swan Valley, ID
Marsha Swartzfager, Layton
Wynlee Tallmadge, Logan

CACHE VALLEY EAGLE SURVEY

Several members of BAS, in conjunction with the Utah Division of Wildlife Resources, participated in a Cache County bald eagle survey over the weekend of January 9 and 10. The ten observers saw a total of 19 bald eagles, 11 adults and 8 immatures. The highest eagle concentration occurred in Blacksmith Fork Canyon, where observers spotted nine individuals.

The bald eagles observed during this survey are winter visitors to the valley; they arrive in late fall and linger in spring until mid-March. The likely breeding areas for these birds are in Canada and Alaska. It is a delight to have these magnificent birds wintering in the county.

— Ron Ryel

"AUDUBON COORDINATING COUNCIL FOR UTAH" FORMED

On December 16, representatives of Utah Audubon Society (Salt Lake City), Wasatch Audubon Society (Ogden) and Bridgerland Audubon Society met. A representative from Mt. Timpanogos Audubon Society (Provo) had expressed strong interest in meeting with us but was unable to attend. The purpose of the meeting was to improve the level of cooperation and coordination among Utah's five Audubon chapters (Cedar City also has a chapter—the Kolob-Virgin River Audubon Society).

We decided to call the group The Aubudon Coordinating Council for Utah. Cindy Cromer and Alan James will represent Utah Audubon, John Bellmon represents Wasatch Audubon, and Bruce Pendery represents Bridgerland Audubon on the Council. We need to get representatives from the Mt. Timpanogos and Kolob-Virgin River chapters for this group to really live up to its name.

The Council's purpose is to facilitate communication between chapters, not interfere with each chapter's autonomy. The primary vehicle for achieving this goal initially is via articles in other chapters' newsletters. If you would like to submit an article or announcement to either the UAS or WAS newsletter, contact Bruce Pendery.

Areas for increased coordination and cooperation could include issues (Utah Lake Refuge, Devil's Slide Management Area, water issues, Logan Canyon highway development, and ski area expansion were specific issues emerging at the meeting), field trips, the Christmas Bird Count and others.

The Audubon Coordinating Council for Utah will next meet at the regular spring Audubon meeting, hopefully in Provo.

— Bruce Pendery

SONGBIRDS RESPOND UNUSUALLY TO SHARP-SHINNED HAWK

On January 3, I noticed a sharp-shinned hawk, perched on the fence just west of our breakfast room, just starting to pluck the feathers of a freshly-killed junco. Much to my surprise, I saw that there were juncos and siskins at several of my feeders only 20 to 40 feet away from the hawk. They fed there seemingly unconcerned with the hawk, which was in plain view and made the more conspicuous by its vigorous plucking at the dead bird. Normally when a sharpie is in the vicinity of my feeders, all birds vanish—some frozen in the dense foliage of a nearby arbor vitae and others in other dense foliage. Moreover, these birds remain frozen for a good 20 minutes after the hawk has flown off.

I suspect there might have been two factors causing these songbirds—juncos, siskins, house finches, evening grosbeaks and Harris' sparrows—to show so little fear. Could these birds recognize that a hawk in the act of feeding is no threat? Could they recognize that for a period after having consumed its prey, a hawk may not be in a hunting mood? This sharpie remained with its breast feathers fully fluffed, giving it quite a different appearance from a hawk on the alert to attack. Of and on, the hawk made a few preening movements.

A second possibility is that the below-zero cold of the preceding several days could have forced the song birds to feed despite the danger to which feeding exposed them. I watched the hawk for about 1 1/2 hours. During this time it seemed indifferent to the presence of the birds nearby, some flying past not more than 15 feet away. Finally, the hawk began to preen its breast and back feathers. Abruptly it took off like a flash toward the nearest feeding tray, past the arbor vitae and out of sight without having caught anything. Even with this second attack, the song birds resumed feeding within two minutes with no particular signs of wariness.

I think now that it was hunger and the high energy demand induced by the cold weather that drove these birds to feed so openly and within sight of the hawk.

— Al Stokes

AL AND ALICE STOKES ON CHRISTMAS BIRD COUNT IN YUCATAN

On December 26, while we were waiting to set out from our hotel in Uxmal to visit the famous Mayan ruins, a woman with binoculars approached me to ask what birds I'd seen. I mentioned a few common ones before she introduced herself as Joan Cobb who, with her husband, was participating in the Audubon Christmas Bird Count that day. I was able to add the cardinal, house wren and yellow-throat to her list. Joan said that they normally see no more than 60 species of birds in that count area, which sur-prised me. But Yucatan is very dry and so supports only a dense scrub forest with few openings in it. When I mentioned that a pair of aplomado falcons was flying around the giant temple on the ruins grounds her ears perked up. We joined them, and to their delight the falcons were making great sweeps about the ruins attempting to catch the cave swallows that nested and roosted within some ruins. Alice and I regretted that we could not spend the entire day with this enjoyable British couple now living in Yucatan.

— Al Stokes

AUDUBON ENERGY PLAN

Energy production and consumption degrades our natural environment worldwide. Most industrial, energy-dependent countries have recognized the need for and adopted national energy plans. These plans were generally born of economic crisis, and have recognized the importance of conservation and exploring alternative energy sources with low environmental impacts. Our country, however, has not begun discussing such a plan, much less adopted one—even with all the presidential candidates scurrying about.

The National Audubon Society has developed an energy plan designed for our country's needs up to the year 2000, when projections show energy demand increasing considerably. The Audubon Energy Plan, if adopted, would by the year 2000 increase our energy efficiency to a level equal to Europe's current standards. The basic tenents of this plan describe a shift from excessive energy production and consumption to policies that intelligently conserve energy. The means to meet this goal include, to name a few:

- establishing automobile fuel economy standards to reduce energy waste,
- establishing appliance efficiency standards,
- establishing electricity prices that reflect real costs,
- developing garbage-fueled power generation,
- developing resource recycling,
- improving and making more attractive investment and financing opportunities in energy conservation and alternative energy sources such as solar, wind, and co-generation systems.

The Audubon Energy Plan promotes reducing energy production from oil, coal and nuclear resources—which means less drilling, less mining, decreased acid rain, decreased atmospheric carbon dioxide, fewer toxic-waste

accidents and an overall improvement in water and air quality. Remember also that many of the industries using—or misusing—natural resources are federally subsidized. Perhaps reducing these subsidies would promote a true free market. . . instead of a political buzzword. That would help increase the market for technologically available renewable energy resources and, in the long run, lower our dependence upon foreign oil imports.

To succeed, the Audubon Energy Plan needs your support. Become informed, tell your friends, write your Senators and Representatives. For more information about the Audubon Energy Plan, write or call the National Audubon Society, 950 Third Avenue, New York, NY 10022; (202) 832-3200.

— Chris Riley

MORE ABOUT ROBINS

In the January issue of the *Stilt,* I wrote about a robin that successfully kept up to 10 waxwings from feeding in the same crabapple tree. Since then I have been watching the mountain ash tree, heavy with clusters of berries, just outside my breakfast room window. This afternoon (December 16), at 1:30 p.m., I noticed a male robin in the tree chasing another bird. I kept careful notes for the next hour and 17 minutes, when I left home.

The robin's preferred perch was half way up the tree on the south side. When house finches, juncos or several times a Harris' sparrow lit in the tree, the robin usually reacted. Its first response was to flare its tail, at times raising and lowering it while at the same time giving its characteristic single-note call. While I watched I saw the robin more than 10 times chase off intruders that might or might not actually be feeding. Usually just a short hop or short flight of one to two feet was enough to cause the finches and juncos to fly off. Rarely did the robin fly further than this to repel a bird. Perhaps this was because the foliage was fairly thick, so a direct flight was not easy. Neither did the robin fly upward toward a bird perched two or more feet higher, again possibly because of the difficulty in penetrating the foliage.

Over my entire observation period the robin fed only twice, taking a fruit or two, then perching quietly on its usual perch. No other robin flew into this tree. At times as many as three finches perched or fed in the tree at the same time; this many birds almost always drew a quick response from the robin.

I noted that the house finches did not eat the entire mountain ash fruit, as do robins, starlings and waxwings. Instead, they pierced the fruit and extracted the seeds within. It took a finch about two minutes to extract the seeds from one fruit. In contrast, birds that eat them whole take only a matter of a few seconds to consume an entire fruit. For the robin, it might not be energy efficient to chase off such a minor competitor as a finch. A flock of waxwings, however, can make quick and deep inroads into the fruit of a single mountain ash tree.

The following afternoon, I saw a flock of six to eight robins fly into an apple tree some 30 feet away from this same mountain ash. Immediately a male robin (very likely the one I'd seen the day before) appeared in the mountain ash, perhaps from the dense lace vine where it might have been resting. The robin fanned its tail, flipping it up and down subtly, and gave its single-note call with its wing tips lowered. In the space of five minutes it chased off 10 robins that flew into the mountain ash. The male usually perched eight feet off the ground on the south side of the tree, exactly where the supply of berry clusters was heaviest—some three times the number on the north side. It made hops or flights toward an intruder when the latter was only a foot or less above it, leaving alone those robins feeding eight feet higher up in the tree. All robins that flew into the tree while I was watching were females.

The male robin's behavior seemed to illustrate how an animal weighs the benefits of its actions versus the costs. When the intruder was a small threat to the robin's food supply, such as a junco or a house finch, the energy spent in chasing them off was greater than the energy represented by the saved food. Similarly, if the intruders were perched considerably higher in the tree or screened by dense foliage, the robin would have had to expend more energy in chasing them off than that represented by the food saved. Rather than attempting to defend the entire tree, the robin concentrated on the densest supply of berries—which also happened to be closest to a safe resting place in the adjacent lace vine.

— Al Stokes

ARCTIC NATIONAL WILDLIFE REFUGE THREATENED

(Editor's note: the text of this article was written by Mark Miller and supplied by the National Audubon Society in Washington, D.C. It may be slightly dated, but is nonetheless a comprehensive and detailed examination of the issues at stake in Alaska.)

In the extreme northeast corner of Alaska lies the Arctic National Wildlife Refuge (ANWR), an outstanding example of a pure, untouched wild ecosystem that once covered a great portion of North America. The area was established in 1960 as an 8.9 million-acre Wildlife Range in recognition of its unique wildlife, wilderness, and recreation values. In 1980, under the Alaska National Interest Lands Conservation Act (ANILCA), it acquired its current name and was expanded to 19 million acres.

Of all this great wilderness, it is the relatively small (about two million acres) coastal plain that is the most important for wildlife. It is in this narrow strip between mountains and sea, that caribou, following their ancient migration routes, give birth to their young. Here also are found grizzly bears, polar bears, muskoxen, wolves, loons, tundra swans, snow geese, golden eagles, and a host of other migratory birds that travel to five continents.

Unfortunately, in 1980 Congress did not give complete protection to the plain, despite the best efforts of Audubon and others. Under oil industry pressure, it ordered (in section 1002 of ANILCA) the Department of Interior (DOI) to "study" the plain and "recommend" whether it should be opened up for oil development or be further protected. Earlier this year, the long-awaited "1002 Report" was released. Secretary of Interior Donald Hodel urged Congress to open up the entire area—despite many conclusions in his own draft report that the area's wildlife and wilderness would be severely harmed.

The coastal plain (referred to simply as the 1002 area) is allegedly the last great chance to find a super-giant oil field onshore in the U.S. Oil companies and certainly the Reagan Administration hope to find in the 1002 area an equivalent amount of oil as exists in Prudhoe Bay. However, whereas Prudhoe Bay's original estimated reserve is 10 billion barrels of oil, the mean estimate of conditional economically recoverable resources in the 1002 area is only about 3.2 billion barrels of oil. And according to the DOI report, there is only a 7 percent chance of finding this amount of recoverable oil in ANWR! There is a less than a one in five chance of finding even 440 million barrels—the minimum estimated amount necessary to make oil field development economically feasible.

National Audubon opposes the opening of the Arctic National Wildlife Refuge for oil development for two pressing reasons. First, ANWR must be preserved because of its internationally significant wildlife and wilderness qualities, which would be irreparably harmed if such a major industrial operation as oil field development were allowed in the area. Second, there are a host of better, cheaper, and faster alternatives to supply significant quantities of energy to meet our nation's needs.

Among our concerns for wildlife is the international Porcupine caribou herd, which uses the 1002 area as its core calving area each spring. This herd numbers about 180,000 to 200,000, and is the largest international herd in North America. Any industrial activity in the narrow coastal plain will overcrowd and upset normal calving behavior for the caribou, and interfere with their movement patterns within the area. According to the Department of Interior's draft report, the herd may decline by as many as 72,000 animals due to oil production activities. Additionally, the report states that the herd of 500 muskoxen, recently reintroduced to the area in 1969 after being hunted to extinction there in the 1800s, could be "displaced from a significant portion (71 percent) of high-use habitats used year-round." Also, snow geese would directly lose a great deal of their staging habitat that they have used for centuries. Of the 105,000 to 325,000 snow geese that congregate and feed in the 1002 area, "maximum displacement...could be as much as 45 percent." With such severe habitat loss and displacement to these species and subsequent damage to wolves, wolverines, grizzly bears, polar bears, as well as many predatory birds, oil production in the 1002 area is sure to disrupt the natural, wild ecosystem as we know it today.

Many other areas in Alaska are already open to oil and gas development. In fact, 90 percent of Alaska's arctic coast, on and offshore, is now open to the oil industry. This last, and indeed unique and spectacular, two million aces of the ANWR coastal plain is virtually all that is left of near pristine wilderness on Alaska's North Slope. Why should we allow giant industrial operations on the coastal plain, which are sure to harm the area, in the hopes of finding what might be a 200-day supply of oil to the U.S. (assuming even the highest projections)? Such activities are totally incompatible with the purposes for which the refuge was established.

The United States desperately needs a responsible energy plan for the future. We are currently faced with an Administration which has rolled back gas mileage standards for automobiles, abolished incentives for renewable energy development, and cut the amount of money spent on energy conservation. Their idea of an energy plan is to push for a "drain America first" approach to the nation's rapidly dwindling oil reserves at the insistence of the oil industry.

There are, however, some much simpler and cheaper answers to our energy needs. If we increased the efficiency of our total car fleet by just one mile per gallon, we could save 130 million barrels of oil annually. And, of we extended that effort over the next 30 years, which is the estimated time span ANWR oil would flow, we would save more oil through better mileage standards than we could ever recover from ANWR (a 3.9 billion barrel savings versus a hopeful 3.2 billion barrel recovery). By the same token we should seriously explore many alternative fuels now coming on the market. Methanol, for example, burns cleaner than gasoline and has proven to be a well-performing, cost effective automobile fuel.

Currently, there are three bills before Congress which address the ANWR issue. HR 39, a bill introduced by House Interior Committee Chairman Morris Udall (D) of Arizona, and cosponsored by 85 other members, would designate the entire 1002 area as wilderness. At the

same time, Congressman Don Young (R) of Alaska has introduced HR 1082, which would allow exploratory well drilling and full oil well development in the 1002 area. A similar bill has been introduced in the Senate by Alaskan senators Frank Murkowski (R) and Ted Stevens (R).

We have already begun what guarantees to be a long battle. ANWR will continue to be a priority issue for legislators and for the National Audubon Society.

We encourage concerned persons to write or visit their representative and senators. Ask that all of the magnificent Arctic National Wildlife Refuge to be managed and protected as wilderness, and express your opposition to any bills that would permit oil exploration or development.

PEREGRINE PROGRESS IN THE WEST

The peregrine falcon population in the west continues to increase. Last year, 107 territories were known to be occupied in the seven-state western region, according to *The Peregrine Fund Newsletter* (No. 15, Fall 1987).

Northern Utah has five known pairs of peregrines. Four of the pairs nested on hack towers constructed by personnel from the Utah Division of Wildlife Resources and Utah Power and Light. All of the pairs on towers produced eggs, and three of the four pairs produced a total of seven young. At least two of these went on to fledge successfully. The peregrine pair at the Hotel Utah were successful again this year and fledged two young. In northern Utah, 19 peregrines were released from four hack-sites. Sixteen of these—84%—successfully reached independence.

In southern Utah, personnel from the Peregrine Fund and the National Park Service conducted a survey in Zion National Park and Glen Canyon National Recreation Areas, identifying 19 occupied territories. Twelve pairs succeeded in producing at least 30 young—an average of 2.5 young per site. Fifty occupied territories have been identified over the past two years in southern Utah.

Other western states boast successes as well. Observers in Washington reported 10 occupied sites with eight pairs producing eggs and seven pairs fledging a total of 18 young; five young were successfully released at a Columbia Gorge hack-site. The Oregon Department of Fish and Wildlife reported six known pairs in that state; six young were known to have fledged. Five of eight young released at hack-sites have become established; one of the three missing birds turned up twelve days later on the Flathead Indian Reservation north of Missoula, Montana. He was recovered weak but alive, and returned to the Peregrine Fund, and has since regained his health. In Colorado, 29 occupied territories were identified; of 24 pairs, 23 laid eggs, and 22 pairs successfully fledged at least 55 young. In addition, 22 young were released from hack-sites with 19 reaching independence. Wyoming has four identified pairs, two of which fledged three birds. Twenty-five young were released from five hack-sites, 21 of which have survived. Montana had three known active sites, but egg production and fledging was uncertain. Montana hacked 23 young, 18 of which reached independence. Idaho has only one known peregrine territory which was occupied, but egg production and fledging data are lacking. Fourteen of the 18 birds hacked in Idaho have survived.

—TJG

BALD EAGLE CONFERENCE

1988 marks the Ninth Annual Bald Eagle Conference held in Klamath Falls. This event, scheduled for February 12-14, 1988, is a joint effort of the Klamath Basin Audubon Society, National Audubon Society, Oregon Department of Fish and Wildlife and the U.S. Fish and Wildlife Service. The conference originated in 1979 to educate people about the value of eagles. Since then, not only have those attending the conference learned about eagles but about other raptors and birds as well.

The Klamath Basin, encompassing part of northern California and south-central Oregon, is world-famous for its spectacular flocks of migratgory waterfowl. In addition, more than 170 species of birds nest in the area. The Basin also hosts the largest concentration of wintering bald eagles in North America outside Alaska.

The conference is held to coincide with the presence of winter eagles and waterfowl in the Basin so that participants may enjoy these magnificent birds. The purpose of the conference is to share information, increase awareness and gain understanding of our wildlife resources—especially of national bird, the bald eagle.

The conference will take place at the Oregon Institute of Technology in Klamath Falls, Oregon. Conference features include a photography class and contest, two bald eagle runs (three and eight miles respectively), numerous speakers dealing with raptor research in general and eagle research specifically, several workshops and evening entertainment. For information on registration and accommodations, contact Charlotte Opp, Klamath Basin Bald Eagle Conference, 5873 Estate Drive, Klamath Falls, OR 97603.

—TJG

AUDUBON SOCIETY

1988 SPRING FIELD TRIP CALENDAR — SAVE!

Saturday, February 13: TRACKING. This field trip is a follow-up to Al Stokes' talk on animal tracks and tracking at the regular BAS monthly meeting of February 11. Learn to identify an animal's tracks, what it was doing when it made the tracks and what its gait was. Leave at 1:00 p.m. from the University radio tower (12th East, across from the USU Foods & Nutrition Building) and return by 4:00 p.m. Call Al Stokes at 752-2702 for information.

Saturday, March 5: BALD EAGLES AT WILLARD CANYON. A close look at 50 or more eagles as they fly in to roost. Leave at 10:00 a.m. from the Fred Meyer parking lot SW corner, return variable. Bring a lunch and warm clothes.

Friday-Saturday, April 8-9: GROUSE COURTSHIP. Overnight camping trip to Curlew National Grasslands in southern Idaho to observe both sage and sharptailed grouse on their dance grounds. Camp at historic Twin Springs campground. YOU NEED RESERVATIONS FOR THIS FIELD TRIP; call Al Stokes at 752-2702.

Saturday, April 16: MARSH AND WATER BIRDS OF CACHE VALLEY. Leave at 8:00 a.m. from the Fred Meyer parking lot SW corner, return by noon.

Saturday, April 30: SHOREBIRDS AT AMALGA BARRENS. The best place to see 12 or more species of shorebirds as well as many other marsh birds. Leave at 8:00 a.m. from the Fred Meyer parking lot SW corner, return by noon. Bring a spotting scope if you have one.

Saturday/Sunday, May 14/15: CANOEING THE BEAR RIVER. A 15-mile easy paddle downriver from Trenton to Amalga with stops to see great blue herons nesting and great horned owls. You should see 60 species of birds. Two separate trips: one Saturday and one Sunday. YOU NEED RESERVATIONS FOR THIS TRIP. Call Alice Lindahl beginning May 1 at 753-7744.

Saturday, May 28: LITTLE BEAR RIVER CANOE TRIP. An easy two-hour paddle down Spring Creek and back up the Little Bear River. The trip goes beneath a great blue heron colony, through lots of beaver activity and among many nesting marsh birds. Two separate trips: one leaving at 8:00 a.m. and one at 4:00 p.m. YOU NEED RESERVATIONS FOR THIS TRIP. Call Al Stokes, 752-2702.

ALL ARE WELCOME!

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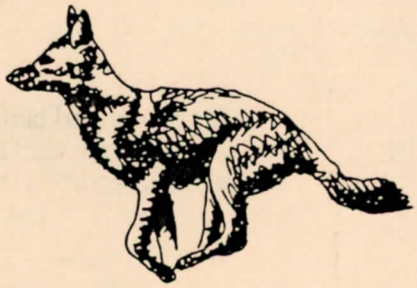

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1987 BRIDGERLAND AUDUBON CHRISTMAS BIRD COUNT TABULATION

Pied-billed Grebe	2
American White Pelican	1 (Note 1)
Great Blue Heron	8
Canada Goose	250
Wood Duck	48
Green-winged Teal	16
Mallard	1,248
Northern Pintail	2
Cinnamon Teal	2 (Notes 1, 3)
Northern Shoveler	14
Gadwall	196
American Widgeon	17
Canvasback	2
Redhead	12
Ring-Necked Duck	91 (Note 3)
Lesser Scaup	3
Common Goldeneye	92
Barrow's Goldeneye	2
Hooded Merganser	4 (Notes 2, 3)
Common Merganser	23
Red-breasted Merganser	1
Ruddy Duck	5
Bald Eagle	12 (Note 3)
Northern Harrier	57
Sharp-shinned Hawk	4
Cooper's Hawk	3
Red-tailed Hawk	48 (Note 3)
Rough-legged Hawk	31
Golden Eagle	5
American Kestrel	38
Merlin	1
Prairie Falcon	5
Chuckar	2
Ring-necked Pheasant	62
Ruiffed Grouse	1
Sharp-tailed Grouse	3
Virginia Rail	8
American Coot	106
Killdeer	20
Common Snipe	51 (Note 3)
Ring-billed Gull	11
Rock Dove	232
Mourning Dove	47 (Note 3)
Common Barn Owl	2
Western Screech Owl	4
Great Horned Owl	12
Northern Pygmy Owl	1 (Note 2)
Short-eared Owl	19 (Note 3)
Northern Saw-whet Owl	2
Belted Kingfisher	11 (Note 3)
Downy Woodpecker	20
Hairy Woodpecker	1
Northern (r-shft) Flicker	83
Horned Lark	216
Steller's Jay	4
Blue Jay	1 (Note 2)
Clark's Nutcracker	186 (Note 3)
Black-billed Magpie	550
American Crow	66
Common Raven	5
Black-capped Chickadee	128
Mountain Chickadee	26
Red-Breasted Nuthatch	66 (Note 3)
White-breasted Nuthatch	2
Brown Creeper	5
Canyon Wren	1
Marsh Wren	3
American Dipper	16 (Note 3)
Golden-crowned Kinglet	54 (Note 3)
Ruby-crowned Kinglet	18 (Note 3)
Townsend's Solitaire	33
Hermit Thrush	1 (Note 2)
American Robin	1,180 (Note 3)
Varied Thrush	1 (Note 2)
Water Pipit	21
Bohemian Waxwing	287
Cedar Waxwing	310
Northern Shrike	6
Loggerhead Shrike	3
Eurasian Starling	5,374
Yellow-rumped (Aud's) Warbler	13 (Note 3)
Rufous-sided Towhee	23
American Tree Sparrow	16
Song Sparrow	47
White-crowned Sparrow	63
Harris' Sparrow	2
Dark-eyed (Oregon) Junco	411
Dark-eyed (Gr-hd) Junco	1
Red-winged Blackbird	3,563 (Note 3)
Western Meadowlark	13
Yellow-headed Blackbird	2 (Note 2)
Brewer's Blackbird	647
Pine Grosbeak	40 (Note 2)
Cassin's Finch	27
House Finch	199
Pine Siskin	1,038 (Note 3)
American Goldfinch	96
Evening Grosbeak	721 (Note 3)
House Sparrow	1,621

[Note 1: rare and unexpected bird]
[Note 2: rare but not unexpected bird]
[Note 3: highest count recorded for species on Christmas count]

SOUTH PLATTE RIVER IS FOCUS OF SUMMER INSTITUTE

We are faced with many issues regarding the future use of water and riparian resources in Colorado. Use of bottomland habitat by livestock, demand for water, protection of wildlife and fisheries, and accommodation of diverse recreational and aesthetic interests are a few of these issues.

The Second Annual Institute of River Ecology—known last year as the South Platte Riparian Institute—explores the management needs, ecological diversity, wildlife values, and cultural heritage of the South Platte River's riparian ecosystems. The Institute will be held July 10-15, 1988, at Buffalo Creek, Colorado under the sponsorship of the Denver Audubon society, in cooperation with the Colrado Division of Wildlife.

Participants will trace the river from its source on the alpine tundra to the plains. They will learn how the geology, discharge dynamics, plant communities and bird and wildlife species of the riparian zone change with elevation. Fisheries and a marvel of life forms on the stream bottom will be studied in the light of fish habitat management practices. Environmental issues, including the proposed Two Forks Dam, will be addressed through balanced representation of divergent viewpoints. The atmosphere is one of open communication and problem-solving.

Buffalo Creek is at the head of a magnificent foothill canyon on the North Fork of the S. Platte River. Participants are housed in rustic cabins and share meals on a terrace beneath towering Ponderosa pines. This is a wonderful opportunity to make new friends and vacation while you learn!

The fee of $350 includes all meals, transportation, lodging, and instruction for the five-day field seminar. University credit is available for an additional fee. Enrollment is limited to 34. A non-refundable deposit of $50 will hold a place for each registration accepted. Full payment of the registration fee is due on May 1, 1988.

To obtain a brochure and registration form, please write to Susan Q. Foster, Director, Institute of River Ecology, P. O. Box 243, Jamestown, CO 80455 or call her at (303) 442-6333.

AUDUBON INSTITUTE OF DESERT ECOLOGY

Each year 60 eager, inquisitive people gather in the shadow of the Santa Catalina Mountains to explore and celebrate the varied ecosystems of the Sonoran Desert at the Institute of Desert Ecology, sponsored by the Tucson Audubon Society. With enthusiastic guidance from some of Arizona's foremost natural history authorities, they discover hidden ecological treasures, find new insights in everyday scenes, and forge lifetime friendships. The dates of this year's Institute are April 28 - May 1.

Sessions in the field and in camp will focus on Sonoran Desert ecosystems, with primary concern for relationships between plants, wildlife, and the desert environment. The intensive daily schedule begins at dawn and ends with owling, blacklighting for insects, and star talks. The Institute program is suitable for any adult with an interest in desert ecology and natural history, regardless of background. A group camping environment promotes rapport and idea exchange among participants and faculty. Participants furnish their own tents or campers. The cost of $245 per person includes all other facilities, meals, and instruction. One unit of university credit is available for an additional fee.

For more information or to register, write Institute of Desert Ecology, Tucson Audubon Society, 300 E. University Blvd., #120, Tucson, AZ 85705.

The Bridgerland Audubon Society meets the second Thursday of each month, October through May, in the Council Room of the new Logan City Building, 255 N. Main. Meetings start at 7:30 p.m. The BAS Planning Committee meets every third Wednesday, October through May, in the Logan Library at 7:00 p.m. Everyone is welcome to attend.

President	Ron Ryel, 753-6077
Vice President	Jillyn Smith, 750-1359
Secretary	Scott Cheney, 753-1893
Treasurer	Betty Boeker, 752-8092
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	Larry Ryel, 753-8479
	Dianne Browning, 752-5946

Membership in the Bridgerland Audubon Society includes a subscription to *The Stilt,* as well as the *Audubon* magazine. The editor of *The Stilt* invites submissions of any kind, due on the 15th of each month. Send to 718 N. 200 E., Logan, UT 84321.

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National Audubon Society
CHAPTER
MEMBERSHIP APPLICATION

HOW DO I JOIN?

Complete the following application and enclose a check for the amount for the appropriate type of membership. Send it to:

NATIONAL AUDUBON SOCIETY
Chapter Membership Data Center
Box 2664
Boulder,CO 80321
Credit Bridgerland Audubon W-52

Check membership category desired.

- ☐ Introductory one year/ $20
- ☐ Individual / $30 (H)
- ☐ Family/ $38 (J)
- ☐ Student/ $18 (K)
- ☐ Senior Citizen Individual/ $21 (N)
- ☐ Senior Citizen Family/ $23 (P)
- ☐ Please bill me ☐ Check enclosed

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