1979 Oakland Christmas Count

Excellent weather and a large number of participants helped make this Oakland Christmas Count a success. Most unexpected were birds found that had never been seen before on count day: Cattle Egret, Green-winged (Eurasian) Teal, Williamson's Sapsucker, Eastern Phoebe. Other rare birds seen on count day were: Red-shouldered Hawk, Ancient Murrelet, Lewis' Woodpecker, Trec Swallow, Black-and-white Warbler. In all, we saw 175 species. We had 213 participants (185 in the field in 41 parties and 28 at feeders). Both of these totals should again make

Oakland one of the top count circles.

We exceeded last year's national high count for three species: Black-bellied Plover, Chestnut-backed Chickadee, Bushtit. Despite good coverage, counts of several species were lower than in recent good-weather years: Steller's Jay, Rufous-sided Towhee, Brown Towhee. Also, most gull totals seemed low, but less than 50 percent of our gulls were identified.

We would like to thank all the people who participated in the count this year, especially Susan Hilinski (feeder compiler), Steve Bailey and Joe Morlan (rare bird committee). We would also like to thank Bob Hirt, who was helpful whenever we asked him to be.

—DAVID RICE AND HELEN GREEN, Compilers

RESULTS: All unusual birds appear in bold type.

These numbers reflect only the field count; the feeder report was received too late to include

received too late to include.

Common Loon 32, Arctic Loon 8, Red-throated Loon 34, Red-necked Grebe 2, Horned Grebe 362, Eared Grebe 87, Western Grebe 1226, Pied-billed Grebe 127, Brown Pelican 12, Double-crested Cormorant 1011, Brandt's Cormorant 114, Pelagic Cormorant 13, Great Blue Heron 46, Green Heron 2, Cattle Egret 2 (Joe Morlan at Davis Street Stock Yard), Great Egret 98, Snowy Egret 251, Black-crowned Night Heron 81, American Bittern 9, Whistling Swan 37, Canada Goose 552, Mallard 891, Pintail 1531, Green-winged Teal 116, Green-winged (Eurasian) Teal 1 (Steve Bailey at the Oakland Airport), Cinnamon Teal 10, European Wigeon 5, American Wigeon 1661, Northern Shoveler 407, Redhead 8, Ring-necked Duck 4, Canvasback 1495, Greater Scaup 2572, Lesser Scaup 1127, scaup species 11,315, Common Goldeneye 617, Barrow's Goldeneye 32, Bufflehead 847, White-winged Scoter 213, Surf Scoter 6,347, Black Scoter 1, Ruddy Duck 1969, Hooded Merganser 1, Common Merganser 22, Red-breasted Merganser 51, duck species 27. Turkcy Vulture 102, White-tailed Kite 3, Sharp-shinned Hawk 38, Cooper's Hawk 22, Accipiter species 3, Red-tailed Hawk 91, Red shouldered Hawk 1 (Hope Nathan, Canyon), Golden Eagle 4 (2 adult, 22)

2 immature), Marsh Hawk 5, Merlin 2, American Kestrel 124, California Quail 665, Ring-necked Pheasant 11, Clapper Rail 15, Sora 3, Common Gallinule 2 (Art Edwards at Alameda Golf Course and Bay Farm Island), American Coot 2617, Semipalmated Plover 254, Snowy Plover 5, Killdeer 457, Black-bellied Plover 1880, Ruddy Turnstone 15, Black Turnstone 1, Common Snipe 18, Long-billed Curlew 162, Whimbrel 18, Spotted Sandpiper 12, Willet 1166, Greater Yellowlegs 16, Lesser Yellowlegs 1, Red Knot 163, Least Sandpiper 1592, Dunlin 7293, Short-billed Dowitcher 855, Long-billed Dowitcher 794, dowitcher species 1832, Western Sandpiper 3136, Marbled Godwit 1080, Sanderling 1167, peep species 2218, American Avocet 1175, Black-necked Stilt 59.

Glaucous-winged Gull 958, Western Gull 368, Herring Gull 54, Thayer's Gull 44, California Gull 812, Ring-billed Gull 643, Mew Gull 391, Bonaparte's Gull 140, Heermann's Gull 4, gull species 5259, Forster's Tern 77, Ancient Murrelet 9 (Bob Hirt 1, south boat; Peter White 8,

north boat).

Band-tailed Pigeon 1208, Rock Dove 1117, Mourning Dove 2139, Barn Owl 2, Screech Owl 3, Great Horned Owl 48, Pygmy Owl 10, Burrowing Owl 18, Saw-whet Owl 7, White-throated Swift 14, Anna's Hummingbird 462, Belted Kingfisher 12, Common (Red-shafted) Flicker 722, Common (Yellow-shafted) Flicker 1, Acorn Woodpecker 13, Lewis' Woodpecker 1 (Steve Beverly and Debbie Dobson in lower Siesta Valley), Yellow-billed Sapsucker 20, Williamson's Sapsucker 2 (Bob Lewis 1 off Tunnel Road, Dan Murphy 1 in Redwood Regional Park), Hairy Woodpecker 8, Downy Woodpecker 32, Nuttall's Woodpecker 42, Eastern Phoebe 1 (Art Edwards at Alameda Golf Course), Black Phoebe 62, Say's Phoebe 17, Horned Lark 107, Tree Swallow 3 (Steve Bailey at the Oakland Airport and Joe Morlan, Oakland Airport channel), Steller's Jay 478, Scrub Jay 1288, Common Raven 5, Common Crow 108, Chestnut-backed Chickadee 1210, Plain Titmouse 223, Bushtit 2288, White-breasted Nuthatch 29, Red-breasted Nuthatch 221, Brown Creeper 33, Wrentit 706, Winter Wren 19, Bewick's Wren 218, Long-billed Marsh Wren 6, Rock Wren 4, Mockingbird 65, California Thrasher 51, American Robin 5292, Varied Thrush 322, Hermit Thrush 258, Western Bluebird 311, Golden-crowned Kinglet 26, Ruby-crowned Kinglet 1087, Water Pipit 152, Cedar Waxwing 1135, Loggerhead Shrike 49, Starling 7593, Hutton's Vireo 53.

Black-and-white Warbler 2 (Eugene Makishima, Tilden Park), Yellow-rumped Warbler 2304, Yellow-rumped (Myrtle) Warbler 4, Yellow-rumped (Audubon's) Warbler 360, Townsend's Warbler 23, Common Yellowthroat 5, House Sparrow 326, Western Meadowlark 818, Red-winged Blackbird 939, Tricolored Blackbird 270, Brewer's Blackbird 1534, Brown-headed Cowbird 126, Evening Grosbeak 6, Purple Finch 163, House Finch 1609, Pine Siskin 622, American Goldfinch 309,

Lesser Goldfinch 608, Rufous-sided Towhee 323, Brown Towhee 824, Savannah Sparrow 210, Lark Sparrow 11, Rufous-crowned Sparrow 11, Dark-eved (slate-colored) Junco 3, Dark-eved (Oregon) Junco 1232, White-crowned Sparrow 1880, Golden-crowned Sparrow 1858, Whitethroated Sparrow 1, Fox Sparrow 446, Lincoln's Sparrow 22, Song Sparrow 371, Song Sparrow (rusty race) 1.

Field Trips Calendar

See the January Gull for details on the following trips:

Saturday, February 2—Panoche Valley.

Sunday, February 3-Los Banos State Refuge.

Saturday, February 16—Monterey Bay Area by bus.

Sunday, February 10-East Bay shoreline. Meet at 8 a.m. at the Berkeley Marina parking lot by the pier. From I-80 take the University Ave. exit and go west (left) to the Marina. This area is also accessible by the A.C. Transit line #51-M. We will bird north along the Alameda County shoreline and perhaps into Contra Costa County. Bring your scopes and be prepared for muddy conditions. Lunch is optional. We should see shorebirds and waterfowl. Leader: Jon Zablackis (527- $(\sqrt{})$ 2083).

Sunday, February 17—Inspiration Point to San Pablo Reservoir. Meet at 10 a.m. at the Inspiration Point parking lot. Take Hwy. 24 east through the Caldecott Tunnel to the Orinda exit. Turn left at the signal onto Camino Pablo. After 2.3 miles turn left onto Wildcat Canyon Rd. for about 1.5 miles to the Inspiration Point parking lot. We will hike downhill 2 to 3 miles to the reservoir. We will bird the grasslands, coniferous and oak woodlands and stream side willows. We will ride back up to the parking lot. Bring your lunch. Leaders: Sue and Bob

Watson (254-4077). (\checkmark)
Sunday, February 24—Coyote Hills to Palo Alto Baylands Refuge. Meet at 9 a.m. in the main parking lot by the visitors' center at Coyote Hills Regional Park. Take the Jarvis Ave. exit from Hwy. 17 or Hwy. 84 to Newark Blvd. and follow the signs to park. We will bird Coyote Hills, then cross the Bay, stop briefly at the San Francisco Bay National Wildlife Refuge Headquarters and visitors' center and continue to the Palo Alto Baylands. Please make every effort to carpool because we will caravan across the Bay. Bring your lunch and a scope. Be prepared for a muddy day. In case of rain please contact the leader, Paul Covel (530-2513). $(\sqrt{})$

Saturday, March 1-San Francisco Bird Blitz. On the National Audubon Bird-A-Thon the leaders of this trip saw 85 species of birds within the City and County of San Francisco. This early spring trip offers the opportunity to see this many or more species in the city. We will meet at 7:30 a.m. sharp at the Lake Merced circle and carpool for caravaning to many other birding spots in the city. Bring scopes, lunch and warm clothing. We will bird until dusk. The goal of this trip is to build the biggest list possible for the day. Leaders: Alan Hopkins, Donna Lion (665-4040) and Dan Murphy (564-0074). (\sqrt{})

Saturday/Sunday, March 15-16—Honey Lake. Call the leader for details. This trip is limited to 25 people. Lodging is available in Susanville; primitive camping is also available in the area. We should see Sage Grouse, Bald Eagles, longspurs and other birds of the eastern Sierra. Leader: Tony Briggs (282-3142 or 626-3131). The latter number is an answering service so ask for Tony by name. (\sqrt{})

Carpooling: Carpooling arrangements can be made for trips marked (√). If you need a ride or are offering one, call Kate Partridge at work (642-6881, 8 a.m. - 1 p.m.) or at home before 9 p.m. (548-0779). All expenses, including gas and incidental fees, are shared by riders. It is best for all involved to plan these arrangements with the driver at the outset of the trip.

-FIELD TRIPS COMMITTEE

December Observations - Through December 26 WATERBIRDS

The Cordel Banks may be the best location for Flesh-footed Shearwater in California. Three were seen there Dec. 9 (JP). The Dec. 1 boat to the Davidson Seamount encountered one Cook's Petrel and Leach's Storm-Petrels (mob). Including the ten remaining near Alviso, only 32 Cattle Egrets at 11 localities were reported (mob), nearly all within a few miles of the coast or San Francisco Bay. The Little Blue Heron at Alviso Dec. 16 (MR) was the first between Oct. 2 and March 7 and the fourth immature in Northern California. Two blue-phase Snow Geese favored Gray Lodge Dec. 2 (EG); this form is regular there. Only four Eurasian Wigcons were reported: Pt. Molate Nov. 29 (PWa), Drakes Estero area Dec. 15 (mob), Oakland Airport Dec. 16 (VD, et al.) and Calaveras Reservoir Dec. 16 (JMS). Much rarer was the pure Eurasian Green-winged Teal on Oakland Airport Dec. 16 (VD, SFB, DG, CS). Muddy Hollow's Tufted Duck was still present through Dec. 26 (mob, CS). I seldom mention Barrow's Goldeneyes, but a male at Moss Beach Dec. 25 was in surf (EM, AM); this species normally stays on bays, harbors, lakes and inland rivers. Moss Landing's Harlequin Duck stayed into early December (mob) and a female visited Lands End, San Francisco, Dec. 8 (NB). Only five Oldsquaws were reported: two still at Princeton Harbor Dec. 14 (mob), Montercy Dec. 2 (GM), Kehoe Beach Dec. 15 (VD, SFB, et al.) and Tomales Bay Dec. 15 (CS, et al.). 7 and the fourth immature in Northern California. Two blue-phase Bay Dec. 15 (CS, et al.).

25

Three Rock Sandpipers gleaned Bodega Head from Dec. 1 (JR, mob) and this species continued at Pebble Beach, San Mateo County, through Dec. 16 (GW). As this season's wreck of Red Phalaropes tapered off, the report of a late Northern Phalarope on Tomales Bay Dec. 15 (SL, et al.) received much scepticism. However, the bill shape was well seen and one of the observers (CS) has censused hundreds of Red Phalaropes almost daily throughout the wreck. One of these Red Phalaropes was on Five Brooks Pond Dec. 26 (CS, et al.) on Five Brooks Pond Dec. 26 (CS, et al.).

on Five Brooks Pond Dec. 26 (CS, et al.).

This has certainly been the season for murrelets close to shore. Not only have Ancient Murrelets remained numerous all along our coast, with some in harbors (mob), but they also penetrated San Francisco Bay; nine enlivened the Oakland Christmas Bird Count (CBC) Dec. 16 (PW, BH, et al.) and more than 12 were visible from Berkeley Pier Dec. 20 with at least six through Dec. 24 (JL, et al.). More surprising were the four Marbled Murrelets at Berkeley Pier Dec. 20 (JL, JM), with three the next day (SFB) and one there until the big storm (AE, et al.). Even Xantus' Murrelet joined this phenomenon, with two just off Monastery Beach, Carmel, Dec. 9-10 (EJ).

LANDBIRDS

Goshawk is a rare straggler to the Bay Area and California mountains are usually assumed to be the source. However, some might irrupt from the far north. Whatever the origin, an adult Goshawk was found at Coyote Reservoir, Santa Clara County, Dec. 22 (LH). Again two adult Bald Eagles are wintering at Calaveras Reservoir (JMS). Fourteen Long-eared Owls were identified on the Pt. Reyes CBC Dec. 15 and many other "-eared" owls flushed too quickly to be determined (mob). Amazingly the Oakland CBC had two male Williamson's Sapsuckers. The first was discovered Dec. 9 along Tunnel Road, Oakland (BL, HL) and remained through Dec. 22 (mob, SFB, KLB). The other, at the north end of Redwood Regional Park, was found on count day (Dec. 16 - FS, SIK, et al.) and was still present Dec. 18 (BB). 16 - FS, SJK, et al.) and was still present Dec. 18 (BR).

An Eastern Phoebe on the Alameda Golf Course was seen only on the Oakland CBC (Dec. 16 - AE, GB, DJ, JZ). Presumably this rare vagrant was still migrating. A local rarity was the Dipper at Stinson Beach water intake dam Dec. 2 (AJ). The only lingering vireo report was of a Solitary Vireo at Bodega Bay Dec. 1 (JR, et al.). Among lingering warblers, Nashville Warbler continued to be well-reported, but the most interesting was a Yellow Warbler inhabiting Walton Square, San Francisco Dec. 21 to this writing (DE) cisco, Dec. 21 to this writing (DE).

The following table of eastern warblers does not complete the accounting of this season's vagrants; the late-November and December Farallon report was apparently delayed and a few others will no doubt show up along the coast.

Black-and-white Warbler (total 2; 25 for fall)				
	2 (one	adult male) Tilden Park	Dec. 16	EM, AM
	1 ennessee	Warbler (total 2; 20 for fall)	-	
		Pt. Reyes Station	Dec. 7-15	DS, et al.
	1	Miramar, San Mateo Co.	Dec. 22	EM, AM
Palm Warbler (total 7 or 8; 206+ for fall)				,
	1	Salmon Creek	Dec. 7	JP
	1	Marconi Pt., Marin Co.	Dec. 15	RM, et al.
	1 (2?)	Half Moon Bay	Dec. 8, 18	EM, AM
	2	San Jose CBC	Dec. 16	fide MR
	2	Monterey Coast Guard	Dec. 2	EH
American Redstart (total 1; 85+ for fall)				
	1	Little Franks Tract	Dec. 15	PG, et al.

A Yellow-headed Blackbird at Ranch Arroyo, Hayward, Nov. 28-Dec. 9, seems to be the first in this city (PG). Along with the Tennessee Warbler, the Pt. Reyes Station orchard also gave the Pt. Reyes CBC (Dec. 15) a Northern Oriole (JL, JW, LCB). The male Great-tailed Grackle at Gray Lodge remained at least to Dec. 2 (EG), and the female reappeared at Walton Square, San Francisco, Dec. 24 (DE). Evening Grosbeaks continue to occur widely, mostly in small transient flocks (mob) although many were reported on the Año Nuevo CBC Dec. 16 (fide BS). Sparrow highlights on the Pt. Reyes CBC were a Vesper at Walker Creek (BM, SP) and four Swamps at Olema Marsh (RS, et al.). Elsewhere, a Harris' Sparrow settled in Lafayette during late December (LF, et al.).

Observers: Karen L. Bailey, Stephen F. Bailey, Laurence C. Binford, George Bing, Neil Blank, Vickie Dziadosz, Art Edwards, Dick Erickson, Jules Evens, Lynn Farrar, David Good, Phil Gordon, Ed Greaves, Ed Harper, Bob Hirt, Louise Hoffman, Anthony James, Ed Jameyson, Dick Johnson, Michael A. Kelly, Shirley J. Kelly, Bob Lewis, Hanno Lewis, Steve Long, John Luther, Akiko Makishima, Eugene Makishima, Bill Manolis, Gloria Markowitz, Roger Marloe, many observers (mob), Joe Morlan, Dan Murphy, Pete Myers, John Parmeter, Susan Peaslee, Bob Richmond, Jean Richmond, Mike Rigney, Fred Sifier, Barry Sauppe, Dave Shuford, Jean Marie Spoelman, Rich Stallcup, Chris Swarth, Penny Walker (PWa), Gil West, Peter White (PW), Jon Winter, Jon Zablackis.

—STEPHEN F. BAILEY, Observations Editor

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(phone 548-9507; or Karen L. Bailey at 642-3327 8 a.m.-noon, 1-5 p.m.)

FREE!

The GGAS office has an accumulation of back issues of Audubon magazine for which it no longer has room. If you would like some of these publications to fill out your collection or to distribute to friends who might be tempted to join GGAS and National Audubon, please drop by the office and take your pick. The sooner the better!

Conservation Notes

PERIPHERAL CANAL'S COMPLETION LIKELY. As of this writing, the Peripheral Canal Project — last link in the vast California Water Project — seems almost certain of passage in the legislature and signing by Governor Brown. The 44-mile canal has been bitterly opposed by the Bay Area representatives and environmentalists because it would take fresh water away from the Delta and the Bay and thus allow the intrusion upstream of salt water. This will have adverse consequences to native marine life and wildlife of the Bay and Delta and will also make it easier in the future to divert free-flowing north coast rivers like the Eel, now considered a wild and scenic river but scheduled for review in 1983. A legislative go-ahead would be the result of intense vote lobbying by Southern California water interests, most notably the Kern County agricultural district and Los Angeles basin users. GGAS has long opposed the canal and has written to state representatives protesting the decision.

CONDOR RESCUE EFFORT BEGINS. An all-out program to save the dwindling population of California Condors from extinction began officially in December with a ceremony at the offices of the U.S. Fish and Wildlife Service in Washington. The conservation program is based on the recommendations of a panel of scientists appointed by National Audubon Society and the American Ornithologists Union and will be funded by an appropriation of \$500,000 approved by Congress to be matched by NAS over the next five years. The scientists say that although the Condors are down to a precarious level — some estimates say only between 20 to 30 of them remain — there is still hope of saving them.

BAY BRIDGE PEDESTRIAN DAY PROPOSED. Ever had the urge to bike or walk through the fresh air above the gulls and oceangoing freighters across the San Francisco-Oakland Bay Bridge? To reduce dependence on automobiles and promote alternatives, Urban Ecology is proposing a "Bay Bridge Festival" on September 13, which is Pedestrian Day and the anniversary of the first automobile fatality—a time to consider transportation systems that are less dangerous, less wasteful, less polluting. Two lanes have previously been closed twice in recent years for locally sponsored foot races which were successful fundraising events. If you are interested in participating in an event to promote an alternative to automobiles, pollution control, environmental protection and human access to the benefits of city life, contact Urban Ecology, P.O. Box 2334, Berkeley, CA 94702.

The Fabric of Nature

Waves pummeled the shore, cloaking the dunes in a misty shroud of salt spray. As a scoter ducked beneath the raging fury, the surf crashed again and chased a small flock of Sanderlings higher up the beach. Frothy fingers of sea-foam reached for tiny black legs but the small white sandpipers cluded their grasp and scurricd to safety. The wave spent itself and withdrew, luring the flock down toward the runnel in search of prey, only to spring upon them moments later. Again the birds retreated, pausing to let the water subside.

One large Sanderling darted ahead of the others toward the surf as the waves receded and probed hurriedly in the flowing water-sand. She was heavier than her flock-mates, her bill was slightly longer. Again and again she plunged her bill down in search of prey, racing against the endless threat of the next wave. With the surf thundering in her ears, the sensitive, flexible tip of her bill felt a soft leg and snapped shut around it. She jerked the sanderab from its hole and sprinted away from the rushing waves with her prey. A hundred meters down the beach, a Mew Gull lifted into the air.

A few paces above the wave-washed zone, the Sanderling stopped, dropped the sanderab and flipped it onto its shelled back. The invertebrate's exposed underparts glistened in the low winter sun and the shorebird began to feed, tearing tiny fleeks of flesh from the twitching limbs. But the Sanderling never finished her meal. Without warning, a Willet darted in, snatched the sanderab from the alarmed Sanderling's bill and trotted away with its pilfered prize. Then, glancing up, the Willet saw that it was not the only pirate on the beach that day.

The Mew Gull swerved away from the Sanderling and banked toward the screaming thief in black and white lurching from the beach below. The Willet whistled raucously in alarm and, with the sanderab still in its bill, fled down the beach with the gull only wingbeats behind. Suddenly, the Willet veered sharply toward the sea, dodging its pursuer and streaked out over the surf. The gull cried and circled back in a flurry of white-mirrored wingtips to resume the chase. The Willet, however, quickly widened the gap between itself and the gull and began a long glide back to the beach when a second gull dashed toward it. Once more, the startled Willet screamed and the sanderab fell from its bill into the swirling foam below . . .

At times, even the most objective obscrver has his sense of justice offended by events in the world of nature. Hummingbirds are known to steal nesting material from other birds, egrets "steal" eopulations with others' mates and bull elk sometimes steal entire harems. It is very

difficult not to feel at least a trace of sympathy for the victimized party in such instances. However, the intricacies of nature are such that for some organisms it is natural to be a resource thief as it is for other organisms to be photosynthesizers, grazers or predators.

One of the most frequently observed forms of resource theft is trophic parasitism, that is, one organism stealing food from another. The coast of California is an excellent place to observe these interactions. In the late summer and fall Heermann's Gulls swarm around Brown Pelicans, forcing them to give up the contents of their pouches and, in winter, Bald Eagles can be seen robbing Ospreys. Of course, the most well-known avian pirates along our shores are the jaegers, one of which is even explicitly referred to as parasitic. These gull-like thieves repeatedly harass terns and gulls until they disgorge their prey.

Trophic parasitism can take many forms. Although not as well-adapted for pursuit as jaegers, some gulls make up for this lack of flight skills through sheer persistence, doggedly harassing a shorebird or another gull until the victim relinquishes its catch. Loons occasionally follow egrets through the shallows, striking at fish stirred up by the wader's feet. Although they don't steal the prey directily from the egrets, the loons are feeding on prey made available by the egret's actions and are simultaneously reducing the number of potential prey available to the egret. A third type of trophic parasitism can be found in the California hills, far from an aquatic environment. In the oak woodlands, Acorn Woodpeckers collect and store acorns in arboreal granaries and it is not unusual for jays to raid these caches.

The importance of trophic parasitism to the piratical birds is poorly known, yet it clearly varies between species. Frigatebirds are aggressive toward other seabirds during their breeding season and therefore must be successful in their piracy in order to raise their young. Jaegers, on the other hand, are usually parasitic only during migration and winter. On their tundra breeding grounds they are primarily lemming and bird predators (although I have seen a Parasitic Jaeger steal a fledgling longspur from a Long-tailed Jaeger, in flight!). Both frigatebirds and jaegers are obligate trophic parasites during at least part of the year. Other species may steal only occasionally to supplement their regular foraging efforts and are considered facultative trophic parasites. Bald Eagles, some gulls and Willets fall into this category. The effect of parasitic birds on their victims is even less well-known. For example, a Sanderling which is victimized has expended energy to secure its prey and has then been robbed of the opportunity to replenish that energy. Whether or not that loss is serious is an unanswered question.

In any event, trophic parasitism can be a frequent and fascinating occurrence in the world around us. We should be neither critical of the parasite nor sympathetic to the victim. Instead, we should admire and appreciate the intriguing way in which they both fit into the complex fabric of nature.

. . . The Mew Gull hung for a moment and then dropped into the turbulent sea. Landing feet-first, the gull quickly craned forward into the swell of green and white and snatched at the sandcrab floating slowly downward. Grasping it firmly, the gull flew from the surface, ruffled twice and flapped to shore.

The gull landed near a flock of Sanderlings. One slightly larger than the rest dared the roaring surf and followed a receding wave back to the sea. She probed quickly, found a small sandcrab and ran up the beach with it to feed. The gull glanced at her and returned to its meal.

-BRIAN J. McCAFFERY

Editor's note — The Fabric of Nature will be a monthly column. Brian J. McCaffery is an undergraduate at UC Berkeley who will graduate in June, 1980, with a degree in zoology (with an emphasis in ecology). He is currently working with Dr. Pete Meyers at the Bodega Marine Laboratory studying the ecology of wintering Sanderlings. For the past two summers he has worked with Dr. Meyers and Dr. Frank Pitelka at the Naval Arctic Research Laboratory in Barrow, Alaska, studying patterns of habitat use by members of the tundra avifauna as well as monitoring population changes in the breeding bird community.

Audubon Adventures for February

Two natural history seminars have been scheduled for February in GGAS' Audubon Adventures series. They are:

IN SEARCH OF THE PACIFIC GIANT SALAMANDER, February 16-17. This course will be held at the Audubon Canyon Ranch on Bolinas lagoon, a desirable habitat for many reptiles and amphibians. Following Saturday evening's potluck dinner, participants will join a flashlight nature walk to find some of these nocturnal creatures. Sunday's nature walk will emphasize amphibians but will not neglect other attractions of the area. A charge of \$4.50 over and above course fee includes overnight accommodations at ACR. Instructors: John Kipping, ACR biologist, and Dr. Stephen F. Bailey of GGAS.

TIDEPOOL ECOLOGY, February 23. Have you ever wondered what it's like to live on a reef? Some of your questions may be answered when we explore the tidal reef at Moss Beach and examine the lives of sponges, crabs, shrimp, sea squirts, anemones and tidepool fish. The biology of these creatures is fascinating when we see how difficult it is to live in this environment. Leader: Ron Russo, supervising naturalist, East Bay Regional Park District. No additional fee.

Cost of these courses will be \$9 per person for GGAS members plus any additional fees such as facility costs or extra instructor time. If you are not a member of GGAS the cost will be an additional **one-time** fee of \$20 per person or \$25 per family. This additional fee provides a year's membership in GGAS and National Audubon Society which includes subscriptions to *The Gull* and NAS's *Audubon* magazine.

To enroll in either of these courses, please send your check and a self-addressed stamped envelope to Golden Gate Audubon Society, 2718 Telegraph Ave., *206, Berkeley, CA 94705. Include course title, its date and the number of people planning to attend.

You will be sent complete information on the course with a confirmation of your enrollment. For any further information call the GGAS office at 843-2222.

Birding Classes in San Francisco

Joe Morlan's birding classes will be offered again through the Galileo-Marina Community College Center in San Francisco. The beginning class starts Tuesday, February 5; the intermediate class begins Wednesday, February 6, and the advanced class starts Thursday, February 7.

Each class meets weekly from 7 p.m. - 9:30 p.m. in room 254 of the Marina Middle School located at the corner of Fillmore and Bay streets. There is ample free parking in the lot just east of the school off Bay Street. Classes run for 18 weeks ending in mid-June.

The beginning class is designed primarily for those who have no previous birding experience but would like to learn the many common birds found in the Bay Area. The intermediate class continues with a systematic treatment of waterbirds beginning with loons. The advanced program deals primarily with land birds. Both are suitable for those who wish to sharpen their field identification skills. All classes feature illustrative wild bird slides.

To register just come to the first class of the course you wish to take. There are no fees or tuition for the evening classes. An optional fee of \$24 will be charged for those who wish to participate in a program of eight half-day field trips arranged on weekends to observe wild birds in natural habitats.

For further information call the college at 931-3595.

Ever Seen a "Grunt-Wistle"?

If you have ever seen Mallards you must have seen this quick but dramatic display. It is also probable that you ignored most of the Mallards' behaviors. A sure cure for such ignorance is A Guide to the Behavior of Common Birds by Donald W. Stokes (1979. Little, Brown. x + 336 pp. Illustrations by Fenwick Lansdowne. \$9.95). This book not only presents the behavior of Mallard and 24 other common birds (all except seven species are frequent in the Bay Area) but also explains the joy of discovering bird behavior-watching. As both a reference and a stimulus I recommend this guide to anyone who would like to know more about what birds do and hopes to observe many of these behaviors personally.

Stokes distinguishes between maintenance behavior (preening, feeding, bathing, etc.) and the broad category social behavior, including all interactions and communication among birds (courtship, territoriality, breeding, flocking, etc.), that forms the primary subject of his book. In his concise outline of how to observe and describe behavior, Stokes admonishes the reader to remember another major distinction and separate the factual recording of observations from the speculative interpretation of functions. This is crucial if your observations are to have scientific value; I agree with the author that they can.

Each species chapter begins with a short introductory description of the bird's behavior. Three specific sections follow: Behavior Calendar, Display Guide and Behavior Descriptions. The Behavior Calendar is a bar graph showing the approximate seasonal timing (averaged for midlatitudes) of the seven major categories in the Behavior Descriptions. The Display Guide names, concisely describes and usually illustrates visual or syllabifies auditory displays, gives the usual seasonal and behavioral context of these particular components and refers the reader to the appropriate Behavior Descriptions. This final section subdivides into seven areas: Territory, Courtship, Nest-Building (including Locating the Nest), Breeding (Egg, Nestling and Fledgling Phases),

"Plumage" (molts - for changing appearance), Seasonal Movement and (other) Social Behavior (usually flocking). The salient features of each area are outlined and then the detailed description incorporates the displays into behavior sequences, variants and seasonal patterns.

I have not studied the social behavior of all 25 species. However, Stokes' guide seems well-constructed and remarkably accurate, showing effective use of the two to fifteen major technical works referenced for cach species, augmented by careful personal study. The major pitfalls I anticipated for such a pioneering book have been consistently avoided. Indeed, most apparent "errors" (e.g. lack of pre-breeding molt in Herring Gull) proved to be graphical simplifications discussed in the text. I am left quibbling with a few definitions in the overly-brief glossary: "range" as a subset or synonym of "home range"; a vague structural distinction between song and call rather than a functional one.

Occasionally Stokes' northeastern bias limits his perspective. He does not understand or even recognize winter feeding territoriality in the American Robin, whereas this formed the core of my Ph.D. dissertation in Berkeley. Of course, *understanding* this phenomenon is in many respects subtle, requiring such intensive study, so this failure is understandable and serves to indicate the limits of the guide's excellence. Furthermore, I am pleased that Stokes recognizes berries as a primary winter food, not as a means of inebriation, as the myth maintains.

Buy this book, use it and discover the dimension of behavior in birds.

-STEPHEN F. BAILEY

News from The Ranch

This spring Audubon Canyon Ranch is offering field courses for Audubon members. The courses are: The Story of a Lagoon, March 1-2, Crafts from Outdoors, March 8-9, Spring Birds and Wildflowers, March 15-16, Audubon Canyon in Spring, March 29-30, An Old-fashioned Father's Day, June 14-15.

All courses will be limited to 25 persons. The class fee of \$30 per person includes lodging. For full information contact ACR at 4800 Coast Highway, Stinson Beach, CA 94970.

Plants and Their Uses

Tuesday, Wednesday and Thursday plant identification and botanical technique classes with Ida Geary will start February 5 from 10 a.m. - 2:30 p.m. at the Fort Point Promenade classroom, Building 672, Golden

Gate National Recreation Area Promenade near Mason and Livingston Streets at the west end of Crissy Field in the San Francisco Presidio (Muni *28). Wednesday classes feature information on edible weeds, mushrooms and marine algae as well as native American uses of plants.

Enrollment is continuous and classes are free to all. They are sponsored by Galileo Marina Community College Center and the National Park Service. For more information call 556-1693 or 931-3595.

East Bay Ecological Communities

Vista College announces An Introduction to the Ecological Communities of the East Bay, a series of six Saturday classes and field trips beginning March 15, led by naturalist Paul Covel. Most of the class time will be spent in the field with emphasis on the flora and its relation to birds and other animal life of these communities.

Classes meet at the Rotary Natural Science Center in Lakeside Park (Lake Merritt), Oakland. The course number is 48p. For more information or registration contact Vista College, 2020 Milvia Street, Berkeley (841-8431) or Paul Covel (530-2513).

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Send address changes to office promptly; Post Office does not forward THE GULL. Monthly meetings: second Thursday, 7:30 p.m. Joint membership — local and national \$20 per year (individual); \$25 (family); includes AUDUBON Magazine and THE GULL; to join, make checks payable to National Audubon Society and send to GGAS office to avoid delay in receiving THE GULL. Membership renewals should be sent directly to the National Audubon office. Subscriptions to THE GULL separately \$5 per year; single issues 50¢. High school and college student membership \$13.50 per year. Senior citizen individual, \$13.50, senior citizen family, \$15.50.

The Golden Gate Audubon Society, Inc. was established January 25, 1917, and became a chapter of National Audubon in 1948.

The Gull deadline is the first of the month for the following month.