

WESTERN TANAGER

Los Angeles Audubon Society

Volume 45

June 1979

Number 9

The Birder's Surinam



by Hank and Priscilla Brodtkin



irgin habitat, the key to successful birding in the neotropics, is today notoriously hard to find and difficult of access. When a new road is built into such a region, a surge of population immediately follows, usually encouraged by the government—and almost overnight the land on all

sides is cleared. A notable exception to this scenario is provided by the nation of Surinam, a Southern California-

sized country nestled between Guyana and French Guiana on the northeast coast of South America. The pristine status of Surinam's tropical forest is primarily a consequence of the nation's low human population—fewer than 400,000 souls—mostly confined to the swampy coastal plain. On account of its outstanding natural attributes the country has become a prime objective for birders in search of unspoiled habitat and unsurpassed neotropical birding.

The American Birding Association's 1978 field trip to Surinam was scheduled to coincide with the commence-



H. Lee Jones

Crested Owl

ment of the fall dry season, which lasts from August to October. The following is a report on the birds observed and the birding localities visited on that trip.

On August 21 our party landed at Zanderij Airport. Altogether there were 20 participants, including our leader, A.B.A. President Arnold Small, a veteran of two previous Surinam expeditions.¹ At the airport we were met by a representative of STINISU, the Surinamese conservation foundation, which was to be our host. A 30-mile bus ride north brought us to Paramaribo, the capital, where we stayed at the Hotel Torarica (which we highly recommend). During the trip we would rely on Haverschmidt's *Birds of Surinam* (now out of print), plus the *Guide to the Birds of Venezuela* by de Schauensee and Phelps. The latter guide was to prove especially valuable, as it describes most of Surinam's birds, and it can easily be carried in the field.

At 6:00 a.m. on the 22nd we were picked up by bus at the hotel, for our first full day of birding. The initial stop was at a pasture-like marshy area a few miles west and north of the city, on the road to the crematorium at **Weg Naragie**. In spite

of the numerous farm buildings close-by, this place was teeming with birds. Stripe-backed Bitterns and Purple and Azure Gallinules played hide-and-seek in the grass while Snail Kites, Black-collared Hawks, Long-winged Harriers, Yellow-headed Caracaras, and Bat Falcons perched or hovered nearby. Flocks of Orange-winged Parrots (the common Amazon in Surinam) flew overhead, as did a few White-colored Swifts—one of the newer birds on the Surinam list. Also found here were the Limpkin, Striped Cuckoo, Green-tailed Goldenthrout, Pygmy Kingfisher, Pied Water-Tyrant, White-headed Marsh-Tyrant, Yellow-hooded and Red-breasted Blackbird, Yellow Oriole, Lined Seedeater, Lesser Seed-Finch, and the water-loving Yellow-throated Spinetail.

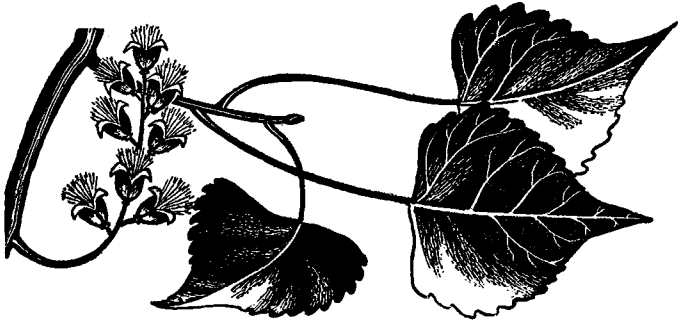
Back on the main coastal highway, we proceeded west to the **Saramacca River** ferry, where the traffic bottle-neck gave us a chance to bird. Along the road we had Pale-vented Pigeon and Ruddy Ground-Dove, plus Band-rumped and Short-tailed Swifts. Pale-breasted Spinetails replaced the Yellow-throated in this less marshy area. Among the birds in the roadside vegetation were the Plain Xenops, Black-crested Antshrike, Cinereous Becard, White-ringed and Sulphury Flycatchers, Lesser Kiskadee, Common Tody-Flycatcher, Pale-tipped Tyrannulet, Pale-vented Thrush, Swallow-Tanager, Blue Dacnis, and Turquoise Tanager.

At the **Coppename River** we boarded an open boat, and, accompanied by White-winged Swallows, headed out toward the mouth of the river and the STINISU Reserve. As the river widened, Laughing Gulls, Black Skimmers, and Magnificent Frigatebirds flew around and over the boat, in addition to Yellow-billed, Large-billed, Royal, and Common Terns. The mudflats were thick with herons and egrets, among which were a few White-necked Herons. In the distance, flocks of Scarlet Ibis flew low over the mangrove forest, making red streaks against the towering thunderheads—while a tree-dwelling Prehensile-tailed Anteater swam in the river—one of the highlights of the day. On the way back we spotted two Rufous Crab-Hawks feeding on crabs beneath the mangroves.

Early the next morning we drove south toward Brownsberg, pausing about halfway to explore a path that leads into an area of swamp forest bordered by savannah. Here we found Slender-billed Kites, Laughing Falcon, Green-rumped Parrotlet, White-necked Puffbird, Swallow-wing (abundant all over Surinam in open areas away from the coast), and Amazonian, Fasciated, and Black-crested Antshrikes. Deeper in the forest we discovered the Arrowhead Piculet, Blood-colored Woodpecker, Painted Tody-Flycatcher, Fuscous Flycatcher, and Coraya and Buff-breasted Wrens.

STINISU's **Brownsberg Nature Reserve** lies some 60 miles south of Paramaribo at the end of the road. From here, the rain-forested hills, which cover 75% of Surinam, stretch south to the Brazilian border. The comfortable lodges sit on the eastern edge of a plateau, overlooking a vast reservoir created to supply power for the aluminum industry. From this vantage point we watched Short-tailed and White Hawks, Greater Yellow-headed and King Vultures, and Plumbeous Kites. This is also the spot to see and hear the White Bellbird as it sings from the tops of the trees during

¹Small, Arnold, "The White-headed Piping Guan, or How I Found my 4000th Life Bird in Surinam," *Western Tanager*, May 1976.



the March dry season. Our main birding route took us down the **Mazaroni Falls Road**, through the only known breeding area of the rare White-throated Pewee. Here the tape recorder proved most valuable, especially for antbirds. Species observed in the area included: the Gray-necked Wood-Rail; Ruddy and Plumbeous Pigeons; Ruddy Quail-Dove; Painted and Golden-winged Parakeets; Caica, Dusky, and Red-fan Parrots; Black-bellied Cuckoo; Blackish Nightjar; Straight-billed Hermit; Blue-chinned and Rufous-throated Sapphires; Black-eared Fairy; Black-tailed, White-tailed, and Collared Trogon; Black-spotted Barbet; White-throated Toucan; Green Aracari; Golden-Olive, Yellow-throated, Golden-green, Golden-collared, and Crimson-crested Woodpeckers; Plain-brown, Long-tailed, Striped, Buff-throated, and Red-billed Woodcreepers; Rufous-rumped, Cinnamon-rumped, and Olive-backed Foliage-Gleaners; Slender-billed Xenops; Black-throated, Mouse-colored, Dusky-throated, and Cinereous Antshrike; Pygmy, Streaked, Brown-bellied, Long-winged, Gray, Spot-tailed, and Dot-winged Antwren; Dusky, Warbling, Black-headed, Spot-winged, Ferruginous, Spot-backed, and Scale-backed Antbirds; Cinereous Mourner; Screaming Piha; Cinnamon Attila; Capuchinbird; Wing-barred, White-fronted, Golden-headed, and White-crowned Manakins; Tiny Tyrant-Manakin; Helmeted and Short-tailed Pygmy-Tyrant; Guianan Gnatcatcher; Lemon-chested and Ashy-headed Greenlet; Rose-breasted Chat; Purple and Red-legged Honeycreepers; Plumbeous Euphonia; Blue-backed, Red-billed, Fulvous-crested, and Flame-crested Tanagers; Fulvous Shrike-Tanager; and Green Oropendola.

A stroll down the main road to the Reserve entrance produced Ashy-tailed Swifts, a flock of 11 Gray-winged Trumpeters, Red-necked Woodpecker, Spangled and Pompadour Cotingas, Black-tailed Tityra, White-necked and Thrush-like Manakins, and Red-rumped Cacique.

On the morning of August 27 we left Brownsberg for the forestry school at **Zanderij**, to spend two days on the savannah. Along the railroad tracks in front of the school we found Crested Bobwhite; Scaled Pigeon; Squirrel Cuckoo; Ruby-topaz Hummingbird; Brown-throated Parakeet; Mealy Parrot; White-fringed Antwren; Variegated, Piratic, White-ringed, Rusty-margined, and Short-crested Flycatcher; Yellow-bellied and Lesser Elaenia; Brown-chested Martin; Finsch's Euphonia; Red-shouldered, Guira, and Burnished-buff Tanagers; Moriche Oriole; and Chestnut-bellied Seedeater. Trips to the nearby

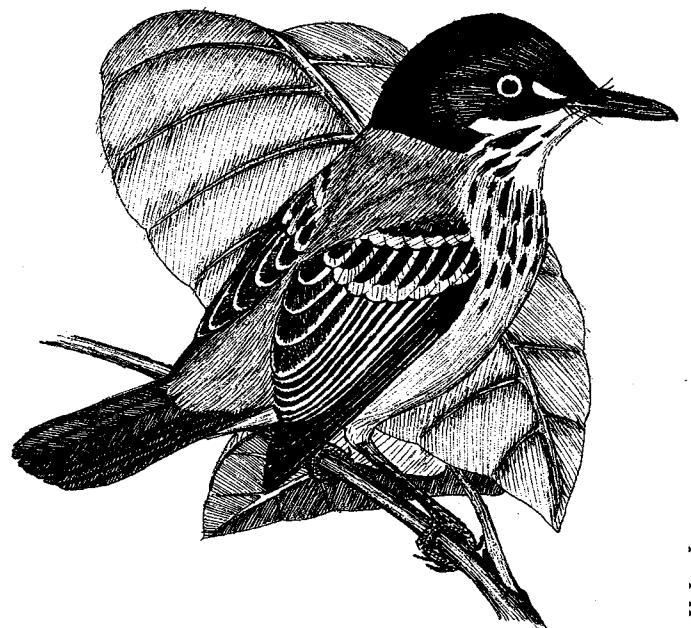
Hannover Savannah produced flocks of Red-bellied and Red-shouldered Macaws, Lesser Swallow-tailed Swifts, Fork-tailed Palm-Swifts, Plain-crested Elaenia, Blue Dacnis, Wedge-tailed Grass-Finch, and Grassland Yellow-Finch. In the early mornings we took the road west through the savannah country, across the Saramacca Bridge, where there is an excellent stand of swamp forest which can be birded from the road. A Double-toothed Kite perched on a low *cecropia*, and a flock of Chestnut-fronted Macaws flew overhead. Among the other birds found here were the Violaceous Trogon; Paradise, Yellow-billed, and Green-tailed Jacamars; Pied Puffbird; Channel-billed Toucan; Pompadour Cotinga; Purple-throated Fruitcrow; Black-crowned Tityra; and Blue-backed Manakin. One bird party was composed of Black-faced Dacnis, Golden-sided Euphonia, and Yellow-backed Tanagers, among others.

At a picnic area in the brushy country past this forest, we were very pleased to discover a small flock of Cream-colored Woodpeckers working a tree over a swimming hole.

Noon on the 29th found us further down this road at Bitagron, on the Coppename River, ready for the 50-mile, four hour dugout canoe trip upriver to STINISU's **Raleigh Falls-Voltzberg Reserve**. Ten minutes into our journey we passed the last Bush Negro village,² and from there on man's dominion had ended—with the exception of a small hydrographic station, where we stopped to observe a Long-tailed Tyrant and a small flock of Epaulet Orioles. We were alone in the wilderness, the virgin world we had come to find.

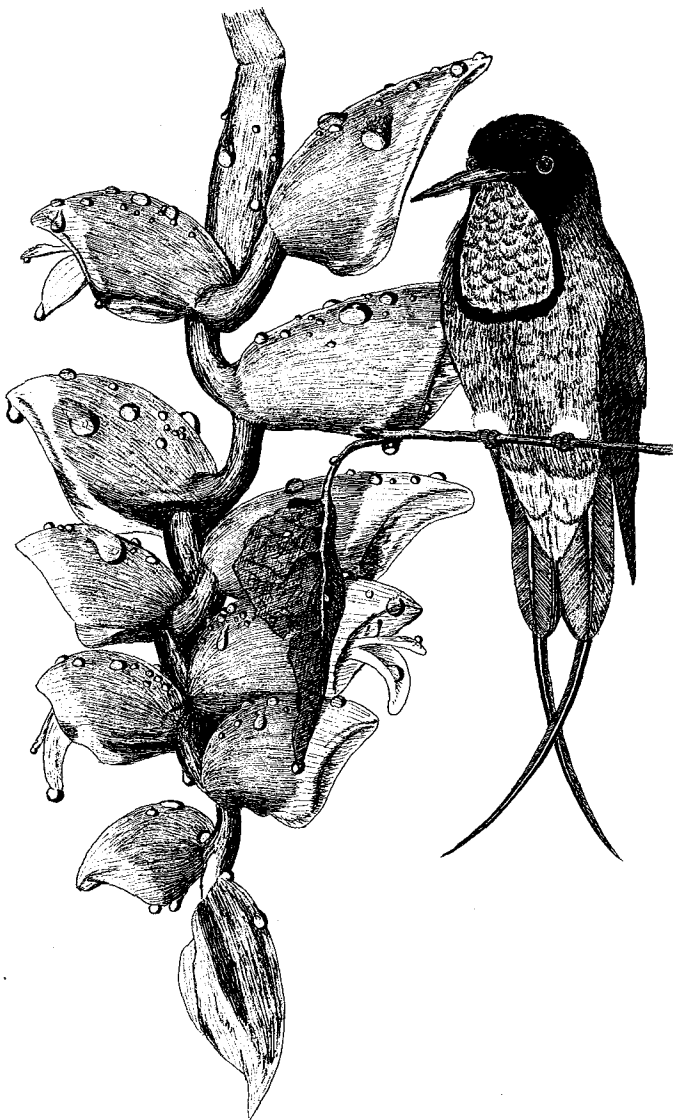
As we journeyed upstream, Ladder-tailed Nightjars perched on exposed limbs over the water, forced there by

²The Bush Negroes, descendants of escaped slaves, still live as their ancestors did in 17th Century Africa.



Painted Tody-Flycatcher

H. Lee Jones



H. Lee Jones

Ruby-topaz Hummingbird

high water from recent rains. Now, in the heat of mid-afternoon, most of the birds had retreated into the tangle of flowering vines along the river's edge; but near the end of the trip, as if on cue, a lone Scarlet Macaw, screeching raucously, flew from the west bank across our bow and disappeared into the foliage on the opposite bank, under a perfect rainbow!

Shortly thereafter we arrived at the Reserve Headquarters, and our lodge on **Foengoe Island**. That evening some of our group went up to the island's airstrip—renowned among birders—to find White-tailed and Spot-tailed Nightjars among the numerous Pauraques. At dawn a dream-like mist hung over the airstrip, shrouding an amazing assemblage of birds, which use the area as a roost. Among the species found feeding in the trees or streaming in numbers overhead were Black and Red-throated Caracaras, Black-faced and Bicolored Hawks, Little Chachalaca, White-headed Piping Guan, and the three large macaws, plus at least nine other species of parrot and five species of toucan.

In addition we noted Black-throated Trogon, Brown Jacamar, Bare-necked Fruitcrow, Capuchinbird, and at least twelve species of flycatchers (including Brown-crested, Dusky-capped, and McConnell's Flycatcher, Forest Elaenia, and Pale-tipped Tyrannulet). Among the fourteen-or-so species of honeycreeper and tanager were a Dotted Tanager and several Magpie Tanagers (only the second time this species has been observed in Surinam).

From the island, boatmen took us through the river's rapids to the mainland and the trail to **Raleigh Falls**. Along the trail a Crimson-Topaz was discovered, plus White-plumed and Rufous-throated Antbirds attending a column of army ants. But the best bird of all was a Crested Owl, conspicuously perched on a jagged limb.

At noon on August 31 we crossed the river to begin the three mile hike to the **Voltzberg**, a unique black granite dome rising some 600 feet above the forest floor—one of the most strikingly beautiful sites we have ever visited, and a fabulous place for birding. En route to the camp, we surprised a Great Tinamou. Epiphytic cactus, orchids, and bromeliads grow at the edge of the granite plates at the base of the dome. The camp, consisting of two thatched-roof open shelters in which hammocks are slung, is situated in a forested draw. The *night* sounds here are fantastic! Little Chachalacas, Marail Guans, and Black Curassows are practically in the camp; and from the granite plate looking up at the Berg we watched a White-tailed Hawk being harrassed by the only Cliff Flycatcher ever noted in Surinam. A rare Rufous-thighed Kite perched near us for a few minutes, while from the adjacent forest the cries of Screaming Pihas filled the air. The most frustrating part of the entire trip was leaving the Voltzberg at 10 a.m. the next morning, after just beginning to tap the rich bird life of this untouched wilderness.

On the morning of September 2nd we took our dugouts back to Bitagron. The trip proved exciting. Two pairs of Orange-breasted Falcons perched in bare trees along the river, a male Masked Duck flew by, and a pair of Sunbitterns slunk back into the tangled undergrowth. Then suddenly the huge form of a Harpy Eagle crossed the river just in front of us, settled in the top of a tree, and glared down with its crest raised!

On our last day in Surinam we concentrated on the coastal mangrove forests north of the Saramacca ferry. From the bus we saw a Maguari Stork. And then, following a dike into the forest, we augmented our trip list with Tiny Hawk, Green-throated Mango, Crimson-hooded Manakin, Spotted Tody-Flycatcher, Chesnut-vented Conebill, and Hooded Tanager. A nearby orchard contributed both White-winged and Black-capped Becard.

The next morning, at Zanderij Airport, we logged our last Surinam birds, the Collared Plover and Grassland Sparrow.

In just two weeks our group had seen over 415 species of birds, almost 70% of the approximately 600 species known to occur in Surinam. In 1980 Arnold Small plans to return, leading another A.B.A. trip. Anyone with a passion for neotropical birding at its best should plan to be with him. ♣

Paul Lehman/Observations from Goleta Point

Spring Seabird Migration

Over the years considerable research has been conducted world-wide on the subject of avian migration. In general, this work has focused upon the problems of navigation and the physiological responses to migration, with the emphasis upon landbirds and waterfowl. Relatively little research has been directed to marine species; and in particular, the seabird migration along the U.S. Pacific coast has scarcely been studied.

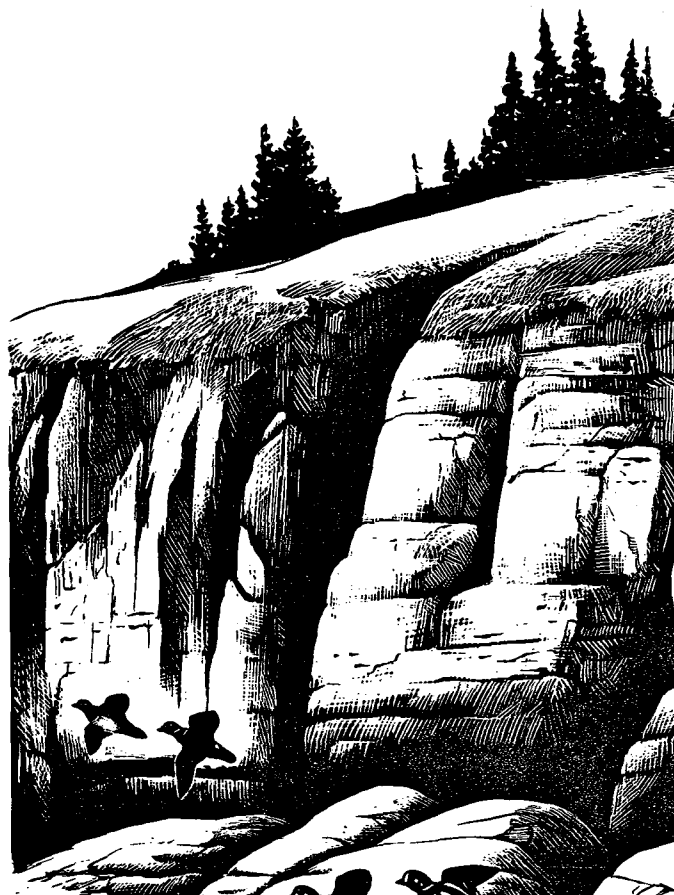
Every year, from the end of February through the beginning of June, the northward migration of Pacific seabirds occurs. During this period spectacular numbers of loons, cormorants, brant, scoters, gulls, and terns may be observed from certain coastal promontories, as they head north toward their breeding grounds in Canada and Alaska.

In the past three years, regular observations of the spring migration have been conducted at two California localities: Pigeon Point, in San Mateo County, and Goleta Point, just west of Santa Barbara. Casual observations have also been made at Point Dume (in Los Angeles County) and at the mouth of the Columbia River in Washington. It is to be hoped that a network of observation stations along the entire Pacific Coast may one day make possible a more complete understanding of the factors influencing the seabird migration.

My work was confined to Goleta Point, one of the best promontories from which to observe the spring migration of seabirds along the Pacific coast. During the spring seasons of 1976, 1977, and 1978, regular observations were made of the seabird movement past the point. In addition, weather data was collected, to permit analysis of the possible effects of weather conditions on spring seabird movement. The species totals for the three years of observation are summarized in the accompanying table.

During the spring an extraordinary number of seabirds may be noted passing Goleta Point. Virtually all of these birds are assumed to winter to the south, along the coast, or further out at sea. Certainly a good number winter off Southern California; but it is probable that the majority winter in areas around Baja California, and perhaps still further south. The coastal lagoons of Baja are heavily-used wintering areas for many of the same species observed at Goleta. It is likely that the majority of Brant seen migrating past the point wintered in these lagoons; and a high percentage of the total Arctic Loon population is believed to winter off Baja.

It would seem that larger numbers of seabirds should be observed along the coast in the fall, before winter extracts its toll of the population. But during the autumn only small numbers of seabirds are noted from Goleta Point. Two factors may explain the dramatic discrepancy between the movement of seabirds in spring and in fall: the duration of migration, and the configuration of the coastline.



Duration of Migration.

For most of the species under consideration, the fall migration through Southern California lasts from late September until late December, a period of three months, with a more-or-less even rate of passage throughout. In the spring the migration extends from the end of February through the beginning of June—a period approximately equal to that of the fall migration. However, in the spring most of the species move through in sizable numbers during only a brief part of that three-month period. For example, all three species of loons may be noted at any time from March through May; but more than 90% of these birds pass through between early April and early May. Similarly, the big push on Brant comes in a relatively short period between late March and late April.

Paul Lehman is a graduate student in Physical Geography at UC-Santa Barbara, and is co-author, with Richard Webster and Louis Bevier, of the forthcoming "Birds of Santa Barbara and Ventura Counties."

Spring Seabird Migration at Goleta Point

Species	1976	1977	1978
Common Loon	1763	4891	477
Arctic Loon	29,672	22,700	35,093
Red-throated Loon	3175	5355	1746
Northern Fulmar	73	2	1
Pink-footed Shearwater	1	1	1
Sooty Shearwater	18,177	1	398
Short-tailed Shearwater	2	0	0
Manx Shearwater	2	0	0
Fork-tailed Storm-Petrel	1	0	0
Ashy Storm-Petrel	0	0	1
Black Storm-Petrel	3	0	0
Double-crested Cormorant	808	1858	415
Brandt's Cormorant	2327	12,500	2366
Pelagic Cormorant	132	89	54
Brant ("Light-bellied")	0	1	0
("Dark-bellied")	19,941	21,378	17,485
White-winged Scoter	31	31	63
Surf Scoter	16,160	22,378	23,448
Black Scoter	3	32	59
Black Oystercatcher	2	0	1
Whimbrel	91	156	92
Surfbird	113	100	390
Red Phalarope	30,220	0	0
Northern Phalarope	39,153	1	26
Pomarine Jaeger	11	2	2
Parasitic Jaeger	68	7	26
Herring Gull	—	—	61
Bonaparte's Gull	9081	6747	5146
Black-legged Kittiwake	3104	1085	25
Sabine's Gull	17	0	0
Forster's Tern	—	1536	2161
Common Tern	—	32	144
Least Tern	3	0	2
Elegant Tern	0	0	2
Black Tern	3	0	5
Common Murre	103	266	13
Pigeon Guillemot	0	0	1
Xantus' Murrelet	5	0	0
Ancient Murrelet	2	1	0
Cassin's Auklet	3	6	2
Rhinoceros Auklet	6	9	2
Total hours of observation	83	68	107

—species not counted that year

Coastline Configuration.

In the spring, seabirds move in a northerly direction toward their breeding grounds in Canada and Alaska. But from southern Los Angeles County to Point Conception the California coastline trends in an almost east-west direction, causing seabirds heading due north to encounter the coastal barrier on a broad front (see the accompanying map). As a result, many birds closely hug the coastline until they clear Point Conception, when they may once again proceed in the preferred northerly direction.

The influence of the coastline configuration and its concentrating effect may be seen by comparing the data from Goleta Point with that from several other localities in Southern California. Since the majority of the seabirds mi-

grating through presumably winter in the Baja area, it would seem that localities in San Diego, Los Angeles, and Santa Barbara Counties would produce approximately similar counts. However, this is not the case. La Jolla, in San Diego County, has much smaller flights than Goleta Point, and while Point Dume, west of Los Angeles, approaches Goleta in volume of passing birds, it is somewhat less productive overall. The northward concentrating effect must certainly continue above Goleta Point, and it seems probable that Point Conception would produce even larger spring migration numbers than Goleta.

It should be pointed out that not all seabirds migrating north from wintering grounds to the south will pass by Goleta Point. And certainly many of those that do are missed. In May 1977, large numbers of Arctic Loons were observed far offshore, flying due north between Anacapa and Santa Cruz Islands, and seemingly headed for a "collision" with the mainland coast in the Santa Barbara area. Conceivably, however, the birds could veer to the northwest before reaching the coast, and would thus be missed at Goleta. Indeed, during May 1978, large numbers of Arctic Loons were observed at the west end of Santa Cruz Island, moving to the northwest. All of these individuals would be missed at Goleta Point.

The Effects of Weather

In addition to the configuration of the coast, the frequent afternoon westerly winds may work to keep birds along the coast. At Goleta these winds are commonly in excess of 15 mph. Also, the regular passage of weather fronts through the area may be accompanied by strong west or northwest winds. Pelagic species such as Northern and Red Phalaropes, Sabine's Gull, and some of the alcids are most often noted during days when strong winds blow from between the southwest and the northwest. However, large numbers of some seabirds are seen at Goleta Point on days with little or no wind. In fact, the largest Brant and Surf Scoter counts have been made in calm weather.

For some time the British and Scandinavians have been studying the relation between landbird movement and weather patterns, and in recent years this type of research has received growing attention in the United States. Recent issues of *American Birds* have included discussions of the effects of large frontal systems, wind, and temperature upon spring and fall landbird migrants in North America. However, relatively little is known about the influence of weather on seabird migration.

In the eastern United States and Canada, large scale fall landbird movement is often initiated by the passage of a cold front, with its falling temperatures, while spring pushes often accompany warm fronts, with their higher temperatures and southwest winds. Unfavorable weather conditions during migration may cause a temporary cessation of movement, with migrants piling up along the route.

This damming-up of migrants may not occur so readily in seabirds as in landbirds. Physiologically, seabirds are better equipped than most landbirds for long distance flight under unfavorable migration conditions, such as headwinds and rain. Such species as the Brant, once launched on a long distance flight, may not stop: On several occasions in the past two years, large flocks of Brant were observed moving past Goleta Point into strong winds and heavy rain.

Among some spring migrant seabirds, weather factors seem to have an effect on movement abundance and timing, though the exact nature of the influence is as yet not fully understood. Weather triggering effects have been shown to exist in the fall movement of Brant, and this could also be the case in the spring. Perhaps coincidentally, over the past three years high Surf Scoter counts were noted on days of high Brant abundance (all were days of clear, calm weather), suggesting that similar causative factors may be at work.

To test the hypothesis of weather triggering, a detailed analysis should be made of the weather conditions existing in areas—such as Baja—where the seabird migration initiates. Goleta Point census counts could then be correlated with the weather data from the southern localities for the days immediately preceding the count.

Field Identification of Seabirds

Accurate identification is essential to any seabird census. While the well-known field guides are adequate for many purposes, they are less than satisfactory when it comes to the identification of species moving by at moderate or long distances from the observer. The following field marks, most of which are not noted in the standard guides, were used to help identify many of the individuals passing by Goleta Point.

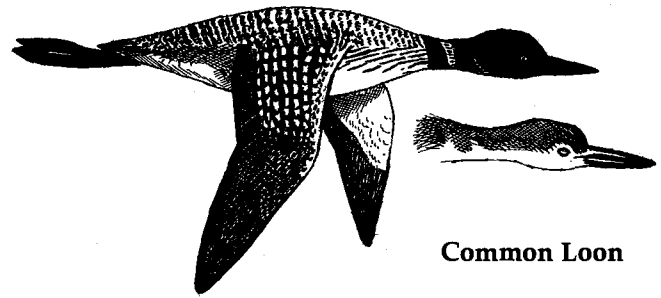
Loons

Of all the species passing by Goleta Point in spring, the loons present the most challenging problems of identification—particularly when the birds are at a distance, so that plumage differences cannot be noted. In such situations, one must rely solely on distinctions of shape.

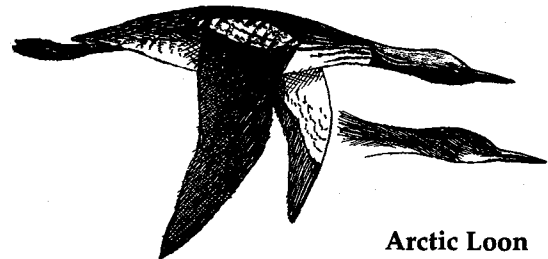
Common Loons in all plumages are recognizably larger and bulkier than either Arctic or Red-throated Loons. In flight, the body size and wings are large, the neck is fairly thick, and the head is fairly large. In addition, the large feet, extending behind the flying bird, are very apparent, even at a great distance. The feet of the other two species of loon are smaller—though the feet of some Arctics are proportionately almost as large as those of the Common. This mark should therefore be used with caution. In flight the Arctic Loon has the same general shape as the Common, but the bird is smaller overall. The Red-throated is about the same size as the Arctic, but is slightly lighter in build, with a slimmer neck and head; and the upturned bill often lends the head a slightly uptilted look.

Breeding-plumaged birds are fairly easy to differentiate, if seen at close range. The Common has a uniform dark head, cross-bars on the breast, and a large amount of white spotting on the back and wings. The Arctic has a distinct pale nape and rear crown, contrasting with the rest of the head and the black throat. This same general pattern, though present in the Red-throated Loon, is more diffused, with the nape showing less contrast (the red color of the throat usually appears dark except at very close range). A breeding-plumaged Arctic can easily be told at a considerable distance by the large white bars on the back. The Red-throated's back and wings are a uniform unmarked brownish.

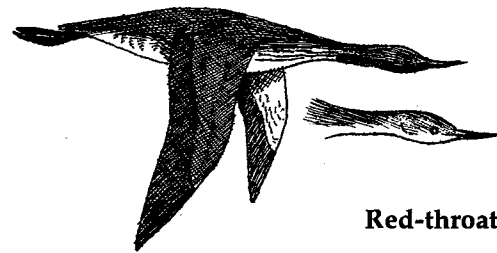
Head shape can be another useful field mark. The Common usually has a large, straight bill and an abrupt slope to the forehead, giving the head a squarer look. The Arctic's bill is also straight, but slimmer, and the head has a rounded look, without the abruptness of the Common. The Red-throated



Common Loon



Arctic Loon



Red-throated Loon

Loons in flight (breeding and winter plumages)

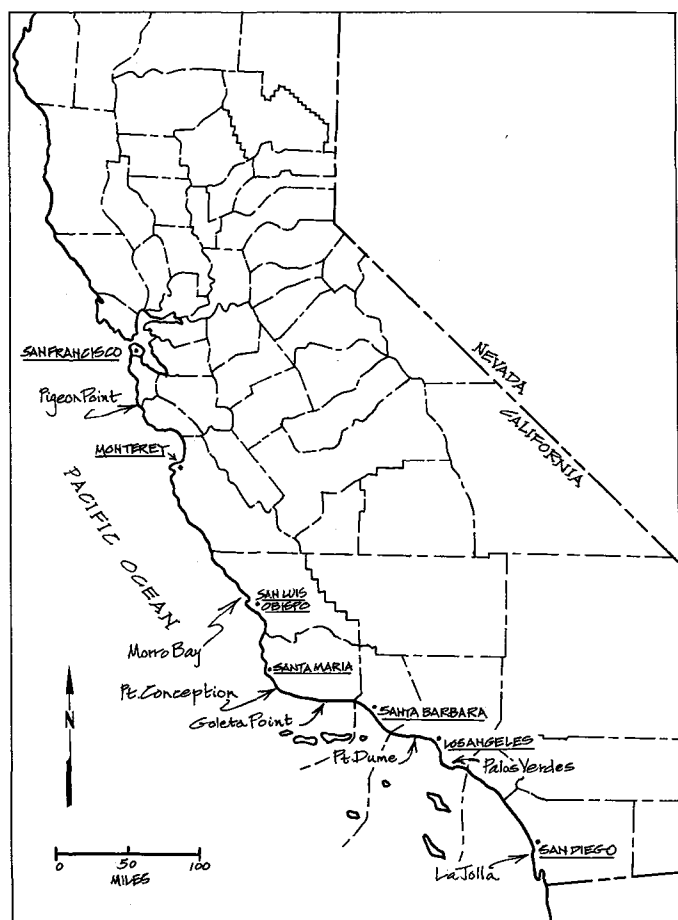
has a slim, upturned bill and often a flatter forehead, angling back to form a slight peak toward the rear of the head.

In winter plumage, the back, hind neck, and crown of the Common Loon are a dark brownish color, and there is white above the eye, forming an "eyelid." In the Red-throated, the back is a paler grayish-brown, well flecked with small spots of white. The crown is also grayish brown, contrasting to a lesser extent with the white of the lower face. In addition, the eye of the Red-throated is located in the light area of the face.

The winter Arctic Loon has the darkest upperparts of all. Its blackish-brown back is virtually unmarked with white, and the dark coloration on the head extends lower onto the face, contrasting more strongly with the white of the lower face. The eye of the Arctic is within the dark area of the face, and the bird shows no white "eyelid." Many Arctics also show a dark "chin-strap." In flight, the head of the winter-plumaged Arctic appears quite dark, with the only white evident on the chin, upper throat, and lower cheek. In flight, the winter Red-throated's head appears quite pale overall.

Cormorants

Several useful field marks exist to aid in identifying cormorants, in addition to the standard characters of throat patch color and size. The Double-crested Cormorant always flies with a crook in its neck, whereas the Brandt's and Pelagic



Coastal Promontories: Central and Southern California

fly with the neck straight out. The immature Double-crested has grayish-white underparts, while Brandt's and Pelagic are brown. The slimness of the bill, head, and body of the Pelagic is distinctive, with the proportionately long and slim neck plus the slim head lending the bird a pencil-like look in flight. The Pelagic's white flank patch in breeding plumage is diagnostic, and in this plumage its overall coloration is more glossy and iridescent than that of the other cormorants.

Brant

On March 29, 1977, one individual of the light-bellied race was seen flying with the "Black" Brant, and a bird which was almost certainly of this race was observed on April 26, 1978. In addition to the light belly, the eastern race shows a white neck band which fails to meet in the front of the neck (as it does in the "dark-bellied" race), thereby forming white patches on the sides. The belly color alone is not a safe field mark, since several apparent "Black" Brant have been noted with distinctly light bellies. It is interesting that all of these individuals were also noticeably smaller in size.

Scoters

The head and bill pattern differences between the scoters are well covered in the field guides. The White-winged Scoter is easily told in flight by its white wing patches, and by its noticeably larger size relative to the other two species. The two dark-winged scoters, the Surf and the Black, are often impossible to differentiate at a great distance. In flight, at

close or medium range, the Black appears rounder and chunkier in overall shape (a good mark, especially in mixed groups). Head and bill shape differences also exist. The Black has a round head with a small bill angling sharply out from the forehead, giving the head a shape reminiscent of that of a Redhead. The Surf Scoter, by contrast, has a sloping bill, somewhat reminiscent of a Canvasback. In flight the wings of the Black Scoter are brownish, distinctly lighter than the body color.

Terns

Stallcup¹ has presented a fine discussion of the identification of Common and Forster's Terns. Adult Commons passing Goleta Point in late April and May have distinct grayish underparts, in contrast to the white underparts of the adult Forster's. This gray coloration is quite evident in most individuals, and should not lead observers to confuse the birds with Arctic Terns. ☺

Seabird Watching Sites

At several localities along the Southern California coast the observer may note the impressive passage of spring migrant seabirds, especially during the peak migration period, from late March through the middle of May. Careful notes made during the migration may contribute to our understanding of the phenomenon.

Productive spots include the following:

Goleta Point (just west of the campus lagoon at the University of California at Santa Barbara). This is the most thoroughly covered seabird watching station, and probably the most productive of the easily-accessible coastal promontories.

Point Mugu (at the large rock on Highway 1, just north of Big Sycamore Canyon). This locality, and the next, may rival Goleta Point in volume of seabirds passing on peak days.

Point Dume (at the dead-end of Westward Beach Road, on the southern end of Zuma Beach). The best viewing is from the top of the bluff, but climb this at your own risk! This is the favored seabird vantage point in the Los Angeles area.

Farther down the coast, try the following areas (apparently less productive than the more northerly points, where the shoreline runs in a more east-west direction):

Point Fermin (and other vantage points on the Palos Verdes Peninsula).

La Jolla Point (along the beach drive in La Jolla, north of San Diego).

Point Loma (take the road downhill from the parking area at Cabrillo Monument).

Point Conception combines all of the ideal elements, but is closed to the public. Large numbers of seabirds pass by our northern coast, north of Point Conception. However, at accessible vantage points (such as the Santa Maria River mouth, Montana de Oro State Park, and Morro Rock) the seabirds are well offshore and difficult to observe. These northern areas are probably the most productive sites for autumn seabird watching. In the fall try the Santa Maria River mouth, at the west end of Main Street, west of Santa Maria.

¹Stallcup, Richard W. 1979. "Pelagic Birds of Monterey Bay, California." *Western Birds* 7 (4): 113-136.

Lee Jones

The Boston-to-Wales Express

June 16, 1952, 1:30am. Time to check on AX6587. Every six hours, day-and-night since June 12th, Dr. Matthews had to drop whatever he was doing and go check up on AX6587. What is an AX6587, anyway? No, it's not the name of a newly discovered viral strain; only the leg band number on a Manx Shearwater. As part of an ongoing experiment on navigation in Manx Shearwaters being conducted by Dr. G.V.T. Matthews and Dr. R.M. Lockley, this individual had been removed from its burrow on tiny Skokholm Island off the coast of Wales, banded, and taken by air to Boston, 3200 miles away, where it was to have been released. Matthews and Lockley were trying to answer, in part, the age old question, How do birds find their way back to their nesting sites after migrating thousands of miles? But they were really asking an even bigger question. And that was: Could a bird find its way back after being transported thousands of miles to a place far removed from its normal wintering grounds, in a direction *other than that* to which it was accustomed to travelling?

It had been only 12½ days since the bird was removed, but already Dr. Matthews was wondering if it would ever return. Could it successfully find its way back to this tiny 1 km² island over a 3000-mile expanse of ocean, in a direction nearly perpendicular to its normal migratory pathway? There was still no word from Rosario Mazzeo, who was supposed to have released the bird on April 3 at the Boston Airport.

Dr. Matthews casually reached into the burrow of AX6587 for what seemed like the hundredth time. Empty. No, wait! There was a *bird* in there! He quickly, but gently, pulled the bird from its burrow and read the band number. Then he read it again to be sure. A-X-6-5-8-7! He let out a loud whoop. The others, awakened by this strange, non-avian call, were soon on the scene, dazed and foggy-eyed from their abruptly-interrupted sleep. Dr. Matthews placed AX6587 back in its burrow, then plugged up the entrance so he could be sure the bird would still be there in the morning. He feared that Rosario had run into trouble with customs at the London Airport and had released the bird before leaving England. But confirmation of the bird's release in Boston came the next morning, when Rosario's letter arrived. "A pretty touch, the bird beating the mail!" exclaimed Dr. Matthews, still elated over the bird's successful journey.

Now he knew it could be done. But the real question loomed larger than ever. How did it happen? Was it a matter of chance? Could it be repeated? Other experiments were to follow. Two Leach's Storm-Petrels, removed from their nests in Maine and released in Sussex over 3000 miles away, returned within two weeks. Laysan Albatrosses taken from Midway Island where they nest, and transported to release sites on the fringes of the Pacific, returned safely to their nests. One made it back from Washington, a distance of 3200 miles, in 10 days. Another travelled 4000 miles from the Philippines.

Obviously there was more than luck and dead reckoning involved. What navigational systems were they using? Several orientation studies had already shown that birds could navigate using the stars in the northern sky as navigational cues. Gustav Kramer and others had eloquently demonstrated in a series of experiments conducted in the early 1950's that European Starlings could navigate using the position of the sun in the sky. This, of course, meant continual compensation for the ever-changing position of the sun as the day progressed. Yet these birds were following their normal migratory route, blindly obeying some innate mechanism that dictated the proper direction to fly.



Sandhill Cranes

Fred W. Lahrman

But what mechanism, if any, could tell a bird how to get home if it didn't even know in which direction to fly? As early as 1947, Dr. H. L. Yeagley had suggested that birds could detect the alignment of the earth's magnetic field. This was an interesting concept, because geomagnetic cues could give the bird a bicoordinate navigational system, the necessary requisite for true navigation. The bird could obtain rough latitudinal information from the angle of inclination of the earth's magnetic field and longitudinal information from the position of the sun in the sky relative to where the sun would be at the same time of day at home. If this seems confusing, think of yourself having just flown from New York to Los Angeles. Your body says it's noon but the sun is low in the eastern sky. The fancy name for this phenomenon we know as jet lag is "circadian rhythm," a kind of built-in biological clock.

Alas, Yeagley's experiments could not be repeated, not even by himself. The idea was forgotten. It wasn't until many years later that several rather sophisticated experiments on geomagnetic direction-finding, conducted by William Keeton, Stephen Emlen, and others at Cornell University, bore Dr. Yeagley out.

It must seem that a bird would have to use a rather sophisticated computer to plot its course home, using various combinations of all these navigational cues. But remember, human intelligence is measured in terms of reasoning power. Birds might not be able to solve problems through reasoning, but they're still exceedingly complex organisms. Much of their brain is given over to innate powers—instincts, if you wish. These built-in guidance systems have been strongly selected-for over millions of years of evolution. We certainly have only begun to solve the many mysteries of bird migration, but at least we now have a crude explanation as to how a bird *might* find its way home.

Jean Brandt

Birding at Valyermo and Big Rock Creek

This area, where the northern slope of the San Gabriel Mts. meets the Antelope Valley, covers an altitudinal range of 3000', and a corresponding variety of habitats. Much of the area lies in the San Andreas Rift Zone, with its intriguing geological history. For example, the rocks of Devil's Punchbowl belong to the same formation as those of the Rock Candy Mts. in Cajon Pass, some 22 miles away—a displacement which has occurred over past geologic ages.

It is recommended that you begin your day's birding in the lower areas, working up the slopes as the day progresses, since the temperatures on the valley floor can become uncomfortable in late spring and summer. Nearby Little Rock Dam is also a good place to start your day (see *Western Tanager*, April 1976).

From State Hwy. 138 in Pearblossom, turn south on County Road N6 to **Devil's Punchbowl (1)**, a county park with nature displays and picnic facilities. Here you will find a one-mile self-guided trail leading down through juniper-covered slopes to a wooded stream. This is an excellent place to watch the spring migration of landbirds. In summer look for Yellow Warblers by the stream, and both Cactus and Rock Wrens on the slopes.

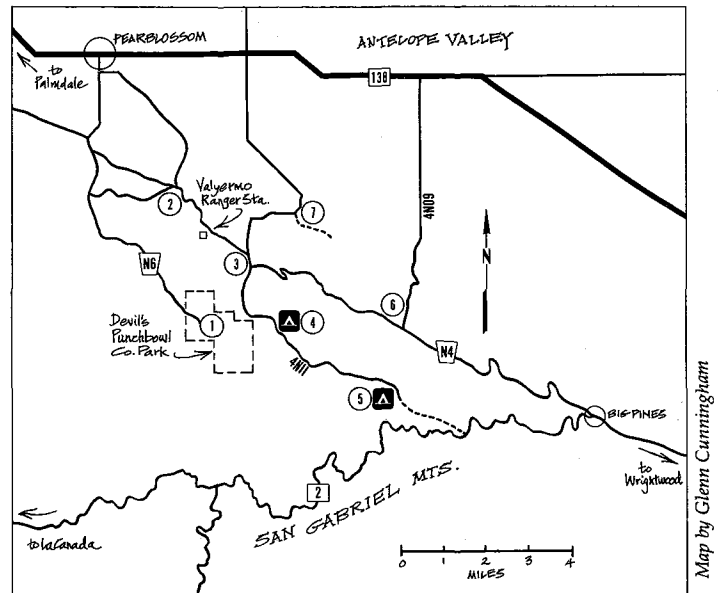
Throughout the pinyon-juniper woodlands in this region, Gray Flycatchers, Gray Vireos, and Pinyon Jays should be looked for (the latter during flight years—fall and winter). Local nesting has yet to be recorded for these three species, but with the exception of a few "hot spots," the area has scarcely been birded.

From the Punchbowl, take N6 back to the first main road going east (signs will say "St. Andrew's Priory," or "Valyermo"). Go east 2 miles to the intersection with N4. Here you first encounter the lush riparian woodland along **Big Rock Creek (2)**. At all times of the year this area is worth birding. Red-shouldered Hawks and White-tailed Kites are often seen, and Summer Tanagers were found here in the summers of 1976 and 1977. The Fall Festival at St. Andrews Priory is always interesting, and the tree-ripened pears sold at the festival are superior.

Continue southeast on N4 past Valyermo to the intersection with **Bob's Gap Road (3)**. From here, ½ mile south to the intersection with Big Pines Road, the birding is excellent. In spring, check the trees for migrating Willow Flycatchers (late May, early June). Phainopeplas feed in the mistletoe in the sycamores and cottonwoods (mostly summer), and Western Bluebirds and Cedar Waxwings are common in winter during their flight years. In Feb.-Mar. 1977, a flock of Bohemian Waxwings was found here, much to the delight of local birders, since Bohemians are quite rare in our area, particularly in large flocks. Bird from the road, since the area is posted "No Trespassing."

East of the intersection there is a small pond, which may have ducks in winter; and the grassy fields east of here are good for wintering Mountain Bluebirds and sparrows.

From here, follow Big Rock Creek Road south to the **Sycamore Flats Campground (4)**. The campground, at 4250', is



open all year, although snow is very possible in winter. Look in the sycamores for Phainopeplas in summer and Townsend's Solitaires in winter. From a point exactly ¼ mile back along the road (the signs reads "Campground ¼ Mile") you may walk down into the riparian woodland. Here Pygmy Owls were found in the winters of 1977 and 1978. Nesting is likely, though not yet proven. Listen for these owls at dawn or in the evening in the dense forest, or anywhere south along Big Rock Creek.

Breeding birds in the area include Black-chinned Hummingbird, Western Flycatcher, Warbling Vireo, Yellow Warbler, and Black-headed Grosbeak. In winter, look for Red-breasted Sapsucker (*S.v. daggetti*), Hairy Woodpecker, Brown Creeper, and Townsend's Solitaire.

Continue southeast 3.6 miles to the **Big Rock Creek Campground (5)**, situated at 4500', at the end of the paved road. The road continues for 2 miles up to Vincent's Gap, at 6000', on the Angeles Crest Hwy., but the route is unimproved and *not recommended* for passenger cars. It is suggested that you walk this road, noticing the contrasting habitats. The south-facing slopes are clothed in arid pinyon-juniper, while the northern slopes are heavily wooded with pines and oaks. Mountain Quail may be found on the drier slopes, and Spotted Owls have been seen along the lower part of the road, in the shady oaks to the right, or just beyond the stream. Both races of the Solitary Vireo have summered here—the only place in Los Angeles County where the Plumbeous race summers. Other breeding or resident birds include the Acorn and Hairy Woodpeckers, Western Wood Pewee, Violet-green Swallow, White-breasted Nuthatch, Western Bluebird, Warbling Vireo, MacGillivray's Warbler, and Green-tailed Towhee.

In winter the snow is often deep, but if you can walk in, look for Williamson's Sapsucker, Varied Thrush, Townsend's

Continued on Page 15

Jon Dunn/FIELD NOTES

Black, Vaux's, and Chimney Swifts

In Southern California all four species of regularly-occurring U.S. swifts are found. While the White-throated presents no identification problems, the other three species are often confused—particularly Vaux's and the Chimney Swift.

By far the largest of the three is the **Black Swift**, a species which breeds in small numbers in the San Gabriel Mts. (Santa Anita Canyon), San Bernardino Mts. (Mill Creek Canyon), and the San Jacinto Mts. (Tahquitz Creek). The birds nest on the mossy cliffs below waterfalls, and may be seen at such localities just after dawn and before dusk. During the remainder of the day they are generally absent, feeding dozens of miles away from their nests. Occasional concentrations of Black Swifts are noted during migration (late May, Sept.), generally during inclement weather; but by and large the species remains unreported during migration, with many of the existing reports of doubtful validity.

In coloration the Black Swift is a *dull black*, but at close range the bird shows a *whitish forehead* and some *whitish edgings* on the *underparts* (particularly conspicuous on the immatures). Color is misleading however, for even White-throated Swifts may appear black when viewed at a distance. The best character is the *shape of the bird* (*long, broad wings*) and its manner of flight, with long periods of *soaring* interspersed with slower, more *swallow-like wing beats*.

Of the two smaller *Chaetura* swifts, the **Vaux's Swift** is much more common, but the Chimney is gradually increasing as a summer visitant to Southern California. The Vaux's is a fairly common spring and fall transient (mid April-May and Sept.) throughout So. Calif., most often encountered during periods of inclement weather. Recent summer records for the San Bernardino Mts. (Big Bear Lake) suggest that it may nest in the region in very small numbers, a plausible supposition since the species nests in the southern Sierras.

The **Chimney Swift** has been increasingly reported as a summer visitant to the coastal slope of Southern California, appearing in the last week in May, with a few generally present into late August. The birds are still best regarded as rare, although in the summer of 1978 a flock of 55 was present in Burbank—the largest concentration on record for our area. There is only one nesting record (Ventura), but additional records are anticipated soon. In general, any summer *Chaetura* swift in the lowlands is likely to be this species, though there is at least one mid-summer record of Vaux's (Pasadena, 1943). Most other published summer records of Vaux's in the lowlands likely pertain to Chimney Swifts.

Both species of *Chaetura* swifts have a distinctive "*cigar*" shape, appearing somewhat tail-less, while both the Black and the White-throated Swift have distinctive *square-shaped tails*. The Vaux's is a slightly smaller species than the Chimney Swift, but, more importantly, it is shorter-winged, and therefore *less inclined to soar*. The Chimney Swift flaps very rapidly, but it also *soars* for short periods, while the Vaux's

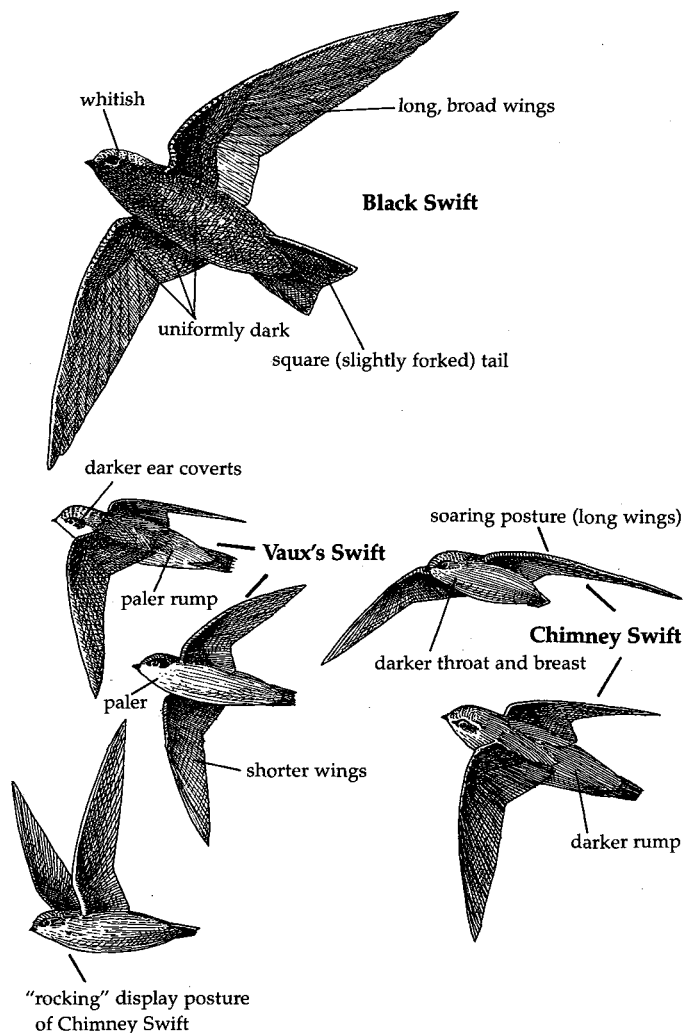


Illustration by Ray Robinson

appears to *constantly flutter its wings*. The Chimney Swift also has the habit of raising its wings above its body and holding them in a steady position while *rocking* from side to side. This behavior may be part of a mating display, for observers have occasionally noted Vaux's Swifts flying in a similar manner on their breeding grounds in Northern California. I have never seen Vaux's exhibit this behavior during migration in our area.

The Vaux's Swift is a *paler* bird overall (breast and rump), with more *contrast* in the facial coloration (dark ear coverts). But these characters are difficult to detect unless the lighting is favorable. A very good character on the Chimney Swift is the loud *twittering call*, usually noted when the species is seen in Southern California. The Vaux's is normally silent during migration, but when it does vocalize, its call is much softer and less audible, almost insect-like. ♡

Gerry Haigh

Terror



he other day a simple thing happened which unexpectedly threw me into a state of momentary shock. I had been reclining on the deck in our box canyon, basking torpid in the sun, dimly aware of a Yellow-rumped Warbler flitting about our pond, catching insects on the wing. Suddenly I was startled by a crashing sound in a bush across the pond. I saw a blur of large flashing wings, then nothing. A stillness ensued which was as alarming as the preceding crash. Neither the warbler nor the intruder were to be seen.

I felt a vague sense of terror welling up in me. I lifted binoculars to my eyes and peered into the brush, straining to see what had happened and thereby, perhaps, to restore some order to my little corner of the world.

At first I saw only a mosaic of leaves and branches and shadows against the bank before me. Then, out of the mosaic emerged the sinister shape of a Sharp-shinned Hawk. He was perched in a bush, empty-footed. He stayed for a moment then took off down the canyon. I felt disappointed that he had missed his prey.

Then I discerned the warbler sitting very still in the far end of the bush in which the hawk had perched. For five minutes or more he kept his body hunched and rigid while he jerked his head nervously about to survey his surroundings.

As I watched the warbler, I too became a fugitive, cowering in the brush near where the predator had passed. Do we humans somehow still remember those many times when our ancestors shrank in terror while a predator prowled through the neighborhood? Was this the source of the terror which stirred in me when I first heard the crash in the brush?

Now that we have turned so much away from nature in an endless fascination with ourselves, we seem to find in other people both the predator and the prey. My parents, for example, cower in a cave in the wilds of New York City. They live like fugitives, ever on guard against muggers and thieves. They keep their apartment dark most of the time to protect themselves from observation by the enemy outside. While visiting them, I learned to carry on conversations in the dark. It was eerie to hear my father washing dishes in the shadows. When they did turn on a light, they would first pull down all the shades of their street-level flat, lest, I suppose, anyone might see in and determine to break in.

"Stay off the streets at night!" they warned. The man up the block, coming home after midnight (as he routinely does from his work), was pursued from his garage to his house one night. Only by running did he make it home unharmed. Not so lucky was the cousin of a friend. She was mugged less than a block from home, giving up her purse in exchange for a vicious blow on the head.

My parents and their friends in the neighborhood exchange these reports of violence like communiques from the front. Each report confirms the need for continued vigilance. The news media are scanned for further confirming evidence. My father came to me with a section of the Sunday Times. Out of thousands of inches of news, he had found two inches which reported the mugging and killing of a man in Brooklyn.

I tried to joke with them about their preoccupation with violence. But it was no joking matter to them. And in the end their fear prevailed over my bemusement. During my short visit, the terror began to seep into me. I found myself double-locking the back door at night despite the price I paid in shutting out the breeze, a heavy price in summer heat.

My parents, the cave dwellers, must have reached in me some



Francis Lee Jaques

deep recess where I know that the world is made up of predators and prey, of violent ones and their victims. This view of life is repeatedly reinforced by our agents in the media whom we have commissioned to fill our minds with images of violence. This commission must reflect our own deep craving to illuminate the dark places to which our primitive memories take us where we cower with our ancestors while predators roam abroad.

So the Sharp-shinned Hawk speaks to me of terror.

So my parents' tales of mugging speak to me of terror.

I have but lately left the cave. I can still be frightened and driven back to cower. ♡

Mono Ecology Seminars

Altacal Audubon Society and the Mono Research Group are sponsoring a series of 8 four-day field courses on the natural history of the Mono Lake-Tioga Pass region, to be held from July through September. Field trips are interspersed with informal lectures and evening campfire discussion sessions. The courses convene at noon on Friday and disband at noon the following Monday. For information on subjects, fees, and schedules, contact Stephen Laymon, 3290 Ackley Rd., Lakeport, Calif. 94543, phone: 707-263-6710.

Steve Strann/BOOKS

On Ducks, Geese, and Swans

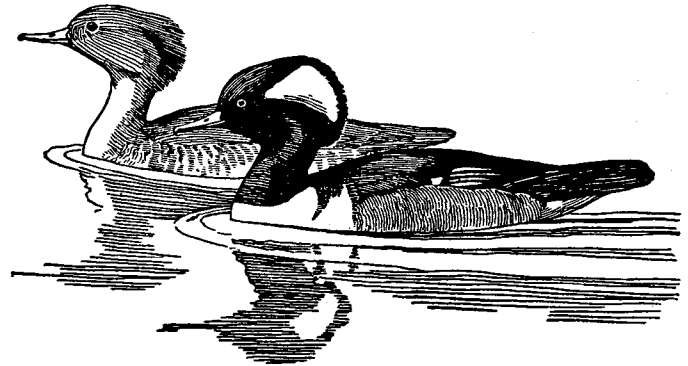
Within the past year many publishers have issued comprehensive editions on the waterfowl of the world (see *Western Tanager*, Nov. 1978). Indeed, no group of birds has been covered so thoroughly since the abundance of owl books appeared on the market a few years ago. What influences this cyclical interest in a particular group of birds is another subject, but since four new volumes have recently been published, a critical overview seems in order. But first, to place the new books in their proper historical perspective, a brief review of the existing works on the subject may be appropriate.

The most widely used and, in my opinion, still the single most important work on waterfowl is Jean Delacour's four-volume *Waterfowl of the World* (Country Life, 1954-64). This is the most comprehensive work on waterfowl produced in the last 50 years, and is still regarded as the primary monograph on the ducks, geese, and swans. No collection is complete without it—though at \$160 it represents a sizable investment. Peter Scott's *Colored Key to the Waterfowl of the World* (Wildfowl Trust, 1957) is basically an international field guide to ducks, geese, and swans, but it is especially useful for its dichotomous key. *Ducks, Geese, and Swans of North America*, by Frank Bellrose (Stackpole Books, 1978), *Waterfowl of North America*, by Paul Johnsgard (Indiana University Press, 1975), and Volumes 2 and 3 of Ralph Palmer's *Handbook of North American Birds* (Yale University Press, 1976) adequately cover the nearctic species, and, while they are necessarily limited in scope, they provide much useful data on migration and distribution.

So why the recent profusion of waterfowl works? First, as with any natural history text, the data on which the book is based soon becomes obsolete. Distribution patterns shift, taxonomic changes occur, and new light is shed upon strategies of behavior. And since Delacour's treatise was completed in the early 60's, political exigencies and human encroachment on the natural environment have dictated changes in the status of many species. It is to these changes that the new books seem to be directed.

A secondary goal of the new works appears to be the achievement of mass appeal. To better inform the public—and to insure sales—authors of natural history texts increasingly seek to present their subjects in as seductive a manner as possible. Color photographs, concise range maps, and an engaging style serve to expand a book's readership, and its impact. The four new works differ widely in their degree of success in accomplishing these goals.

Frank Todd is Curator of Birds at San Diego's Sea World, and as such is considered an expert on waterfowl both in the wild and in captivity. In his new work, *Waterfowl: Ducks, Geese, and Swans of the World* (Sea World Press, 1979, \$44.95), Todd has achieved the summit of the art. Simply put, his book is superb. With over 800 color photographs and an extremely useful and informative text and appendix, the author has created a work in the grand style, reminiscent of the work of Beebe from the turn of the century. Todd's book is a personal tome, filled with his own often-controversial opinions; but this in no way lessens the impact of the presentation. Clearly intended as an update of Delacour's work, the book admirably fulfills the goal of careful scholarship plus mass market appeal. Any non-ornithologist could easily use the book, while the inveterate waterfowler would not feel that his interests were compromised. Separate chapters are devoted to the various tribes of waterfowl, with each species treated individually and thoroughly. Comprehensive descriptions of subspecies are also included, as well as recent data on distribution, behavior, and reproductive biology. But in the final analysis, it is the author's consummate melding of design and



George Milsch Sutton

data that makes this volume a marvellous addition to anyone's bookshelf.

Paul Johnsgard's *Ducks, Geese, and Swans of the World* (University of Nebraska Press, 1978, \$35.00) is less successful as a work for the mass market. While literally filled with pen-and-ink sketches, and including 59 color photographs, Johnsgard's book appears to be intended primarily for the serious student of the world's waterfowl. By no means, however, is this meant to demean the work, as it easily stands as a premier treatise on the subject. Also intended as an update of Delacour's work, the present volume emphasizes, within each species account, the natural history and status of each bird, including the newer data from the literature. Though somewhat repetitive, the writing style is concise, conveying the author's ideas with ease.

I am sorry to say that Eric Soothill's and Peter Whitehead's *Wildfowl of the World* (\$15.95) is a sham. To begin with, the work does not cover all the world's wildfowl: The Torrent Ducks and the Whistling Swan are not even mentioned. And I get the feeling that the publisher was in a hurry to grab some of the waterfowl book market, since mistakes abound. Each cursory species account includes a color photograph, but in the case of the Northern and Australian Shovelers the photos are inexcusably switched. In addition, there are numerous errors in the index (goldeneyes are left out), errors in the pen-and-ink sketches (a White-winged Scoter is misidentified as a Black Scoter), and poor choices of photographs (the Bufflehead is almost unrecognizable). In fact, about all that can be said for this effort is that it contains helpful sections on international wildfowl collections and wetlands.

Donald Heintzelman's *North American Ducks, Geese, and Swans* (Winchester Press, 1978, \$15.95) should not be purchased for its species descriptions, since this information is much more extensively covered in the older wildfowl works. The main attribute of the book is its fairly complete listing of North American waterfowl refuges; Each listing includes a comprehensive map, information on types of waterfowl seen, habitats, refuge size, and location. This compilation is valuable to anyone interested in waterfowl birding, and may be the main motivation for acquiring the book.

Of the four new editions, I can comfortably recommend only two. Frank Todd's work clearly qualifies as the most appealing of the lot. Combining scholarship with sumptuous beauty and clarity, this book stands as a shining example of the multipurpose ornithology text. Paul Johnsgard's work is also worth purchasing, but it is more of a traditional monograph, and as such is less attractive to the general public. The other books range from mediocre to just plain bad. Stay away from Soothill's and Whitehead's book, and obtain Heintzelman only if a survey of wildfowl refuges is desired. 🐾

Shumway Suffel

BIRDS of the Season



June, more than any other month, spans the spectrum of the avian year. A very few non-breeding stragglers from the winter season—shorebirds, loons, and the like—are still with us. And we also have a few late migrants, including those fascinating vagrants, the eastern warblers, orioles, and sparrows, which can turn a dull birding day into an unforgettable adventure. But primarily, June is a month for nesting. By now many lowland species have raised their first broods, and some are starting their second families. In the mountains, however, nesting is just about to begin. Hardly have the last spring migrants departed than the first southbound travellers appear. The earliest male Rufous Hummingbirds will be back in our mountains by the end of June, and the first of the returning shorebirds will arrive in early July.

April, as expected, brought us a bonanza of migrating birds, and for the most part the migrants were on schedule, with a concentration of passerine species in mid-April and at the end of the month. Most of the unusual birds, however, were non-passerines. The **Louisiana Heron** found at Pt. Mugu on March 21 was seen again on April 6, and an immature (white) **Little Blue Heron** was present in Goleta for at least 10 days (Paul Lehman and Louis Bevier). But an adult Little Blue at the lake in Laguna Niguel Park could not be confirmed. The rarest and most elusive heron was a **Yellow-crowned Night Heron** below San Diego (Guy McCaskie, April 15). It stayed for at least two weeks, but was seen only when flying into or out of an abandoned, but densely overgrown gravel pit. The **Garganey** near Lake Elsinore stayed for about two weeks, and was last seen on April 4 (Bea Becker). Ten years ago **Blue-winged Teal** were noteworthy birds in our area, but during April there were five males with accompanying females at Bolsa Chica, more than five males plus females near Lake Elsinore, and at least 17 in Ventura County.

Swainson's Hawks were seen sparingly in the Antelope Valley during the month (Fred Heath, et al), and one was spotted high over the Coso Rest Area in Inyo County (Terry Clark, May 1). A late **Ferruginous Hawk** was near El Toro on March 31, and the **Merlin** in Altadena was last seen on April 9 (both Jon De Modena). A **Peregrine Falcon** flying over La Jolla Canyon, Ventura County, was the only one reported (Richard W., April 8). A report of a **Yellow Rail** near the Garganey's pond at Lake Elsinore drew a crowd on April 14, but in spite of perfect habitat, no rail could be found. The **American Oystercatcher**, missing from Pt. Fermin since December, was found again a few miles further west on March 26 (Fred Bernstein), and was still in the area in late April (Hal Ferris). Three reports of **Solitary Sandpipers** were received—one below San Diego (S.S., et al, April 16), another at Goleta (Paul L. and Louis B.), and three in southwestern Inyo Co. (Dan Guthrie, April 29). **Baird's Sandpipers** were not reported along the coast, but a few were seen inland—one near Blythe on the Colorado River (Brett Whitney, April 2), and two near Baker on the Mojave Desert (Steve Cardiff, April 6). An early **Semipalmated Sandpiper** (always rare

and difficult to identify) was found at the south end of the Salton Sea (Guy McC., April 21). The first migrant **Northern** and **Wilson's Phalaropes** appeared at McGrath State Park near Ventura on April 15 (Richard W.), and on the 25th, Kimball Garrett and Jean Brandt counted 12,500 **Northerns** from the bluffs at Pt. Dume. A sub-adult **Sabine's Gull** at Osborne Banks on April 28 was an early sighting of this handsome small gull (LAAS trip). **Least Terns** returned to the Marina del Rey area about April 20 (Jerry Jonson).

On March 25, Jan Tarble heard, taped, and later saw what could only be a **Flammulated Owl** at Shoshone in Inyo County. The taped call sounds right, but the date is so early that it may have been a wintering bird (as was the January specimen from the San Bernardino Mts., many years ago). The **Spotted Owl** which nested over the trail at Switzer's Picnic Area in the San Gabriel Mts. two years ago, and possibly last year as well, was on the nest again this April.

Despite the high overcast in late April, there was only one report of **Vaux's Swifts**, a small flock at Big Sycamore (Hal Ferris, April 18). The arrival date of **Black-chinned Hummingbirds** was set by two observations—at Topanga Canyon on April 6 (Gerry Haigh), and near Ojai the next day (R.W.). Of the five or more **Lewis' Woodpeckers** which wintered at Morongo Valley, at least three stayed through April, and there was talk of possible nesting there. Two **Cassin's Kingbirds** at Whittier Narrows Dam on March 5 were so early that they may have wintered in the area. A single **Olive-sided Flycatcher** (usually a late arrival) was in Santa Anita Canyon on April 25 (Hal Baxter), and by the 30th there were five at Morongo (Russ Wilson). Three **Bank Swallows** at McGrath S.P. on April 1 were early for the coast, and a **Purple Martin** (increasingly rare here) near Ojai on the 7th was the only one reported (R.W.). **Bendire's Thrashers** are summer residents in the eastern Mojave Desert, uncommon in the western Mojave, and casual along the coast. So two April sightings are of interest: a single bird near San Diego (Jon Dunn), and another on the Antelope Valley field trip (LAAS, April 17). The very early nesting of desert birds was well illustrated by two adult **Le Conte's Thrashers** feeding two full-sized but short-billed immatures on April 18 at Windmill Wash near Yucca Valley (Hal Baxter).

Reports of warblers increased during April, with almost a hundred **Wilson's** and several **Yellows** counted in Griffith Park on the 11th (Justin Russell), and five warbler species seen in the Oak Canyon Nature Center, Anaheim, on the 13th (Doug Willick). At Morongo Valley on the 18th, **Bell's Vireos** and ten species of warblers were present, including two singing male **Lucy's** and several **Yellow-breasted Chats**. A male **Kentucky Warbler** on the wet lawn under the cottonwoods at the Coso Rest Area above Little Lake, Inyo County (Dan Guthrie, April 30) was a very rare bird. Unfortunately, a gale force wind was blowing the next day, and the bird could not be relocated. The major movement of migrants through this man made oasis—some leaving, some arriving—makes it evident that the site deserves future coverage. The invasion of **Great-tailed Grackles** continues,

as two were seen near Holtville, a location intermediate between the populations along the Colorado River and at Ramer Lake. It seems probable that the birds will soon cover the whole Imperial Valley, as they have the agricultural areas of Arizona. A pair of **Summer Tanagers** were seen at Morongo on April 24 (Barbara Turner), and by the 28th two pairs were there (Doug Willick). There were two early but well-separated reports of male **Black-headed Grosbeaks** on March 31st (Doug W., in Anaheim, and Richard W. in Ventura Co.). The first **Lazuli Buntings** were noted in early April, and with the Lazulis at Morongo Valley, Russ and Marion Wilson singled out a male **Indigo Bunting**. ♀

Big Rock Creek /Cont'd from pg. 10

Solitaire, Brown Creeper, and Golden-crowned Kinglet. Golden Eagles may be seen at any time of the year.

Return to the Big Pines Road intersection (N4), and turn east to **Mile Hi (6)**. The trees around the Mile Hi Gardens have had Lewis' Woodpeckers in winter. Listen for Poor-wills on summer evenings. From here you may continue east to Big Pines and bird your way along the Angeles Crest Hwy. (see *Western Tanager*, Sept. 1978), or return on N4 to the Bob's Gap Road intersection. Turn north here and you will soon pass a small pond where Black Phoebes are resident and ducks are regular in winter. At **Bob's Gap (7)** there is a dirt road to the east. Walk along this road, through a Joshua Tree-pinyon-juniper woodland. In summer look for Scott's Oriole (April-July), Black-throated Sparrow, Costa's Hummingbird, Verdin, Cactus Wren, and Ash-throated Flycatcher. Black-chinned Sparrows and Rock Wrens should be present on the slopes. And look under fallen Joshua Trees for Desert Night Lizards (*Xantusia vigilis*), tiny endemic lizards with vertical-slit pupils. In all our Southern California birding areas, be on the lookout for rattlesnakes. They are common, though rarely seen.

There are full facilities in nearby Palmdale, plus limited services in Pearblossom, and the campgrounds have picnic tables and restrooms. Most of the areas covered lie within the Angeles National Forest.

Good birding! ♀



WESTERN TANAGER

EDITOR Barry Clark

ASSISTANT EDITOR Corliss Kristensen

Published 10 times a year, monthly except January and July, by the Los Angeles Audubon Society, 7377 Santa Monica Blvd., Los Angeles, Calif. 90046

PRESIDENT Sanford Wohlgemuth

1ST VICE-PRESIDENT Kimball Garrett

2ND VICE-PRESIDENT Art Cupples

EXEC. SECRETARY Carol Friedman

Audubon membership (local and national) is \$18 per year (individual), \$21 (family), or \$13.50 (student or senior citizen), including AUDUBON Magazine, and THE WESTERN TANAGER. To join, make checks payable to the National Audubon Society, and send them to Audubon House. Subscriptions to THE WESTERN TANAGER separately are \$6.00 per year (Third Class), or \$9.00 (First Class, mailed in an envelope). To subscribe, make checks payable to Los Angeles Audubon Society.



Ray Robinson at work

Wildlife Mural Completed

San Diego artist Ray Robinson recently put the finishing touches on an 18-foot mural commissioned by Los Angeles Audubon with funds from the Ora L. Leeper Fund. The mural, depicting the native birds, plants, mammals, and reptiles of the San Gabriel Valley, has been installed in the Santa Fe Dam Nature Center in Irwindale. The Wildlife Management Area, located behind the dam, embraces over 400 acres of prime coastal sage scrub habitat, a vegetation type which once covered extensive areas of the interior valleys of Southern California. Los Angeles Audubon cooperated with the County of Los Angeles and the Army Corps of Engineers in insuring the preservation of this wilderness area, one of the few localities within Greater Los Angeles where such typical desert species as Cactus Wrens, Black-throated Sparrows, and Roadrunners may be found.

Los Angeles Audubon ANNUAL PICNIC

Saturday, August 4th

Vermont Canyon, Griffith Park

10 a.m.-5 p.m.

The picnic area is located just north of the Greek Theatre, on the left. Bring frisbees, baseball mitts, footballs, food, and friends.

CALENDAR

Los Angeles Audubon Headquarters, Library, Bookstore, and Nature Museum are located at Audubon House, Plummer Park, 7377 Santa Monica Blvd., Los Angeles 90046. Telephone: 876-0202. Hours: 10-3, Tuesday through Saturday.

Audubon Bird Reports:

Los Angeles 213-874-1318
Santa Barbara 805-964-8240

Pelagic Trip Reservations

To make reservations for pelagic trips, send a check payable to LAAS plus a self-addressed, stamped envelope, your phone number, and the names of all those in your party to the Reservations Chairman, Audubon House. No reservations will be accepted or refunds made within 4 days of departure. To guarantee your space, make reservations as early as possible. Trips will be cancelled 30 days prior to departure if there is insufficient response. If you wish to carpool, please so indicate, and you will be contacted two weeks prior to the trip.

SUNDAY, JUNE 10—Big Bear Lake and vicinity. Meet at Big Bear Lake Dam at the west end of the lake, at 7:30 a.m. Species likely to be seen include Calliope Hummingbird, Williamson's Sapsucker, Pinyon Jay, Mountain Bluebird, "Plumbeous" Solitary Vireo, and Virginia's Warbler. Leader: Kimball Garrett, 477-5769.

TUESDAY, JUNE 12—Evening Meeting, 8:00 p.m., Plummer Park. **Herb Clarke**, noted author-photographer, and past-President of LAAS, will present a slide program on **Malaysia—Land Below the Wind**. The Clarkes led a birding tour to Malaysia in October '78, and this program will present some of the highlights of that expedition.

SUNDAY, JUNE 17—San Gabriel Mountains. Meet at 8:00 a.m. at the 1st entrance to Charlton Flats, off Angeles Crest Highway. Species likely to be seen include Dusky Flycatcher, "Red-breasted" Sapsucker, Clark's Nutcracker, and Townsend's Solitaire. Leader: Fred Heath, 828-6524.

SATURDAY, JULY 21—Antelope Valley. Meet at 7:00 a.m. at Avenue D (Hwy. 138) and the Antelope Valley Fwy. (14). The group will spend the day checking ranches and desert habitat for characteristic nesting species, and will also look for marsh birds and fall migrant shorebirds. Be prepared for hot temperatures. Bring liquids. Leader: Tom Frillman, 856-8779.

SUNDAY, AUGUST 26—Morro Bay Pelagic Trip. Departure at 7:30 a.m. from Virg's Landing at Morro Bay, with return at 3:00 p.m. Price: \$22.00 per person. Leaders: Jon Dunn and Bruce Broadbooks.



Mono Lake Field Trips

Every Saturday or Sunday from June 9 through Sept. 9 the Mono Lake Committee is conducting field trips to explore the geology, botany, zoology, and human history of this unique natural region east of Yosemite N.P. The trips are free, but limited to 40 people. To sign up, select a preferred and an alternate date, enclose a stamped, self-addressed envelope, and send it to: The Mono Lake Field Trip, P.O. Box 29, Lee Vining, Calif. 93541.

Conservation Objectives

The LAAS Conservation Committee has identified 21 local conservation problems upon which the chapter will focus its efforts in the months to come. Prominent among these are wetland conservation issues; and of particular concern are the protection of **Malibu Lagoon**, **Ballona Creek**, and **Mono Lake**. To safeguard these habitats, LAAS is lending its support to the state Coastal Commission, while working for enactment of a strong Riparian Act. A bill to restore Mono Lake to its 1970 level has been conditionally approved by the Water, Parks, and Wildlife Committee of the State Assembly. The Mono Lake Committee has yet to take a stand, however, since the bill alone may fail to mobilize an adequate water preservation program on the part of the Dept. of Water and Power.

The **Santa Monica Mountains** face the threat of imminent development, even with plans for a National Recreation Area within sight. LAAS is also assuming an active role in the formulation of the **Desert Management Plan**—which may affect as much as 1/3 of the state's land area.

Other issues of concern to the Committee are the protection of the **California Condor**, the preservation of the **Whitewater River marsh**, and the protection of the **San Luis Rey River**. A small conservation committee cannot tackle every environmental issue, particularly in Southern California where development pressures are great. However, organized efforts on individual target projects may achieve significant results in preserving what remains of our valuable wild habitat. Please contact Conservation Chairman, Corliss Kristensen (213-391-8843) for information on how you can help.

Los Angeles Audubon Society
7377 Santa Monica Blvd.
Los Angeles, California 90046

Miss Ruth M. Price
20932 Balgair Circle
Huntington Beach, Calif. 92646

Non-Profit Organization
U.S. POSTAGE
PAID
Permit No. 26974
Los Angeles, Calif.



BOOKSTORE CATALOGUE

AUDUBON HOUSE

Olga L. Clarke, Sales Chairman

June 1979

Los Angeles Audubon Society, 7377 Santa Monica Blvd., Los Angeles, California 90046 Tel (213) 876-0202

NORTH AMERICA

GENERAL FIELD GUIDES

- BIRDS OF NORTH AMERICA, Robbins 4.95
 *HANDBOOK OF NORTH AMERICAN BIRDS,
 vols 1,2,3, Palmer ea. 32.50

CANADA

- WHERE TO FIND BIRDS IN BRITISH COLUMBIA, Marks 3.95
 BIRDS OF CANADA, Godfrey 29.00
 WHERE TO GO BIRDWATCHING IN CANADA, Stirling 3.95
 BIRDS OF THE CHURCHILL REGION, MANITOBA, Jehl/Smith 3.95
 BIRDS OF NOVA SCOTIA, Tufts 15.00
 WHERE TO FIND BIRDS IN NOVA SCOTIA, N.S.B.S. 3.00
 BIRDS OF VANCOUVER ISLAND, Stirling 2.95

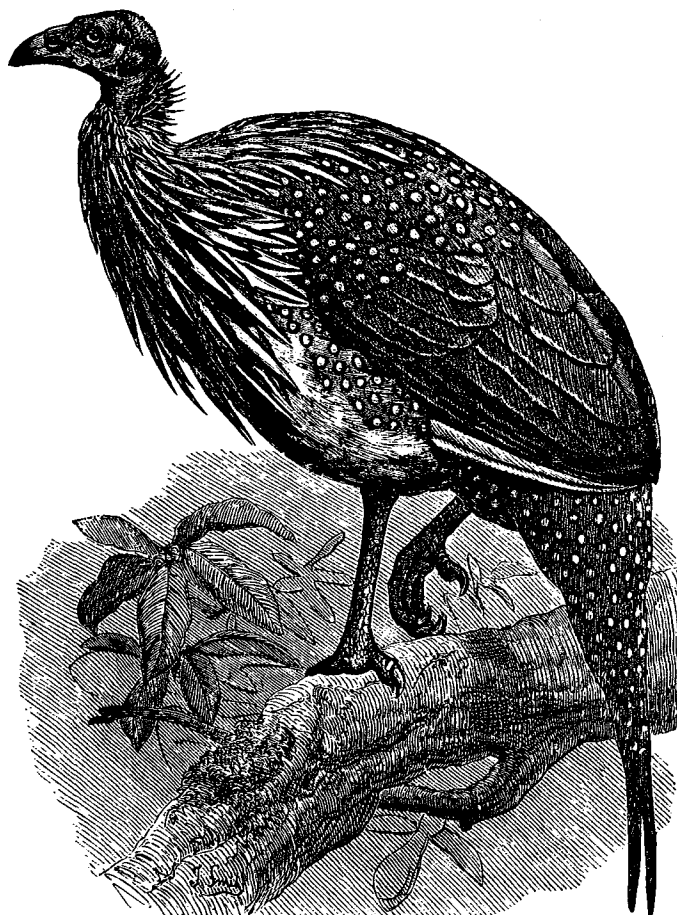
EAST

- AUDUBON LAND BIRD GUIDE, Pough 7.95
 AUDUBON WATER BIRD GUIDE, Pough 7.95
 BIRDS OF CAPE COD NATIONAL SEASHORE, Bailey 2.95
 AUDUBON SOC. FIELD GUIDE TO NO. AMERICAN BIRDS,
 EASTERN REG., Bull/Farrand 9.95
 BIRDWATCHER'S GUIDE TO THE EASTERN
 UNITED STATES, Geffen 6.95
 FIELD GUIDE TO THE BIRDS, EASTERN LAND
 & WATER BIRDS, Peterson 5.95 9.95
 GUIDE TO BIRD FINDING EAST
 OF THE MISSISSIPPI, Pettingill 15.95
 GUIDE TO EASTERN HAWKWATCHING, Heintzelman 5.95
 WHERE TO FIND BIRDS IN FLORIDA, F.A.S. 3.50
 BIRDER'S GUIDE TO GEORGIA, Hans 2.95
 BIRD FINDING IN ILLINOIS, Fawks/Lobik 4.00
 CHICAGOLAND BIRDS: WHERE & WHEN
 TO FIND THEM, Smith 1.50
 TOP BIRDING SPOTS NEAR CHICAGO, Sanders/Yaskot 2.95
 WHERE TO FIND BIRDS IN EASTERN MASSACHUSETTS, Robin-
 son/Stymeist

- ENJOYING BIRDS IN MICHIGAN, M.A.S. 2.95
 MANUAL FOR IDENTIFICATION OF BIRDS OF
 MINNESOTA & NEIGHBORING STATES, Roberts 7.50
 GUIDE TO PRESERVES OF THE NEW HAMPSHIRE AUDUBON
 SOCIETY
 WISCONSIN'S FAVORITE BIRD HAUNTS, Tessen 6.95

WEST

- AUDUBON SOC. FIELD GUIDE TO NO. AMERICAN BIRDS,
 WESTERN REG., Udvardy 9.95
 BIRD-FINDING IN INTERIOR & SOUTHCENTRAL ALASKA,
 Kessel 3.95
 STATUS & DISTRIBUTION OF ALASKA BIRDS, Kessel/Gibson 7.95
 BIRDS OF ARIZONA, Phillips 22.50
 BIRDS OF ORGAN PIPE NATIONAL MONUMENT, Wilt 2.50
 BIRDER'S GUIDE TO SOUTHEASTERN ARIZONA, Lane 4.50
 BIRDS OF CALIFORNIA, Small 4.95 12.50
 BIRDING LOCATIONS IN & AROUND LOS ANGELES, Brandt 1.75
 PELAGIC BIRDS OF MONTEREY BAY, Stallcup 1.75
 BIRDS OF PT. LOBOS (Monterey), M.P.A.S. 1.75
 BIRDING IN THE SACRAMENTO AREA, Mallette 3.95
 BIRDS COME FLOCKING, FIELD GUIDE TO STA. BARBARA CO.,
 CALIF., Matelson 3.50



- BIRDS OF SONOMA CO., ANNOTATED CHECKLIST/GAZETEER,
 Bolander/Parmeter 4.95
 BIRDER'S GUIDE TO SOUTHERN CALIFORNIA, Lane 4.50
 BIRDS OF SO. SAN FRANCISCO BAY REGION, Sibley 3.50
 BIRDS OF YOSEMITE, Stebbins 1.50
 BIRDS OF THE YOSEMITE SIERRA, Gaines 6.00
 PICTORIAL CHECKLIST OF COLORADO BIRDS,
 Bailey/Niedrach 15.00
 BIRDER'S GUIDE TO EASTERN COLORADO, Lane 3.25
 HAWAIIAN BIRDLIFE, Berger 15.95
 HAWAII'S BIRDS, H.A.S. 3.95
 FAMILIAR BIRDS OF NW FORESTS,
 FIELDS & GARDENS, Marshall 2.50
 FAMILIAR BIRDS OF NW SHORES & WATERS, Nehls 2.50
 BIRDING OREGON, Ramsey 4.95
 BIRDS OF THE PACIFIC NORTHWEST,
 Gabrielson/Jewett 7.95

*Special Order. No discount. Approximate price.
 Allow 8-10 weeks for delivery.

*BIRD LIFE OF TEXAS, 2 vols, Oberholser	set 65.00
FIELD GUIDE TO BIRDS OF TEXAS, Peterson	11.95
BIRDS OF BIG BEND NATIONAL PARK & VICINITY, Wauer	4.95
BIRDER'S GUIDE TO THE RIO GRANDE VALLEY OF TEXAS, Lane	4.50
BIRDER'S GUIDE TO THE TEXAS COAST, Lane	3.50
UTAH BIRDS, Behle/Perry	4.00
BIRDS OF ZION NATIONAL PARK & VICINITY, Wauer/Carter	2.95
GUIDE TO BIRD FINDING IN WASHINGTON, Wahl/Paulson	4.50
BIRDS OF THE WEST, Clarke/Small	30.00
*BIRDS OF THE WEST COAST, vol 1, Lansdowne	40.00
FIELD GUIDE TO WESTERN BIRDS, Peterson	6.95
BIRDS OF YELLOWSTONE & GRAND TETON NATIONAL PARKS, Follett	2.95



INTERNATIONAL

AFRICA

FIELD GUIDE TO BIRDS OF EAST & CENTRAL AFRICA, Williams	13.50
FIELD GUIDE TO NATIONAL PARKS OF EAST AFRICA, Williams	13.50
FAUNE DE MADAGASCAR, XXXV, OISEAUX, Milon (French)	60.00
BIRDS AFIELD (Rhodesia), Ginn	5.95
BIRDS OF SEYCHELLES & OUTLYING ISLANDS, Penny	11.95
ROBERTS BIRDS OF SOUTH AFRICA, McLachlan/Liverside	23.95
FIELD GUIDE TO BIRDS OF SOUTHERN AFRICA, Prozesky	10.00
FIELD GUIDE TO BIRDS OF WEST AFRICA, Serle	16.95
LES OISEAUX DU ZAIRE, Lippens/Wille (French)	100.00
BIRDS OF ZAMBIA, Benson	13.95
GUIDE TO NATIONAL PARKS OF ZAMBIA, Clarke/Loe	9.95

ASIA

LES OISEAUX DE CHINE, MONGOLIE ET CORRE: NON PASSEREAUX, Etchecopar/Hüe (French)	100.00
FIELD GUIDE TO BIRDS OF THE EASTERN HIMALAYAS, Ali	19.50
HONG KONG BIRDS, Herklots	14.00
NEW GUIDE TO BIRDS OF HONG KONG, Webster/Phillips	6.95
BOOK OF INDIAN BIRDS, Ali	12.95
GUIDE TO BIRDS OF THE DELHI AREA, Ganguli	22.50
HANDBOOK OF BIRDS OF INDIA & PAKISTAN, vols 3-10, Ali	ea. 22.95
BIRDS IN JAPAN, Yamashina	33.00
BIRDS OF JAPAN, Kobayashi (Japanese)	37.75
FIELD GUIDE TO JAPANESE LAND BIRDS (Japanese)	3.50
FIELD GUIDE TO JAPANESE WATER BIRDS (Japanese)	3.50
BIRDS OF THE MALAY PENINSULA, Glenister	12.00
*BIRDS OF THE MALAY PENINSULA, VOL 5, CONCLUSION & SURVEY, Medway/Wells	60.00
COMMON BIRDS OF THE MALAY PENINSULA, Tweedie	5.95
BIRDS OF NEPAL WITH REFERENCE TO KASHMIR & SIKKIM, Fleming	19.50
PHILIPPINE BIRDS, du Pont	40.00
FIELD GUIDE TO BIRDS OF SOUTH-EAST ASIA, King	20.00
BIRDS OF SOUTH VIETNAM, Wildash	10.95
BIRDS OF THE SOVIET UNION, Dement'ev et al, 6 vols (Xerox)	set 160.00

LET'S LOOK AT SRI LANKA	4.95
NEW GUIDE TO BIRDS OF TAIWAN, Severinghaus/Blackshaw	6.95
BIRD GUIDE OF THAILAND, Lekagul/Cronin	12.50
AUSTRALASIA	
AUSTRALIAN FLYCATCHERS, Officer	7.95
AUSTRALIAN HONEYEATERS, Officer	7.95
FIELD GUIDE TO AUSTRALIAN BIRDS, NON-PASSERINES, Slater	15.00
FIELD GUIDE TO AUSTRALIAN BIRDS, PASSERINES, Slater	15.00
BIRDS OF FIJI IN COLOUR, Belcher	6.95
AVIFAUNA OF MICRONESIA, ORIGIN, EVOLUTION, DISTRIBUTION, Baker	9.95
BIRDS OF NEW GUINEA & TROPICAL AUSTRALIA, Peckover/Filewood	25.50
GUIDE TO MT. KAINDI, BACKGROUND TO MONTANE NEW GUINEA ECOLOGY, Gressitt/Nadkarni	6.95
UPLAND BIRDS OF NEW GUINEA, Beehler	8.95
NEW GUIDE TO NEW ZEALAND BIRDS, Falla	
SMALL BIRDS OF THE NEW ZEALAND BUSH, Power	4.95
SOUTH PACIFIC BIRDS, Du Pont	33.00
BIRDS OF THE SOUTHWEST PACIFIC, Mayr	6.95
BIRDS OF FRENCH POLYNESIA: TAHITI, Bruner	4.95
BIRDS OF TAHITI, Thibault/Rives	12.95
EUROPE/MIDDLE EAST	
WHERE TO WATCH BIRDS (Gr. Britain), Gooders	5.00
BIRDS OF BRITAIN & EUROPE, Bruun/Singer	8.95
BIRDS OF BRITAIN & EUROPE WITH NO. AFRICA & MIDDLE EAST, Heinzel	11.95
LET'S LOOK AT THE CAMARGUE	4.95
GUIDE TO BIRD-WATCHING IN DENMARK, Sanders/Berg	3.95
WHERE TO WATCH BIRDS IN EUROPE, Gooders	10.00
HANDBOOK OF BIRDS OF EUROPE, MIDDLE EAST & NO. AFRICA: BIRDS OF THE WESTERN PALEARCTIC, vol 1, Cramp et al	65.00
BIRDS OF ISRAEL (Hebrew)	5.95
BIRDS OF LEBANON & THE JORDAN AREA, Benson	15.00
GUIDE TO BIRD-WATCHING IN MALLORCA, Watkinson	3.95
BIRDS OF THE MALTESE ARCHIPELAGO, Bannerman	15.00
BIRDS OF SOUTHERN PORTUGAL, Cary	
GUIDE TO BIRD-WATCHING IN SWEDEN IN SPRING, SUMMER, AUTUMN, Sander/Berg	3.95
CARIBBEAN	
FIELD GUIDE TO BIRDS OF THE BAHAMAS, Brudenell-Bruce	10.95
FINDING BIRDS IN TRINIDAD & TOBAGO, Heintzelman	3.95
GUIDE TO BIRDS OF TRINIDAD & TOBAGO, French	18.50
BIRDS OF THE WEST INDIES, Bond	8.95
MIDDLE AMERICA	
LIFE HISTORIES OF CENTRAL AMERICAN BIRDS, vols 2&3, Skutch	set 50.00
BIRDS OF COSTA RICA, DISTRIBUTION & ECOLOGY, Slud	15.00
BIRDS OF GUATEMALA, Land	12.50
DISTRIBUTIONAL SURVEY OF BIRDS OF HONDURAS, Monroe	17.50
FIELD GUIDE TO BIRDS OF MEXICO, Edwards	10.00
FINDING BIRDS IN MEXICO, Edwards	10.00
FINDING BIRDS IN WESTERN MEXICO, Alden	6.50
FIELD GUIDE TO MEXICAN BIRDS & ADJACENT CENTRAL AMERICA, Peterson	10.95
FIELD GUIDE TO BIRDS OF MEXICO & CENTRAL AMERICA, Davis	6.50
BIRDS OF THE REPUBLIC OF PANAMA, 3 vols, Wetmore	ea. 17.50
FINDING BIRDS IN PANAMA, Edwards	5.50
GUIDE TO BIRDS OF PANAMA, Ridgely	19.00

LAS AVES DE TIKAL, Smithe (Spanish)	12.00
BIRDS OF TIKAL, Smithe	17.00

SOUTH AMERICA

BIRDS OF THE ANTARCTIC & SUBANTARCTIC, Watson	19.95
AVES ARGENTINAS, Norosky (Spanish)	14.95
BIRDS OF CHILE, vol 1, Johnson	26.50
BIRDS OF CHILE SUPPLEMENT, Johnson	11.50
BIRDS OF THE FALKLAND ISLANDS, Wood	22.50
FIELD GUIDE TO BIRDS OF GALAPAGOS, Harris	10.95
BIRDS OF GUYANA, Snyder	7.00
GUIDE TO BIRDS OF PATAGONIA, Reed	2.50
BIRDS OF DEPARTMENT OF LIMA, PERU, Koepke	5.95
LAS AVES SUDAMERICANAS, vol 1, Olrog (Spanish)	25.00
SPECIES OF BIRDS OF SO. AMERICA WITH DISTRIBUTION, de Schauensee	13.50
BIRDS OF ISLA GRANDE, TIERRA DEL FUEGO, Humphrey	9.95
GUIDE TO BIRDS OF VENEZUELA, de Schauensee/Phelps	19.95.....50.00

GENERAL BIRD REFERENCES

DICTIONARY OF AMERICAN BIRD NAMES, Choate	8.95
FAMILIES OF BIRDS, Austin/Singer	1.95
FUNDAMENTALS OF ORNITHOLOGY, Van Tyne/Berger	25.00
LIFE OF BIRDS, Welty	22.95
ORNITHOLOGY IN LABORATORY & FIELD, Pettingill	17.50

SPECIFIC BIRDS

SOUTHERN ALBATROSSES & PETRELS, Harper/Kinsky	8.50
BIRDS OF PARADISE & BOWER BIRDS, Cooper/Forshaw.	150.00
BIRDS OF PREY, Lloyd	1.95
FIELD STUDY OF FALCONIFORMES OF BRITISH COLUMBIA, Beebe	4.95
THE CALIFORNIA CONDOR—1977, N.A.S.	4.95
*CROWS OF THE WORLD, Goodwin	28.50
CURASSOWS & RELATED BIRDS, Delacour/Amadon (Autographed by author)	50.00
DUCKS AT A DISTANCE, Hinds	1.00
DUCKS, GEESE & SWANS OF NORTH AMERICA, Bellrose	15.00
UPLAND GAME OF CALIFORNIA, Mallette	1.00
*THE GANNET, Nelson	25.00
*WILD GEESE, Ogilvie	22.50
HERONS OF THE WORLD, Hancock/Elliott	65.00
*MANUAL OF NEOTROPICAL BIRDS, vol 1, Blake	50.00
LIFE HISTORIES OF NO. AMERICAN BIRDS, 26 vols, Bent	ea. 4.00-7.95
BIRDS OF THE OCEAN, Alexander	6.95
OWLS OF NORTH AMERICA, Eckert	29.95
PARROTS OF THE WORLD, Forshaw/Cooper	30.00
PHEASANTS OF THE WORLD, Delacour (Autographed by author)	40.00
*PIGEONS & DOVES OF THE WORLD, Goodwin	45.00
RAILS OF THE WORLD, Ripley/Lansdowne	100.00
FLIGHT IDENTIFICATION OF EUROPEAN RAPTORS, Porter	18.00
RAPTORS OF CALIFORNIA, Mallette	1.50
GUIDE TO IDENTIFICATION & AGEING OF HOLARCTIC WADERS, Prater et al.	8.95
WATERBIRDS OF CALIFORNIA, Cogswell	5.95
WATERFOWL OF CALIFORNIA, Kozlik	1.50
COLOURED KEY TO WILDFOWL OF THE WORLD, Scott	6.00

CHECKLISTS

INTERNATIONAL

FIELD CHECKLIST OF BIRDS OF COLOMBIA, Hilty	1.75
FIELD LIST OF BIRDS OF SW COLOMBIA & AMAZONIA, von Sneidern	1.50
BIRDS OF WESTERN ANDES RAIN FOREST IN STATES VALLE & CAUCA & DAGUA VALLEY, von Sneidern	1.50
FIELD CHECKLIST OF BIRDS OF COSTA RICA, Steffee	1.50

FIELD CHECKLIST OF BIRDS OF ECUADOR, West	1.50
BIRDS OF LIMONCOCHA, NAPA PROVINCE (Ecuador), Pearson/Tallman	1.25
BIRDS OF ECUADOR & GALAPAGOS ARCHIPELAGO, Butler	5.50
FIELD CHECKLIST OF BIRDS OF GUATEMALA, Steffee	1.25
FIELD CHECKLIST OF BIRDS OF THE GUIANAS, Steffee/Mason	1.25
FIELD CHECKLIST OF BIRDS OF HONG KONG, Steffee	1.50
CHECKLIST OF BIRDS OF IRAN, Scott	1.50
FIELD CHECKLIST OF BIRDS OF KENYA & TANZANIA, Steffee	1.25
TRAVELER'S LIST & CHECKLIST FOR BIRDS OF MEXICO, Wauer/Tucker	1.25
BIRDS OF NORTHEASTERN MEXICO, AND ANNOTATED CHECKLIST, Davis	2.25
DISTRIBUTIONAL CHECKLIST OF BIRDS OF CARIBBEAN COAST OF PANAMA CANAL ZONE, Pujals	1.25
FIELD CHECKLIST OF BIRDS OF PANAMA CANAL ZONE, Eisenmann	1.25
FIELD CHECKLIST, BIRDS OF WESTERN CHIRIQUI HIGHLANDS, PANAMA, Eisenmann	1.25
CHECKLIST OF PERUVIAN BIRDS, Parker	3.75
FIELD CHECKLIST OF BIRDS OF TRINIDAD & TOBAGO, Satterly/ffrench	1.25
CHECKLIST OF BIRDS OF VENEZUELA, Alden	1.50
ANNOTATED CHECKLIST OF BIRDS, MAMMALS, REPTILES & AMPHIBIANS OF VIRGIN IS. & PUERTO-RICO, Philbosian/Yntema	2.00
BTO LIST OF BIRDS OF THE WESTERN PALEARCTIC	1.25
BIRDS OF THE WORLD: A CHECKLIST, Clements	15.00
REFERENCE LIST OF BIRDS OF THE WORLD, Amer. Mus. Nat. Hist.	8.00
CHECKLIST OF BIRDS OF ZAMBIA, Z.O.S.	1.25
NORTH AMERICA	
A.B.A. CHECKLIST, BIRDS OF CONTINENTAL U.S. & CANADA	3.50
CHECKLIST OF ALASKA BIRDS, Gibson .....	.60
FIELD CHECKLIST OF BIRDS OF INTERIOR ALASKA, Kessel .....	.20
BIRDS OF THE CHUGACH NATIONAL FOREST (KENAI PEN.), Isleib .....	.20
BIRDS OF KODIAK NATIONAL WILDLIFE REFUGE, U.S.D.I. ....	.20
FIELD CHECKLIST OF BIRDS OF ARIZONA, Steffee .....	.60
BIRDER'S LIFE LIST & DIARY, Dietert	3.95
BIRDER'S LIFE LIST & DIARY SUPPLEMENT, Dietert	3.95
L.A.A.S. FIELD LIST OF BIRDS OF CALIFORNIA, McCaskie .....	.60
FIELD LIST OF BIRDS OF THE DELAWARE VALLEY REGION, D.V.O.C.	1.00
DAILY FIELD CHECKLIST OF BIRDS OF EASTERN NO. AMERICA .....	.15
CHECKLIST OF BIRDS—EVERGLADES NATIONAL PARK, Ogden .....	.60
FIELD CHECKLIST OF BIRDS OF HAWAII. ....	.20
N.M.S. FIELD LIST OF BIRDS OF NEVADA, Lawson .....	.60
LINNAEAN FIELD CARD, NEW YORK CITY REGION. ....	.20
COMBINATION LIST & CHECKLIST FOR BIRDS OF NO. AMERICA, Tucker	10.00
TRAVELER'S LIST & CHECKLIST FOR BIRDS OF NO. AMERICA, Tucker/Wauer .....	.60
POCKET FIELD CHECKLIST FOR BIRDS OF WESTERN NO. AMERICA .....	.15

OTHER GUIDE BOOKS

FAUNA

FIELD GUIDE TO ANIMAL TRACKS, Murie	5.95
*FIELD GUIDE TO BUTTERFLIES (Eastern US), Klots	

FIELD GUIDE TO BUTTERFLIES OF AFRICA, Williams.....	8.95
FIELD GUIDE TO BUTTERFLIES OF BRITAIN & EUROPE, Higgins/Riley.....	8.95
BUTTERFLIES OF RHODESIA, Cooper.....	5.95
BUTTERFLIES OF SOUTHERN CALIFORNIA, Emmel.....	4.50.....10.00
FIELD GUIDE TO INSECTS (U.S.), Borror/White.....	5.95
FIELD GUIDE TO LARGER MAMMALS OF AFRICA, Dorst/Dandelot.....	8.50
FURBEARERS OF CALIFORNIA.....	1.00
GUIDE TO MEXICAN MAMMALS & REPTILES, Wright/Pelham.....	2.95
GUIDE TO NATIVE LAND MAMMALS OF NE NEW GUINEA.....	3.00
WILD MAMMALS OF RHODESIA, Kenmuir/Williams.....	5.95
FIELD GUIDE TO MAMMALS (U.S. & Canada), Burt/Grossenheider.....	5.95
FIELD GUIDE TO WESTERN REPTILES & AMPHIBIANS, Stebbins.....	6.95
REPTILES OF THE WORLD, Gans.....	1.95
DESERT WILDLIFE, Jaeger.....	4.95
FLORA	
AUDUBON SOC. FIELD GUIDE TO NO. AMERICAN WILDFLOWERS, EASTERN REG.....	9.95
AUDUBON SOC. FIELD GUIDE TO NO. AMERICAN WILDFLOWERS, WESTERN REG.....	9.95
WILDFLOWERS OF ALASKA, Heller.....	7.50
FIELD GUIDE TO COMMON & INTERESTING PLANTS OF BAJA CALIF., Coyle/Roberts.....	8.50
KEY TO COASTAL & CHAPARRAL FLOWERING PLANTS OF SO. CALIF., Collins.....	4.95
CALIFORNIA DESERT WILDFLOWERS, Munz.....	4.95
CALIFORNIA MOUNTAIN WILDFLOWERS, Munz.....	4.95
CALIF. NATIVE PLANTS DESIRABLE FOR GARDENS & BIRD SANCTUARIES, T.P.F.....	25
HANDBOOK OF WILDFLOWERS, WEEDS, WILDLIFE & WEATHER OF PALOS VERDES PENINSULA, Gales.....	4.50
SHORE WILDFLOWERS OF CALIFORNIA, OREGON & WASHINGTON, Munz.....	4.95
WILDFLOWERS 3, THE SIERRA NEVADA, Horn.....	7.95
CALIFORNIA SPRING WILDFLOWERS, Munz.....	4.95
DESERT WILDFLOWERS, Jaeger.....	3.95
COLORFUL DESERT WILDFLOWERS, Ward.....	4.95
FIELD GUIDE TO PACIFIC STATES WILDFLOWERS, Niehaus/Ripper.....	10.95
FLOWERS OF SOUTHWEST MESAS, Patraw.....	2.95
FLOWERS OF SOUTHWEST MOUNTAINS, Arnberger.....	2.95
*WILDFLOWERS OF THE U.S.: CENTRAL & MOUNTAIN PLAINS, 3 vols, Rickett.....	74.50
*WILDFLOWERS OF THE U.S.: NORTHWEST, 2 vols, Rickett.....	69.50
*WILDFLOWERS OF THE U.S.: SOUTHWEST, 3 vols, Rickett.....	72.00
*WILDFLOWERS OF THE U.S.: TEXAS, 2 vols, Rickett.....	52.00
TREES OF NORTH AMERICA, Brockman.....	4.95
PACIFIC COAST TREE FINDER, Watts.....	1.00
KEY TO TREES & SHRUBS OF DESERTS OF SO. CALIF., Collins.....	4.95
KEY TO TREES & WILDFLOWERS OF MOUNTAINS OF SO. CALIF., Collins.....	7.95
DISCOVERING SIERRA TREES, Arno.....	1.95
MISCELLANEOUS	
CALIFORNIA HISTORICAL LANDMARKS.....	1.50
GUIDE TO NO. AMERICAN BIRD CLUBS, Rickert.....	15.00
FIELD GUIDE TO ROCKS & MINERALS, Pough.....	5.95
FIELD GUIDE TO SHELLS OF THE PACIFIC COAST, INC. HAWAII & GULF OF CALIFORNIA, Morris.....	4.95
FIELD GUIDE TO STARS & PLANETS, Menzel.....	5.95

WESTERN OUTDOOR ENVIRONMENTAL GUIDES (Children's).....	ea. 1.50
YOSEMITE ROAD GUIDE.....	1.50

RECORDS

BIRDS OF THE AFRICAN RAIN FOREST, Keith.....	14.00
FIELD GUIDE TO BIRD SONGS OF EASTERN & CENTRAL NO. AMERICA, Peterson, Records/Cassettes.....	ea. 19.95
SONGS OF EASTERN BIRDS, Borror.....	3.50
SOUNDS OF FLORIDA'S BIRDS, Hardy.....	6.50
VOICES OF NEOTROPICAL BIRDS, Hardy.....	6.50
THRUSHES, WRENS & MOCKINGBIRDS, Borror.....	5.95
WARBLERS, Borror/Gunn.....	7.95
FIELD GUIDE TO WESTERN BIRD SONGS, Peterson, Records/Cassettes.....	21.95/23.95
SONGS OF WESTERN BIRDS, Borror.....	4.95
WRENS, Hardy.....	6.50

FIELD AIDS

AUDUBON BIRD CALL.....	3.25
INDEX TABS: BIRDS OF NO. AMERICA, PETERSON EASTERN & WESTERN GUIDES.....	ea. 1.25
L.A.A.S. CAR DECAL.....	3/1.50......65
L.A.A.S. CLOTH PATCH.....	3/3.50.....1.25
L.A.A.S. LAPEL PIN.....	2.50
PELICAN POUCH CARRYING CASE.....	9.95
PELICAN POUCH SHOULDER STRAP.....	1.50
PLASTIC JACKET: BIRDS OF NO. AMERICA, PETERSON GUIDES.....	ea. 2.25
POCKET GUIDE TO MAMMAL TRACKS.....	3/0.25......10

BIRD FEEDERS

HUMMYBIRD BAR.....	4.95
ORIOLE BAR.....	6.95
PARTS FOR HUMMYBIRD & ORIOLE BARS.....	15-3.00
CYLINDER SEED FEEDER, 16".....	12.95
SEED SAVER FEEDER.....	9.95
SUET FEEDER.....	3.00

BINOCULARS & TELESCOPES BUSHNELL/BAUSCH & LOMB

20% discount when ordered through us.

We also carry stationery featuring distinctive nature prints, on fine paper.

LOS ANGELES AUDUBON MEMBERS and WESTERN Tanager SUBSCRIBERS receive a 10% DISCOUNT on purchases of \$10.00 OR MORE.

WE HONOR MAIL AND PHONE ORDERS

Because of postage uncertainty, WE PREFER THAT YOU LET US BILL YOU. Otherwise, add 6% sales tax (Calif. only) and \$1.00 minimum postage & handling. You will be advised if additional charges are due. MAKE CHECK PAYABLE TO LOS ANGELES AUDUBON SOCIETY.

Prices subject to change without notice.

Merchandise not returnable without authorization.

We continually add new selections to our stock. Please inquire for any titles not shown on this list.

All profits used to further the aims of the Los Angeles Audubon Society

Audubon House is open Tuesday through Saturday 10-3 pm.