

WESTERN TANAGER

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The Discovery of the Birds of the West

by Barry Clark



To the legions of latter-day birders, caught up in the challenge of contributing new species to their personal state or AOU lists, it may come as something of a surprise to realize that little more than a century ago much of our land was wilderness, its physical features uncharted, its avifauna largely unknown to science. From our present vantage point we may look back with a measure of amazement to those bygone days, reliving the exploits of that earnest band of early ornithologists who trudged the western birding trails before us, opening the eyes of a continent to a new world of wonder.

Though the full story of western ornithology has yet to be set to paper, from the scattered fragments we may at least make out the broad outlines. The subject itself is vast and richly variegated, and to place it in its proper perspective we must delve deep into the past—for the roots of our tale reach back far beyond our times, to the earliest urgings of mankind.

Birds, it appears, have always been a source of wonderment to men: Witness the fact that the Aves remain today the most thoroughly studied of any class in the Animal Kingdom. At the outset, no doubt, our interest in birds was bound up in the struggle for survival; but it's unlikely that even our most primitive forebears could have failed to appreciate the aesthetic and philosophical implications of such dazzling and ingratiating products of creation.

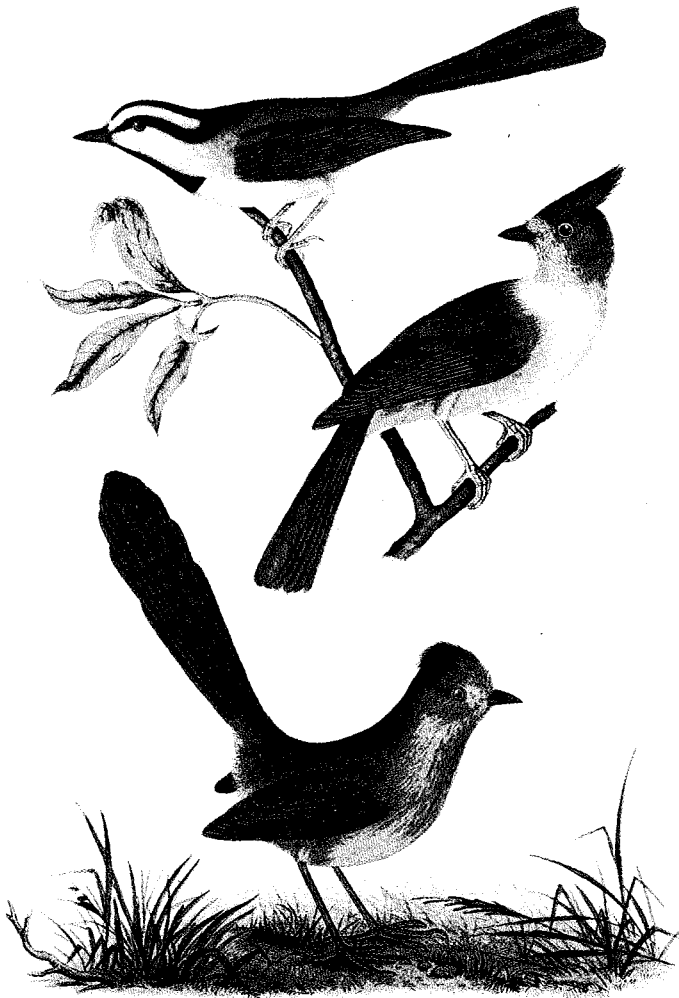
Around 9000 B.C. the earliest known representations of birds were painted on the walls of the caves in southern France by wandering Cro-Magnon hunters—the presumed progenitors of the Eskimos—before the tribes moved north with the ice. The Old World changed rapidly then, and by the end of the Egyptian dynastic age, around 600 B.C., some 90 identifiable species of birds had been immortalized on papyrus or stone—many of them still at home today along the lower Nile. In the 4th century B.C., Aristotle listed 170 species, including the widely-distributed Black-billed



Magpie—among the first of our western birds to turn up in the historical record. A staunch advocate of the exact study of nature and an outspoken opponent of the Platonic precept that ideals alone are real, Aristotle would guide the way for hard-headed workers in the natural sciences for two millennia to come.

Science in the New World, characteristically, lagged behind that of the Old. But the Hopewellian Indians, who dwelled by the rivers of the American midwest around

Continued Overleaf



The first illustration of the Mountain Chickadee, Plain Titmouse, and Wrentit, published in Philadelphia in 1849. The birds were discovered by William Gambel in California six years before.

Aristotle's time, took the trouble to record the birds they knew on the bowls of ceremonial pipes, preserving for posterity the likeness of the Crow, the Kestrel, the Cardinal, the Carolina Parakeet, and the Ivory-billed Woodpecker. While the Amerindians undoubtedly knew much of the ways of the wild, to the frustration of future scholars their history was entirely oral. As a consequence, no entries were added in the American ornithological record for over a thousand years.

Soon after Aristotle, Europe settled into its long Sleep of Reason, when Platonism and piety together held sway, and natural history, in accordance with the mood of the times, wallowed in anecdote. The bestiaries of the day, nine parts fancy to one part science, were contrived to awe the credulous with marvellous exhibits, testament to the handiwork of the Creator. Yet, somehow, by 700 A.D., sixteen *bona fide* birds on the British list had been logged by the Anglo-Saxons; and before three centuries had passed the number had soared to 75. In those days the Norsemen were poking around the northeastern shores of America, and their ledgers allude to a few native species, including partridges, Turkeys, and eiders.

In southern Europe, under Muslim influence, Aristotle was in time disinterred, and the love of learning revived, provoking the Holy Roman Emperor, Frederick II, architect of the Enlightenment, to produce, in the 13th century, his celebrated tome on falconry—the first modern textbook of ornithology. "Our interest in this book," he said, "is to show things as they are."

Thereafter, the pace of natural science picked up, as the spirit of the Renaissance swept across the continent. The next two centuries were to see the rise of universities, the invention of movable type, and the "discovery" of the New World.

On his maiden voyage to America, in October 1492, Christopher Columbus noted flocks of southbound songbirds, which led him at last to safe harbor in the Bahamas. Among the items of booty he brought back to Barcelona was a live Cuban Parrot, while subsequent missions sailed home with such treasures as the Turkey and Muscovy Duck, plus enraptured reports of Red-tailed Hawks, nighthawks, and hummingbirds. These last, in particular, created something of a commotion, for the creatures appeared to partake in equal parts of the nature of birds and insects. Soon a flotilla of fabulous argosies were scouring the ends of the earth in quest of curiosities to stock the menageries of the wealthy. Natural scientists had found a lavish new source of patronage.

In England, the new Age of Science was marked by the appearance in 1544 of the first printed bird book, authored by William Turner, the founding father of British ornithology. Singlehandedly, Turner contributed nearly half of the 30 new birds added to the British list during his century, pushing the total to 150 species by the year 1600. It would be over a hundred years before America could hope to catch up.

By now the Spanish conquest of the Americas was energetically underway. Significant among the surprises awaiting Cortés in Tenochtitlán were the sumptuous zoological gardens maintained by Moctezuma. But no trained naturalist was counted among the cohorts of Cortés, and the natural wealth of the Aztecs was to languish for fifty years—until 1571—when Francisco Hernández, physician to Philip II, disembarked on the shores of New Spain. From the remnant of the Aztec collections, Hernández wrote descriptions in Latin of some 230 new birds, including such North American species as the Short-eared Owl, Black-crowned Night Heron, Ruby-crowned Kinglet, Northern Mockingbird, Hepatic Tanager, and Cedar Waxwing. Unfortunately, the Spanish crown's aversion to science soon sealed off the frontier, and nothing more, ornithologically-speaking, was to be heard from Mexico until after the Revolution, 250 years hence.

To cope with the confusion of specimens now pouring into Europe, a sensible system of classification was urgently required. There were many attempts to devise such a scheme, but progress would await the work of the 17th century Englishmen, John Ray and Francis Willughby, who were the first to arrange their species in morphological groups. The discoveries of Isaac Newton and the empiricism of Bacon and Locke had begun to bolster confidence in the powers of human reason; and in the 1670's, armed with that

new innovation, the Galilean telescope, Ray and Willughby set off on an extended tour of the continent, to tackle the problems of field identification head on. Throughout, they supported their observations with accurate notes plus carefully catalogued specimens. Ray, himself (considered by James Fisher "the greatest field observer who ever lived"), contributed no less than 33 new species to the list of British birds, boosting the total by 1700 to just over 200.

Few contributions were made to the American list during the 17th century, for the settlers at Jamestown and Plymouth were evidently engaged with more pressing concerns. While Ray and Willughby were separating the Coal Tit from the Marsh Tit, John Clayton, "the best bird observer in the colonies," was lumping the Mockingbird and the Brown Thrasher, while confusing the Cardinal and the Summer Tanager. In 1688 Clayton listed a frugal total of 45 species for the whole of British America.

All that was to change, however, with the advent of Mark Catesby—the first of the many inspired young naturalists who, over the course of the next two centuries, were to carry forward the ornithological exploration of America. In 1712, at the age of 29, Catesby landed in Virginia, and by the end of his 12-year sojourn he had collected and painted 109 species (about 25% of the birds of eastern America), posing his subjects on the plates in ecological associations. Though he was hopelessly bewildered by the Wood Warblers (calling one a creeper, another a titmouse, and a third a "finch-creeper"), Catesby can claim the credit for separating the Pileated from the Ivory-billed Woodpecker, and for recognizing such overlooked species as the Downy Woodpecker, Blue Grosbeak, and White-breasted Nuthatch. His monumental *Natural History of Carolina, Florida, and the Bahama Islands* (1746) was the first major opus devoted to American birds, a model for many such works to follow.

Unquestionably, however, the landmark event of Catesby's century was the publication, in 1758, of Carl Linnaeus' revolutionary system of binomial classification. Conceived by the Swedish botanist when he was 27, the system marked the start of the "scientific" ordering of living things, setting in motion a century of phenomenal progress—the golden age of descriptive natural history. In his seminal work, Linnaeus named a total of 790 species of birds—less than 10% of the current worldwide total. In the century to follow that figure was to increase almost ten-fold.

In the mid-18th century, while Europe was discovering Gainsborough and Haydn, America west of the Mississippi was little more than a blank spot on the map, a true *terra incognita*. The southeast belonged to the Spaniards, France claimed the entire drainage of the Mississippi, and the whole of the southwest was an integral part of New Spain. It was not until 1769 that Portolá established the west's first permanent settlement, on San Diego Bay. But even in California the pace of colonization was slow; and at the time virtually nothing was known of the wild lands further north. Though the region bordering the coast was nominally claimed by the British, no one had any notion of what creatures might lurk there.



William Anderson was typical of the young surgeon-naturalists who explored the American west. In 1858, while stationed at Fort Union, New Mexico, he discovered Virginia's Warbler, named for his wife.

In 1741, the German naturalist, Georg Wilhelm Steller, sailing with Vitus Bering on an expedition for the Czar, had touched at Alaska long enough to discover the Steller's Jay, the Steller's Eider, and the now-extinct Spectacled Cormorant. Though it would be 30 years before the west would see another such expedition, the exploration of the coast had, in effect, begun. In 1759 the skins of a California Condor and a California Quail found their way somehow to London, where they attracted polite attention at the opening of the British Museum.

Since some 20% of the birds of the west are shared with the Old World, it was inevitable that many of our native species would be discovered on foreign soil. In 1768 another German naturalist, Peter Simon Pallas, while exploring the Siberian Arctic, gathered up several typical western species, including Cassin's and Rhino Auklets, Tufted Puffin, Hermit Thrush, Golden-crowned Sparrow, and Gray-crowned Rosy Finch. Captain James Cook followed soon after, in search of the northwest passage. In 1776, after patrolling the California coast, Cook put in at the tip of Vancouver Island, where William Anderson, the ship's physician, collected the first Rufous Hummingbird, Red-shafted Flicker, Red-breasted Sapsucker, and Oregon Junco. Then, in Alaska, Anderson augmented his list with the type specimens of the Boreal Chickadee, Wilson's Warbler, Lapland Longspur, Varied Thrush, and the



Spencer Fullerton Baird in 1887. From his post at the Smithsonian he directed the ornithological exploration of the west, personally describing many new species and subspecies.

Black-backed Three-toed Woodpecker.

While the eastern states of America were struggling with the British, in England Gilbert White was at work on his *Natural History of Selborne*, probably the most popular bird book of all time. White's fusion of poetics and science was to inspire such 19th century writers as Thoreau, Burroughs, and Muir, while his reliance on songs and calls for bird identification would point the way for generations of field observers.

William Bartram, the first native-born American ornithologist, shared a close kinship with White. In the late 1700's, Bartram began the systematic study of the life histories of American birds, a pursuit that was to encourage the emulation of his contemporaries, Thomas Nuttall and Alexander Wilson.

Meanwhile, at Monterey in 1786, the French explorer La Pérouse collected another California Quail, plus the first California Thrasher. Six years later, also at Monterey, Archibald Menzies, a young Scottish surgeon aboard Captain Vancouver's *Discovery*, secured the type specimens of the quail and the condor—the first species to be named scientifically from California. In Monterey, now the capital of the territory, Menzies was made comfortable by his Spanish hosts, dining on silver service while collecting birds in the field.

By the dawn of the 19th century, the British had named all their regularly-occurring birds, and were cleaning up the last sticky problems in species recognition. At the same time, all but a few of the birds of eastern North America were known—and it remained to uncover the 135-odd species which waited beyond the Great River. Independence for the Thirteen Colonies had fired expansionist ambitions, and American statesmen had begun to promote the notion of "manifest destiny"—the inalienable right of the young republic to reach from sea to sea. America thus stood poised on the brink, prepared to begin the conquest of the frontier.

In 1803 Thomas Jefferson organized the Lewis and Clark Expedition to explore the overland route to the mouth of the Columbia River. The Louisiana Purchase in that same year had doubled the size of the nation, extending the boundaries from the Mississippi to the Rocky Mountains, and the U.S. had laid a claim to Oregon. Though no naturalist accompanied the party, Lewis and Clark came back with descriptions or specimens of several new species of birds, including the Whistling Swan, the Mountain Quail, the Sage Grouse, the Sharp-tailed Grouse, and the Western Tanager—plus the Lewis' Woodpecker (which they took for a kind of crow) and the Clark's Nutcracker (which they mistook for a woodpecker). The last three species were described in 1808 by Alexander Wilson, "the father of American ornithology," in his 9-volume treatise on American birds—a work unequalled in Europe at the time. The ambitious work treated some 262 North American species, 39 of them new to science.

The year 1819 found 32 year-old Thomas Say headed west with the Yellowstone Party under Major Stephen Long, churning down the Ohio in a sternwheeler disguised as a steam-snorting dragon—to impress and warn away potentially hostile Indians. Leaving the river, the group struck out across country to the eastern slope of the Rockies, collecting along the way a veritable bonanza of birds. In Kansas, Say found the Lark Sparrow, in Nebraska the Long-billed Dowitcher, and in western Colorado he secured the first specimens of Say's Phoebe, Rock Wren, House Finch, Lazuli Bunting, Cliff Swallow, Band-tailed Pigeon, Blue Grouse, Lesser Goldfinch, Orange-crowned Warbler, Western Kingbird, Scissor-tailed Flycatcher, and Burrowing Owl. A Mule Deer shot in New Mexico also proved to be new to science; Say hastily took the requisite notes, made a quick sketch, and then he and his companions consumed it.

By the 1820's more than 80 additional western birds had been duly discovered and named—most of them from Mexico, where, since the revolution of 1821, conditions were more amenable to civilized nature study. The year after Independence found Englishman William Bullock in the new republic; after a single year of collecting he dispatched to London a total of 76 new species, including such familiar western birds as the Acorn Woodpecker, Black-headed Grosbeak, Violet-green Swallow, Painted Redstart, Bullock's Oriole, Hooded Oriole, Cassin's Kingbird, Canyon Wren, Dipper, Black Phoebe, and Brown Towhee. In 1832 the German zoologist, Wagler, also working in Mexico, was to add several more, among them the Ladder-backed Woodpecker and Brewer's Blackbird.

Back in California, in 1822, the HMS *Blossom*, with surgeon-naturalist Alexander Collie aboard, put in at Monterey to collect the first Pygmy Nuthatch, plus the first California Scrub Jay. Six years later, the 22 year-old Italian, Paolo Botta, engaged in a two year tour of the territory, secured the first known specimens of two more of our typical birds, the Anna's Hummingbird and the Roadrunner.

Ornithology in the Far West was to progress relatively slowly, however, until 1834, when John Kirk Townsend (age 25) and Thomas Nuttall (48)—author of the first American handbook of birds—undertook a cross-country journey to Oregon, collecting en route a record number of western species. Among the new birds they found were the Sage Thrasher, the Common Bushtit, Chestnut-backed Chickadee, Vaux's Swift, Hermit Warbler, MacGillivray's Warbler, Audubon's Warbler, Black-throated Gray Warbler, Townsend's Warbler, Green-tailed Towhee, Townsend's Solitaire, Mountain Plover, and Chestnut-collared Longspur. An owl would have been on the list, but Nuttall is said to have eaten it before Townsend could prepare the skin. On his way home by ship in 1836, Nuttall stopped off in Santa Barbara, then a pueblo of 700, to discover two more new birds, the Yellow-billed Magpie and the Tricolored Blackbird.

But he wasn't the only birder around; for by now, traffic in California was picking up: The year before, an unknown ship's officer had paused in the territory to collect the first Cactus Wren; and two years later the German explorer, Ferdinand Deppe, on a visit to Monterey, found the first Ferruginous Hawk.

Altogether, Townsend and Nuttall brought back the skins of 25 species previously unknown to science—one of history's richest collections—which they sold for expenses to Audubon, to include among the 506 species in his *Birds of North America* (1838). Despondent after his return to the east, Townsend gave up birding, took up the profession of dentistry, and died at an early age.

Audubon, himself, had a passion for procuring new species—though by the 1830's these were harder and harder to come by. Several of his most stunning "discoveries" (the Townsend's Bunting, the Black-headed Goldfinch, the Small-headed Flycatcher, Cuvier's Regulus, the Carbonated Warbler, and the Bematulated Duck) were, unfortunately, never to be witnessed by anyone but himself. However, on an expedition to Kansas in 1843, Audubon succeeded in bagging the first Bell's Vireo, Harris' Sparrow, Sprague's Pipit, and Baird's Sparrow—all named for his friends—plus the Western Meadowlark, which he told from the Eastern by its song.

In 1841, at the urging of Nuttall, the 22 year-old physician William Gambel headed west, walking all the way to California via the Santa Fe Trail, the Route 66 of the day. During seven years' residence in the territory (then in the throes of revolt against the Mexican government) he produced the first detailed study of the avifauna of California—an annotated list of 176 species that included such overlooked birds as the Nuttall's Woodpecker, Plain Titmouse, Mountain Chickadee, and Wrentit. His description of the latter is likely to ring true to anyone who

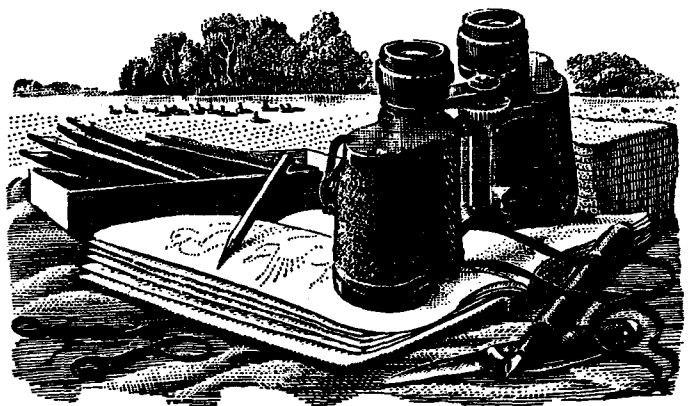
has pursued it:

For several months before discovering the bird, I chased among the fields of dead mustard stalks, the weedy margins of streams, low thickets, and bushy places, a continued, loud, crepitan, grating scold, which I took for that of some species of wren, but at last found to proceed this Wren-Tit, if it might be so called.

In Gambel's day Condors still assembled with gulls on the California beaches, Ospreys were "common" along the coast, and only "a few" Mockingbirds could be found around the towns. But apart from these notable changes, most of his observations would apply without revision to the birds of the region today. Gambel was an astute and enthusiastic observer, but unfortunately, in 1849 he succumbed to an attack of typhoid fever while crossing the Sierra.

In California, however, the boom was now on, and a host of collectors were soon searching for birds in the state. In 1848, in the Colorado Desert, Major James Abert stumbled upon his towhee, and the year of Gambel's death, young William Hutton, the first of an illustrious line of San Diego birders, found the vireo that bears his name in the oaks outside Monterey. Elsewhere in the state, the 30 year-old physician Adolphus Heermann collected the first Rufous-crowned Sparrow, plus the first U.S. records of the Black-chinned Hummingbird and the Canyon Wren. Then, in 1850, John Bell, an old friend of Audubon's, while searching for gold in the west, was rewarded with the discovery of five new birds: the Sage Sparrow, Lawrence's Goldfinch, White-headed Woodpecker, and Williamson's Sapsucker.

The late 1840's saw the successful conclusion of the Mexican War, and the consolidation of United States territory—with the annexation of Washington-Oregon plus the whole of the great southwest. Suddenly there was talk of transcontinental railroads—and to that end a series of surveys were mounted, on a monumental scale. Spencer Fullerton Baird, at 27 the first Secretary of the Smithsonian, was assigned the task of collecting biological data in conjunction with the surveys; and to do the job he recruited a brilliant corps of young naturalists, most of whom were commissioned as surgeons in the service of the Army. Among this group were John Cassin, James Cooper, Charles Bendire, John Xantus, John McCown, George Lawrence, and Elliot Coues—all of whose names would in



Dan Leavitt



The White-headed Woodpecker, discovered by John Graham Bell in central California in 1850.

time be immortalized in the nomenclature of western ornithology.

With only 3,000 soldiers and 30,000 inhospitable Apaches in the lands of the southwest, the naturalists faced a tough challenge—for frequently, while they were watching birds, the Indians were watching them. Braving regular attacks—which took the lives of several of their number—the men managed, nonetheless, to mop up most of the western birds still awaiting discovery, making the decade of the 50's (when 42 new species were added to the list) one of the most active in the annals of American ornithology.

James Cooper, in 1860 assigned to duty at Fort Mohave, near present-day Needles, listed 242 species for Southern California, including the Lucy's Warbler, a new bird he found near the Colorado River. With satisfaction Cooper noted that the birds of California's chaparral and desert communities beautifully fulfilled the expectations of the theory of evolution, advanced by Darwin a mere two years before.

Overnight, Darwin's vision had revolutionized American ornithology. Previously, the prevailing notion had been that species were conceived *in situ*, according to some whim of the Creator. But now, a century after Linnaeus, a unifying schema had emerged—and all that seemed to be necessary

to prove the theory was to assemble sufficient evidence from the field. This the railroad surveys supplied in abundance, in the process providing base-line data on the flora and fauna of the west.

In Arizona, in 1854, S.W. Woodhouse turned up the first Cassin's Finch, plus the first White-throated Swift; and in the same year the flamboyant John Xantus, stationed at Fort Tejon (north of Gorman, California) found the first Hammond's Flycatcher and Spotted Owl. Then, in 1865, on his way to his post at Fort Whipple, north of present-day Phoenix, 23 year-old Elliot Coues collected the type specimen of the Grace's Warbler. Seven years later he was to publish his *Key to the North American Birds*, even today considered by many to be the finest treatise yet written on the subject of American birds.

The outbreak of Civil War, in 1861, upset the railroad surveys, but by then there were relatively few new birds left to be found in the west; and those that did remain (a group of about a dozen species) were either highly local in distribution (the White-winged Junco, the Black Rosy Finch), or else confined to the no-man's-land of southeast Arizona, ruled by Cochise and Geronimo. With the demise of Cochise in 1874, birding in southeast Arizona became somewhat safer, and a number of California ornithologists, notably Henry Henshaw, made a mecca of the area. Here was collected the first Rufous-winged Sparrow (1873), plus the first Arizona Woodpecker (1886), as well as the first U.S. specimens of the Sulphur-bellied Flycatcher, Broad-billed Hummingbird, Lucifer Hummingbird, Rivoli's Hummingbird, Red-faced Warbler, and Olive Warbler (all in 1874). The 80's added the first U.S. records of the Beardless Flycatcher (1882), Coppery-tailed Trogon (1885), and Rose-throated Becard (1888), followed in 1900 by the first Thick-billed Parrot. In addition, the last decades of the century saw a number of taxonomic problems cleared up. In 1873 Henshaw proved that the previously identified "Williamson's Woodpecker" and the so-called "Black-bellied Woodpecker" were in fact male and female of the Williamson's Sapsucker; and in Marin County, in 1877, Charles Allen, a lumberyard guard, pointed out the distinction between the Allen's and Rufous Hummingbirds.

By 1900 the west had surrendered its most spectacular secrets. The list of American birds stood at 729 species, and the arduous task of inventorying was now all but done. The Arizona Woodpecker, found in the Santa Rita Mountains in 1886, was, by present-day reckoning, the continent's last new bird.

While it is probably the secret dream of every serious birder to stumble upon a species that proves to be new to science, the chances of such a discovery, in North America at least, are vanishingly remote. There are, of course, a few places left in the world where the odds are a little bit better. Between 1970 and 1976 at least 25 new species turned up, though most were denizens of remote mountain ranges or steamy tropical jungles.

But even if every last one of our native birds has by now been logged and classified, exotics continue to appear on the North American list at the rate of a couple per year—vagrants from outside our borders, or species expanding their ranges. In the past few years the Berylline

Hummingbird, the Eared Trogon, the Aztec Thrush, the Wood Warbler, and the Variegated Flycatcher have all slipped under the fence—and who knows *what* may follow?

The invention of prism binoculars in 1859 provided a powerful new tool for the field observer—and by the turn of the century the descriptive phase of American ornithology had essentially come to an end. Now the challenging task of *synthesis* could begin—as a new generation of skilled observers took to the field to perfect the techniques of identification, and to probe the mysteries of avian ecology, ethology, and migration. Throughout the long and colorful history of ornithology, amateurs have played a key role—and their role remains today as important as ever in the past. For in the study of natural history the conquest of one frontier only presents another—and there is no end yet in sight to the grand adventure of discovery. 🐦

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Francis Lee Jaques



Roger Tory Peterson

The Roadrunner was first collected near San Diego in 1828 by the Italian naturalist-archaeologist Paolo Botta.

Condor Action

Congress last month approved an all-out program intended to insure the survival of the California Condor. The plan calls for expanded research, habitat protection, captive propagation, and reinstatement of captive-bred birds to the wild.

Research will be directed toward learning more about the seasonal distribution of the birds, their daily foraging range, and the degree to which their food has been contaminated by pesticides (possibly the major factor in their decline). The propagation program will begin as early as next fall, when nine immatures or non-breeding adults will be taken from the present population. The long-term goal is to maintain as many as 20 captive breeding pairs, whose offspring will be returned to the wild over the next 40 years.

Efforts will also be made to identify suitable habitat for the birds and to preserve it through purchase or special agreements.

Funding for this major undertaking will come from the Dept. of Fish and Wildlife and conservationist contributions. LAAS in the past has been an important supporter of the Condor protection program, and this year contributed another \$2500 from membership donations. Our continued support will be needed to insure that the remaining Condor habitat is preserved.

Convergence Quiz

There are no *right or wrong* answers to last month's quiz. What follows is a subjective assessment of the ecological and morphological characters shared by the hawks and the owls:

- 1-C Medium sized, boreal, predatory on birds.
- 2-F Small, colorful, insectivorous, sometimes urban.
- 3-I Large, boreal, sometimes white.
- 4-G Medium sized, open country, low harrier flight.
- 5-E Small, arboreal, predatory on birds.
- 6-H Large, specialized habitat, omnivorous.
- 7-B Large, widespread and adaptable, predatory on rodents.
- 9-A Largest, boreal, "invasion" species, predatory on rodents.
- 9-D Large, western U.S., predatory on rodents.

Jean Brandt

Birding at Lake Havasu

Sabine's Gull? Leach's Storm Petrel? Three species of jaegers? *Pelagic* birding in the desert? YES! The Colorado River has been dammed in several places, creating a chain of large lakes, among them 46 mile-long, 3 mile-wide Lake Havasu, a 25,000 acre body of water that sprawls behind Parker Dam. Only recently discovered by birders (most of the records date from the fall of 1977), the area has won renown as a magnet for pelagic vagrants.

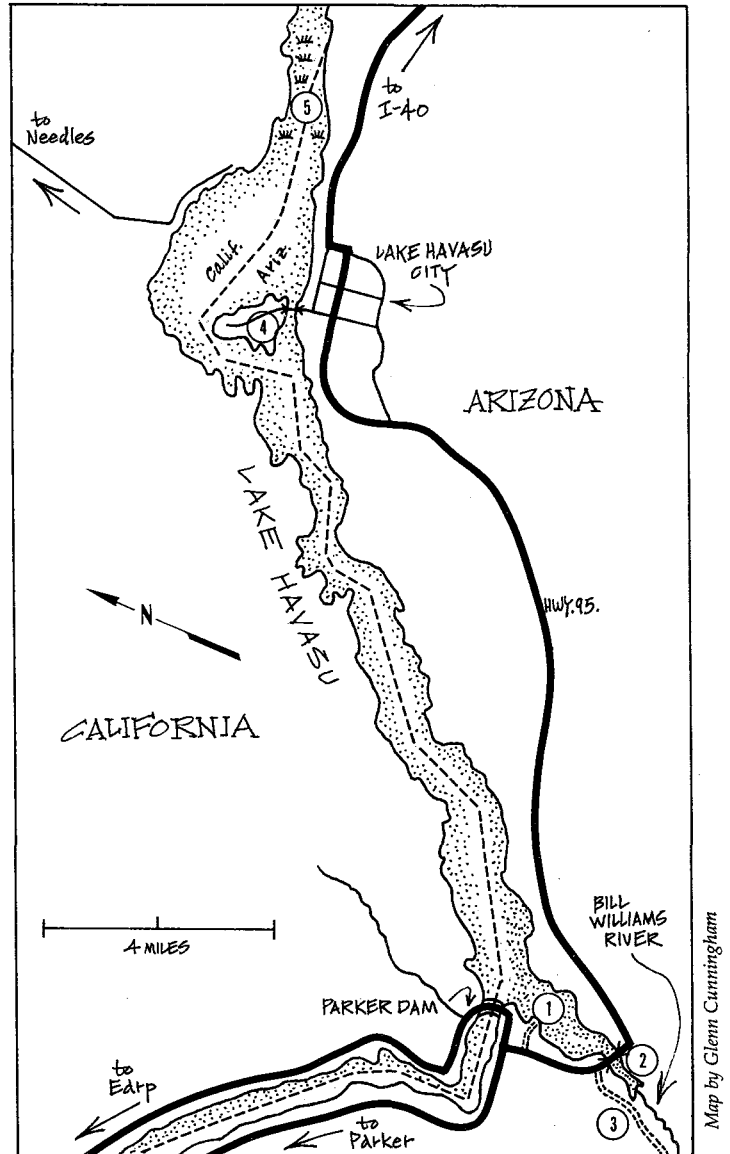
Proceeding north from the Colorado (see the March 1979 *Western Tanager*), cross over Parker Dam into Arizona, and continue about 2 miles to **Havasus Springs Resort (1)**, where you may rent a boat to explore the delta of the Bill Williams River. A trip in late fall and winter should produce rafts of ducks, which at mid-day fly onto the lake from the river below the dam. Loons are also frequently found in this season, with a chance for the rare Arctic and the accidental Red-throated.

From the **bridge** over the delta (2), large numbers of Canada Geese may be seen in winter, in addition to numerous waterfowl. Sora and Virginia Rails lurk in the rushes, and the mudflats host wintering Least Sandpipers and Long-billed Dowitchers. During spring and fall migration, shorebirds are abundant. In winter, watch overhead for Bald Eagles—uncommon, but of regular occurrence.

The most extensive remaining stand of **riparian woodland** along the Colorado may be seen from a dirt road south of the bridge and parallel to the Bill Williams River (3). Here you may still get the feeling of the way the river was in days gone by, before the agriculture-and-recreation boom.

To look for pelagics on the lake, follow Arizona State Hwy. 95 north to Lake Havasu City, and proceed to the **Havasus Marina (4)**. Here, boats are available for rent—indispensable for viewing pelagics. The prices are steep (\$80 per half day for a fast boat, \$20 per half day for a putt-putt), but in the fall especially, the quality of the birding may more than compensate for the cost. After renting the boat, proceed under London Bride (!) into the main body of the lake. In the fall of 1977, several Parasitic, 2 Pomarine, and 3 Long-tailed Jaegers were sighted here, plus an unbelievable white-rumped petrel, thought to be a Leach's. The same season one Brown and one Blue-footed Booby were found. In summer, Magnificent Frigatebirds are casual on the lake, and in the 1950's the rare Sabine's Gull was reported, plus a single Heermann's Gull. Northern Phalaropes are found in fall near the center of the lake, as well as Common Terns—rare inland away from the Salton Sea. In September, swallows (including Bank) are often seen on migration, in addition to Vaux's Swifts. Since the state line runs through the center of the lake, state listers may find themselves desperately attempting to flush rare birds from one side to the other.

The **upper marsh (5)**, at the north end where the lake narrows, is excellent for marsh birds, but is shallow and reedy, and can be treacherous for boating. Interesting birds



sighted here include several Franklin's Gulls (fall '78) and a Black Skimmer (fall '77)—one of two Arizona records.

On the California side, at **Havasus Landing (6)**, you may land your boat (though none may be rented here). This is a good place to look for shorebirds, including the rare Sanderling, the casual Ruddy Turnstone, and the Black Turnstone (1 record). The Upland Sandpiper and Reddish Egret are of accidental occurrence.

The prime time for birding at Lake Havasu is in late summer and fall, when the temperature and humidity are nearly unbearable. Under these conditions, jumping in and out of the water becomes a necessity. Accommodations, gasoline, and supplies are available at Parker and Lake Havasu City. *Good birding!*

Jon Dunn/FIELD NOTES

Short-tailed and Sooty Shearwaters

One of the most difficult problems in the identification of west coast pelagics is that of distinguishing the Short-tailed from the Sooty Shearwater. Although close and careful scrutiny is essential for an accurate determination, a knowledge of distribution can prove helpful—for the Sooty is basically an abundant summer visitant off our coast, while the Short-tailed is a scarce visitant in late fall and winter. It is important, therefore, that particular care be taken in identifying Short-taileds outside the period from November through early April.

Sooty Shearwaters arrive off our coast in very large numbers in late April, remaining common-to-abundant through September. The numbers rapidly diminish in October, and by early winter the bird is quite rare in So. Calif.—though considerably larger numbers remain off the coast of central California. In So. Calif. the species may be found most easily in winter off Morro Bay, in San Luis Obispo Co.

The Sooty is a uniform dark brown bird with *flashy white wing linings* that *contrast sharply* with the darker flight feathers (the primaries and the secondaries).

Because of the problems of field identification, the exact status of the **Short-tailed Shearwater** is uncertain; but in our area the species appears to be almost exclusively a late fall and winter visitant. Populations are more numerous off central Calif., with sizable numbers recorded annually in Monterey Bay. Further south, the Short-tailed is considerably less common, though the species has been recorded in all the coastal So. Calif. counties. While the numbers in So. Calif. evidently vary substantially from year to year, the bird appears regularly in very small numbers off Morro Bay, and several flights involving numbers of the species have been recorded off La Jolla, in San Diego Co.

Many of the problems in the identification of Short-tailed Shearwaters may be traced to the fact that the major field guides portray the bird with dark underwings. As a result of this misinformation, there are virtually no credible reports of the species from the early 1950's to the early 1970's. The truth is that only a very small percentage of Short-taileds show uniformly dark underwings; the vast majority display some pale gray coloration, and in many the underwing is nearly as pale as that of the Sooty. The pale color on the Sooty, however, is *confined to the wing linings*, while on the Short-tailed it is *more evenly distributed* on both the wing linings and the flight feathers (see illustration).

Since individuals may vary considerably, and lighting conditions may influence a viewer's impressions, it is imperative to rely on secondary field marks before making a final determination. The Short-tailed is a *smaller* bird than the Sooty (approaching the size of a Manx Shearwater), and consequently it flies with a *faster, more erratic wingbeat*—suggesting a dark-bodied Manx rather than a Sooty in flight. Flight patterns of pelagics vary greatly, of course, depending upon wind conditions; but regardless of the weather, Short-taileds seem to look *thinner* and *shorter-*

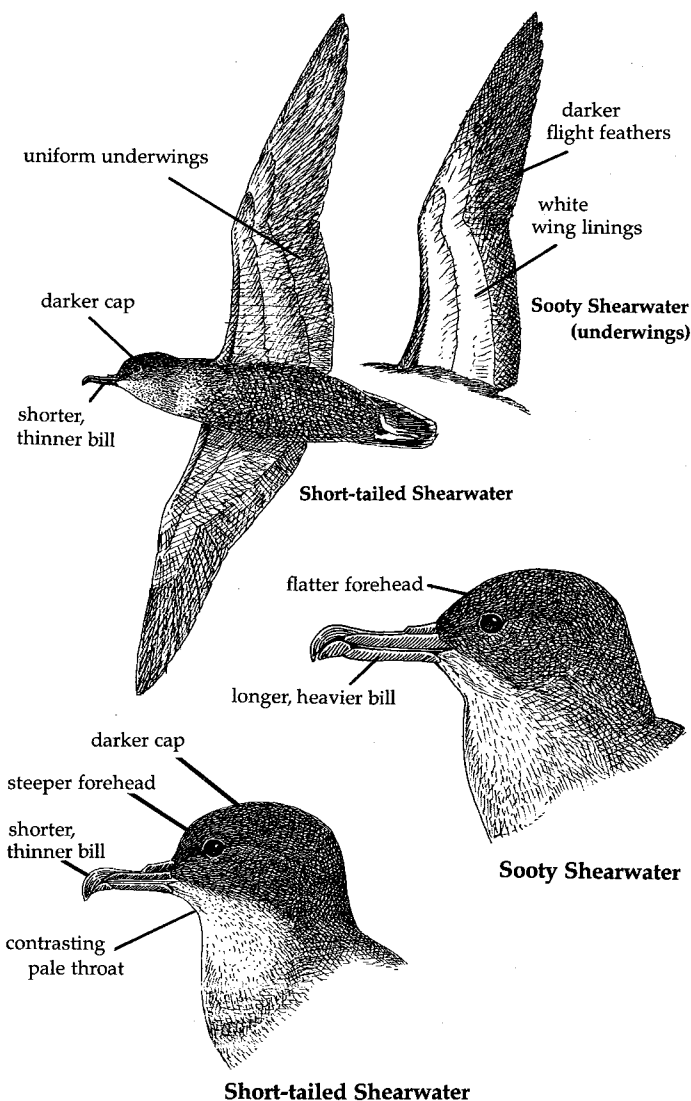


Illustration by Ray Robinson

winged in flight. When viewing conditions permit, a very good character on the Short-tailed is the *steeper forehead*, compared to the more sloping brow and *flatter crown* of the Sooty. In addition, the *bill* of the Short-tailed is significantly *shorter and thinner* than that of the Sooty—an excellent mark if seen. In general, Short-taileds tend to show more of a "capped" appearance—the dark cap noticeably contrasting with the paler throat. Finally, the *tail* of the Short-tailed is *shorter* than that of the Sooty, and at very close range, the *feet* may actually be observed projecting *beyond the tip of the tail*—a character which may not apply in the case of the Sooty.

While Sootys may demonstrate considerable interest in boats, the Short-tailed seems more inclined to respond to "chumming," on occasion actually landing behind the boat, in a manner reminiscent of Fulmars.

Shumway Suffel

BIRDS of the Season



April, as always, promises to bring us an abundance of birds: waterbirds and shorebirds along the coast, migrating landbirds in every bush, and hawks, swallows, and swifts overhead. But amid this embarrassment of avian riches, a few specialties may be worth the extra effort of seeking out. Early in the month, Sage Grouse should be strutting on their *leks* in the Owens Valley (to witness this annual ritual, turn left at the little church about 35 miles north of Bishop and follow the signs). In addition, owls, which are early nesters, will be on territory this month, even in the mountains. Favorite owling areas are Mt. Palomar (for Spotted, Saw-whet, and Flammulated Owls), Lake Fulmar and the James Reserve in the San Jacintos (for Spotted and Saw-whet, with Whip-poor-wills as a bonus), and the Fawnskin-Hanna Flats area in the San Bernardino (for Spotted, Saw-whet, and Flammulated). The migration of small landbirds will build up as April progresses, and late in the month is the prime time to visit such southern desert oases as Morongo Valley, Twenty-nine Palms, Anza-Borrego, and Yaqui Wells, where a fortuitous conjunction of topography and headwinds conspires to slow the northbound migrants, holding them on the ground.

Two Monterey Bay pelagic trips, on Feb. 18 and 24, proved an interesting study in contrasts. The first was disappointing, with only a few birds of the expected species, and it ended in the afternoon with a miserable rain. The LAAS trip on the 24th, on the other hand, turned up all the birds seen on the 18th, plus two **Harlequin Ducks**, three **Black-footed Albatrosses**, and a large shearwater (all white below, dark above with a white band at the base of the tail, and a well-defined dark cap above the white cheeks). The bird has been tentatively identified as a **Greater Shearwater**, a new bird for the west coast, and probably the first sighting for the entire Pacific.

Most of our wintering birds stayed on into early March, and only a few new ones turned up during February. The Salton Sea and the Colorado River above Yuma were targets for many LAAS birders. A rare **Reddish Egret** was found by Sharon Goldwasser on Feb. 11 along the river just below Imperial Dam. Sharon also spotted a **Sprague's Pipit** (very rare there) on the Arizona side of the river. Nearby, the partially-filled Senator Wash Dam hosted 275 **Common** and three **Barrow's Goldeneyes**, plus three **Hooded Mergansers** (Richard Webster, Feb. 17). Later, an **Arctic Loon** (unusual so far inland) was at the same site (Jon Dunn, Feb. 27). At Brock Ranch, halfway between Holtville and Yuma, the **Least Flycatcher** and the **Brown Thrasher** were still present on Feb. 17. At the south end of the Salton Sea (SESS), Barbara Turner found a **Louisiana Heron** on Feb. 19—the only report this winter. Nearby there were 100 **Common Goldeneyes** and one **Barrow's Goldeneye**, plus 60 **Greater Scaup** (large numbers of each for the area). Below Brawley, 74 **Sandhill Cranes** were found (also an unusually large number). In addition, two **McCown's** and a **Lapland Longspur** were in the fields near Unit 1 (all R.W., Feb. 18).

In rereading old issues of the *Western Tanager* we learn that the first **Cattle Egret** in the west was found in Orange Co. in Dec. 1962, and that four were at SESS in Nov. 1963. Today an estimated 5,000 pairs are nesting successfully at SESS. The birds are not known to nest along the coast, occurring there only as stragglers; but 35 were seen this winter near San Diego (Guy McCaskie), about 30 were in Orange Co. (Barbara Turner, Feb. 11), and 10 were near Whittier Narrows (Hal Baxter, Mar. 5). The **White Ibis** enigma endures, with one bird remaining at or near Pt. Mugu (Conejo Valley A.S., Feb. 10) and another at Legg Lake Park, El Monte (Bill Wedendorf, Jan. 21). Then, on March 4, at Whittier Narrows Dam, a large "shrimp-pink"

bird with white wings appeared. It was soon identified as an ibis, probably a White X Scarlet Ibis hybrid (Mickey Long). Its origin, however, remained a mystery. Busch Gardens had no Scarlet Ibis last summer, and no pink was noted in the plumage of any of the White Ibis in residence there. Incidentally, the bird sanctuary at Busch Gardens is now closed, and the birds are being moved to other sanctuaries in Florida, Virginia, and St. Louis.

The only report of a **Red-necked Grebe** was a single bird that flew by McGrath State Beach (R.W., Feb. 22). One hundred **White Pelicans** flying over Monrovia in February (Marianne Wallace) were early, but on a traditional migration route to the Great Basin. The imm. **Whistling Swan** at Lake Cahuilla below Indio (Eleanor and Bob Parsons, Jan. 28) was later found to have been released by game officials during the hunting season. Five male **Blue-winged Teal** accompanied by several unidentified females were at Bolsa Chica during February (Charlie Collins, et al). Male **European Wigeons** were widely reported, with one at Unit 1 SESS; two at Lake Henshaw, S.D. Co.; one at Upper Newport Bay; another at Legg Lake, El Monte; and one or two more in both Ventura and Santa Barbara Counties. The **Harlequin Duck** near Oceanside power plant was still present Feb. 19 (R.W.), but, as several searchers can testify, the bird was tough to find. The **Tufted Duck** stayed on at Quail Lake until March 2 (Jean Brandt), as did the Brodtkin's **Oldsquaw** at Marina del Rey. **White-winged Scoters** were fairly common this winter, but **Black Scoters** were scarce: our sole reports were of two females off the Huntington Beach pier, plus a few off Pt. Dume. **Hooded Mergansers** were widely reported, but the numbers were small, except for a high count of five at Malibu Lagoon (Bill Borman). Other observers at the site were able to locate only three.

There were several reports of **Turkey Vultures** returning to our area, but the only sizable aggregation was a flock of 300 birds observed by Robyn Morton on Feb. 10 at NESS. The winter was good for **Bald Eagles**, with 26 at Big Bear Lake (L.A. Times), 12 at Lake Mathews (Doug Morton), 9 at Lake Cachuma (Paul Lehman), and smaller numbers elsewhere. Single **Ospreys** were at NESS (Barbara Turner, Feb. 18), Lake Mathews (Doug Morton, Feb. 10), and over Hwy. 57 at Diamond Bar on Feb. 12. The **Merlin** remained in Altadena and another was in Ojai on Jan. 17 (Don Sterba). Our only report of a **Glaucous Gull** was the bird at Upper Newport on Feb. 16 (Jerry Johnson), but **Glaucous-winged Gulls** were fairly common along the coast, with 7 on the beach at Corona del Mar on Feb. 24 (Jerry Friedman).

Two of the wintering flycatchers mentioned last month could not be found thereafter. The **Ash-throated Flycatcher** in Anaheim was last seen Jan. 24, and the **Eastern Phoebe** at the Arcadia Arboretum was not seen after Feb. 25. However, on Feb. 24 another was discovered near Pt. Mugu. Ed Navojosky stayed on after the Jan. 28 LAAS field trip and found a **Gray Flycatcher** in the Wister Unit, SESS. A male and two female **Vermilion Flycatchers** lingered all winter in the Prado Dam basin above Corona (Doug Willick). At Morongo, a single **Winter Wren** and two **Lewis' Woodpeckers** were the only birds of interest (the Brodtkins, Feb. 17). The only sighting of **Varied Thrushes** in numbers was Dan Guthrie's report of 12 near Camp Baldy, north of Pomona. **Townsend's Solitaires** were seen by Jean Brandt in Big Rock Creek in late February, but she found no Pygmy Owls in the area.

California's first winter **Philadelphia Vireo**, at Harbor Lake, could not be located after mid-January, but two **Yellow Warblers** stayed on in the area at least until Feb. 26 (Hal Baxter). One of these was an extremely dull bird, mostly gray, with only a touch of yellow on

the undertail coverts. Two **American Redstarts** were located, one at Finney Lake, where they have wintered before (Bertha Raines), and another at Pt. Mugu N.A.S. (Conejo Valley A.S., Feb. 10).

Like the Cattle Egret, the **Great-tailed Grackle** is invading So. California. Twelve years ago the birds were found with difficulty along the Colorado River near Imperial Dam, but this year a quick count revealed 300 along five or six miles of river below the dam (Jon Dunn). The birds are also reported to be spreading to the northwest, with some 30 at Ramer Lake and the Red Hill Marina in the Imperial Valley, at least two in the town of Baker, and two or three pairs presumably nesting at Furnace Creek Ranch, Death Valley. Along the coast there are reports of grackles from the counties of San Diego (1), Los Angeles (2 or 3), Santa Barbara (1), and San Francisco (1). The latest of these was a single bird in the Ports-of-Call area of San Pedro (Jim Jennings, Feb. 25). A delayed report of a male **Lark Bunting** in Ojai (Don Sterba, Jan. 15) was the only one this winter. Two **Gray-headed Juncos**, in Tapia Park since last December, stayed on into early March. A **Swamp Sparrow** at the New Lakes, Whittier Narrows, was not unexpected in this ideal habitat (Hal Baxter, Feb. 15). Four years ago, before the efforts of LAAS, the area was a stubble field. ♀

Santa Monica Mountains Alert

Until the boundaries of the Santa Monica Mountains National Recreation Area are set and the necessary land is purchased, we must depend upon the Coastal Act to protect this important chaparral and seashore area from development. Unfortunately, the future of the Coastal Act is bleak. Development proponents have added momentum to the Cusonovitch Bill, which would remove roughly half of the central Santa Monica Mountains from the protection of the Coastal Commission. Construction in these regions would destroy plans for the Backbone Trail, and deny wilderness protection to some of the area's most sensitive habitats.

Letters are urgently needed to:

John Nejedly, Chairman
Committee on Natural Resources and Wildlife
California State Senate
State Capitol
Sacramento, California 95814



**WESTERN
Tanager**

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Steve Strann/BOOKS

BIRD FAMILIES OF THE WORLD, by C.J.O. Harrison (consultant editor), Illustrated by Ad Cameron, Harry N. Abrams, Inc., New York, 1978; 264 pp., 500 + color illustrations. \$25.00.

In the early 60's two books were published that set out to summarize, on a relatively general basis, the class Aves. Austin and Singer's *Birds of the World* (Golden Press, 1960) and Fisher and Peterson's *The World of Birds* (Doubleday, 1963) discussed those attributes that distinguish the various orders and families of birds. As recently as 1975, John Gooders compiled another survey of the bird families of the world (*The Great Book of Birds*, Dial Press), this time using photographs to illustrate his points. As a whole, these books were popular accounts, outlining broad taxonomic distinctions, but not delving into point-by-point specifics.

We now have another addition to this group. In the *Bird Families of the World*, Dr. C.J.O. Harrison, in conjunction with more than 50 well-known ornithologists, has attempted to update the family-level survey. While, of necessity, much of the presentation is a rehash of previously published material, the authors state that "the book contains up-to-date information, and even material yet to be published in more formal academic works." I cannot pass judgement on how much new information is present, but I can say that what is presented is clearly defined and well laid out.

After an almost too brief introduction, covering the criteria for taxonomic distinction, each of the 176 families, whether extinct or extant, is discussed in some detail. It should be noted that the delineation of avian families is a subject of controversy, the total figure varying from author to author (Austin, for example, decided on 208 families.) Again, the point-by-point bases for distinction are not discussed, but enough information is provided to profit the non-ornithologist. Each of the 34 avian orders (27 living, 7 fossil) is followed by a list of the families included, with a brief general statement regarding the group's taxonomic definition. For example, the Psittaciformes (Parrots) are "specialized birds with short, hooked bills in which the upper mandible bears a cere and articulates with the skull." While the statement, in itself, is true, it tells you very little, and is almost misleading. But further reading reveals more specific information on the group under the family subheading. In addition, the treatment of each family includes a section on general distribution, feeding, nesting and young, behavior, economic importance, and species composition.

Along with the information conveyed by the text, an attempt has been made to illustrate representative examples of birds belonging to each of the families. Fully half the volume is taken up by Ad Cameron's colorful portraits. Best known for illustrating Abram's previous popular work, *Birds: Their Life, Their Ways, Their World*, Cameron portrays his birds with an eye to enhancing the reader's knowledge of the particular family or species. Illustrations showing relative size and scale, behavioral postures, specific feeding habits, courtship patterns, and interesting morphological anomalies are, for the most part, successful. But caution is in order, as some of the illustrations are misleading. How many times has a Gray (Red) Phalarope been seen sitting on the dorsal fin of a Killer Whale (pg. 103)? And is the Green Woodpecker's tongue really that long (pg. 163)? Some of the illustrations appear a bit rough, and some postures and proportions seem slightly exaggerated—but on the whole the illustrations enhance the text, while contributing to the overall attractiveness of the publication.

The two books published in the 60's are now difficult to obtain and Gooder's volume is an even more general treatment than is Harrison's. If you need a non-scholarly work which provides accurate and basic information on avian classification, then this is the book to buy. ♀

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 Report—call 874-1318

Field Trip Reservations

To make reservations for bus and 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.

THURSDAY, APRIL 5—Executive Board Meeting, 8:00 p.m., Audubon House.

SATURDAY, APRIL 7—Antelope Valley. Meet at the parking lot on Hwy. 14 overlooking Lake Palmdale (south of Palmdale). The turnout is just before you drop into the valley. Wildflowers and early migrants are likely. Leader: Jon Dunn, 981-1841.

TUESDAY, APRIL 10—Evening Meeting, 8:00 p.m., Plummer Park. **Bob Van Meter** will present a film tour of **Ecuador and the Galapagos**. Mr. Van Meter is a dedicated amateur with a lifelong interest in nature. His film documents the wildlife, the birds (including Darwin Finches), the insects, plants, and people encountered on this expedition, described in the Feb. 1979 *Western Tanager*.

SATURDAY, APRIL 14—Morongo Valley. Meet at 8:00 a.m. in Covington Park, Morongo Valley. Take Interstate 10 east to 29 Palms Hwy. (62), then north approx. 10 miles to Morongo Valley. A good chance for early spring migrants, with birding at Yucca Valley to follow. Leader: Bruce Broadbooks. 670-8210.

MONDAY-FRIDAY, APRIL 16-20—The Islands of Baja. A four-day natural history tour sponsored by San Diego Audubon Society. The 85-foot *H & M. Mascot VI* will tour the Los Coronados, Todos Santos, and the islands of San Martin, San Geronimo, and the rarely-visited Isla Guadalupe—home of the elephant seals and Guadalupe Fur Seal. Expert naturalists will lead the trip. Cost: \$255, all meals included. For info. write or call Bill Everett, 4461 Olive Avenue, La Mesa, California 92041 (714-464-7251).

SATURDAY, APRIL 28—San Pedro to Osborne Banks Pelagic Trip. Departure at 6:00 a.m. aboard the *Vantuna* from USC Dock at San Pedro, with return at 6:00 p.m. Price: \$18.00 per person. Leaders: Jon Dunn and Olga Clarke.

SATURDAY, APRIL 28—Salton Sea. Meet at 7:30 a.m. at Finney Lake. Go south on Hwy. 111 to Albright Ave. (1.5 miles south of Calipatria). Turn right on Albright and proceed 0.4 miles to Kershaw Rd. Turn right (south) and go 2.1 miles to Titworth. Turn left and continue 0.2 miles to Smith Rd., then right on Smith to the campground at the end of the road. The lake is on the south side of the campground. Meet along the shore. Leader: Larry Sansone. 463-4056.

THURSDAY, MAY 3—Executive Board Meeting, 8:00 p.m., Audubon House.

SATURDAY, MAY 5—Founder's Day at Starr Ranch. Share a day of exploring, birding, and picnicking at the Starr Ranch Audubon Sanctuary. Access is via Caspers Wilderness Park, 8 miles east of San Juan Capistrano on Ortega Hwy. (Rte. 74). The Ranch may be entered from 8-10 a.m., and the gates will be open again from 1-4 p.m. for exiting. Bring your own water; fires and cooking not permitted. No pets, please. For Friday camping information, call Caspers Park, 714-496-4212, and for additional information call Starr Ranch, 714-586-6190.

SUNDAY, MAY 6—Pelagic Trip to Santa Cruz Island, landing at Pelican Bay. Departure at 7:30 a.m. from Island Packers Dock in the Ventura Marina. Return at 5:30 p.m. Price: \$25.00 per person. Leaders: Ron Wiley, Shum Suffel, Lee Jones, Phil Sayre.

TUESDAY, MAY 8—Evening Meeting, 8:00 p.m., Plummer Park. Program to be announced.

SATURDAY-SUNDAY, MAY 19-20—Pelagic Trip to San Miguel Island. Departure at 9:00 p.m. Saturday aboard the *China Clipper* from Captain Jack's in the Oxnard Marina. Return at 4:30 p.m. Sunday. Price \$29.00 per person. Leaders: Jon Dunn and Richard Webster.

Birds in the Suburbs

UCLA is offering a 6-week course designed to enrich the experience of observing birds in suburban backyards and neighborhoods. Two Saturday field trips are included. Instructor is **Jeffrey Froke**, manager of the Starr Ranch Audubon Sanctuary. The course meets Mondays, April 16 to May 21, 7:30 to 9:30 p.m., at UCLA. For information, contact UCLA Extension, 825-7093.

The Desert Tortoise

UC-Extension in Kern County is sponsoring a two day class devoted to the Desert Tortoise and its western Mojave ecosystem. The class will meet in California City April 28-29. Fee: \$38. The instructor is **Dr. Kristin Berry**, Lead Zoologist with the BLM's California Desert Program. For information contact UC Extension in Bakersfield, 805-834-3100.

Santa Barbara Bird Report

Birders visiting the Santa Barbara area and wishing up-to-date birding information may now dial **805-964-8240**, the number of the new Santa Barbara Bird Report.

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