WESTERN TANAGER

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Fish of the Desert

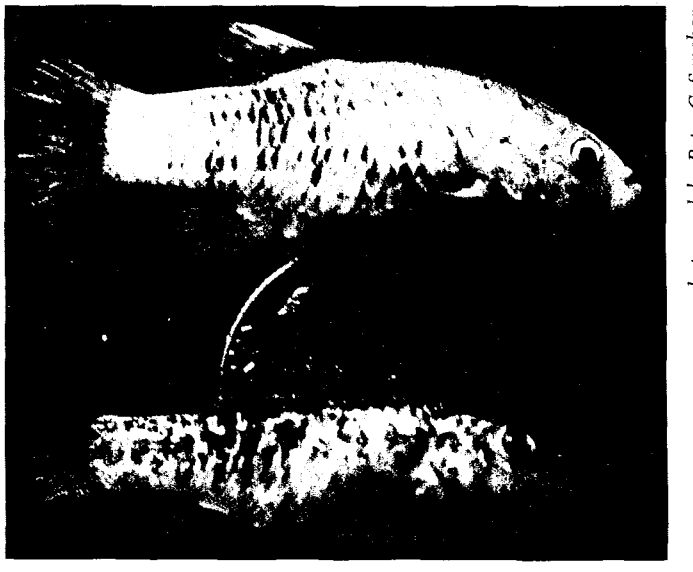
by Larry L. Norris

Death Valley National Monument would not appear to provide suitable habitat for fish populations numbering into the millions, but it does. In fact, four species of fish inhabit the several springs, creeks, and perennial river pools in and near Death Valley. These fish are called *pupfish* because of their diminutive size; they are seldom longer than one and a half inches (3 cm) when fully grown. All are members of the genus *Cyprinodon* in the Killifish family. *Cyprinodon* is latin for "carp with teeth"; the size and shape of pupfish teeth are important morphological characteristics in determining species. Species can also be determined from pupfish habitat, since ranges do not overlap.

To fully appreciate the present distribution of pupfish populations in the Death Valley area it is necessary to understand the system of lakes that occurred in this region during the Pleistocene era. The western Mohave Desert received all the run-off from the melting glaciers on the eastern slope of the Sierra Nevada during the interglacial periods. These meltwaters created a series of pluvial lakes which extended eastward from the Owens Valley across the desert to the Colorado River. Lake Manly filled the valley known today as Death Valley to an average depth of six hundred feet (180 m) and a length of approximately 125 miles (200 km); this was the largest of these lakes. Scientists today know that these lakes were linked to the Colorado River drainage because another species of pupfish is found in isolated springs in southern Arizona and northern Mexico.

With the last melting of the Sierran glaciers and the onset of a drier climate, these large pluvial lakes began to evaporate, and eventually groups of pupfish were isolated in spring systems that emerged along the shores of the shrinking lakes. By the time these lakes had dried up, only a dozen or so springs remained to provide suitable aquatic habitats for pupfish.

The habitats in which pupfish are presently found are not suitable for most species of fish. Two habitats are hypersaline, and three experience extreme temperature fluctuations during the course of the year; others are restricted in size — some springs are not much larger than a bathtub. In fact, both the most restricted and the harshest environments for any fish species in the world are found in Death Valley National Monument.



photograph by Peter G. Sanchez

Ash Meadows Pupfish *(cyprinodon nevadensis mionectes)* Male, top; female, bottom. Note size relationships.

A short overview of the different pupfish species and habitats in the Death Valley area will demonstrate some of the physiological adaptations these fish have made in response to harsh environments. It will also shed some light on the problems encountered in trying to manage pupfish populations. Salt Creek lies near the geographical center of Death Valley National Monument and is the only natural habitat for *C. salinus*, the Salt Creek Pupfish. Salt Creek is not associated with any spring system and so the water level, temperature, dissolved oxygen and salt content fluctuate in daily and seasonal patterns, placing the pupfish in an extremely unstable environment. Not many species of fish could survive such extremes in temperature. But these little fish have been able to cope with temperature changes ranging from freezing to 104°F (40°C). Daily temperature variations of 15°C have been recorded in the lower portions of Salt Creek. Physiological changes caused by isoenzymes that function at certain temperatures are thought to be responsible for such tolerance levels. (Isoenzymes are variants of enzyme molecules that regulate body functions.)

Cottonball Marsh, just south of Salt Marsh, is perhaps the harshest environment for any fish in the world. The spring for this marsh is located on the west side of the valley. The water flows down along shallow, salt-rimmed seeps to the marsh itself, which consists of sulpher pools rimmed by travertine deposits. Summer temperatures at Cottonball Marsh have been recorded at 112°F (44°C), and water salinity has been found to be up to two and a half times that of ocean water (88%). The Cottonball Marsh Pupfish *(C. milleri)* was unknown to science until its discovery in the late 1950's.

The pupfish of Cottonball Marsh actually drink the salt water to keep from dehydrating. This process of adjusting to hypersaline conditions is called *osmoregulation*. Normally, the salty water would draw out all the body fluids through the process of osmosis. To combat this process, the pupfish drinks the salty water, and through internal chemistry increases the plasma osmotic concentration in its body, and thus decreases body fluid loss from osmosis. A certain amount of metabolic water is produced to offset this loss. This process represents an amazing and very necessary adaptation to a hypersaline environment.

Saratoga Springs, the stronghold for pupfish in Death Valley, is the only habitat for *C. nevadensis nevadensis*, a subspecies of the Amargosa Pupfish. In early summer, millions of juvenile pupfish

photographs by Larry L. Norris

Sulpher Spring, Cottonball Marsh

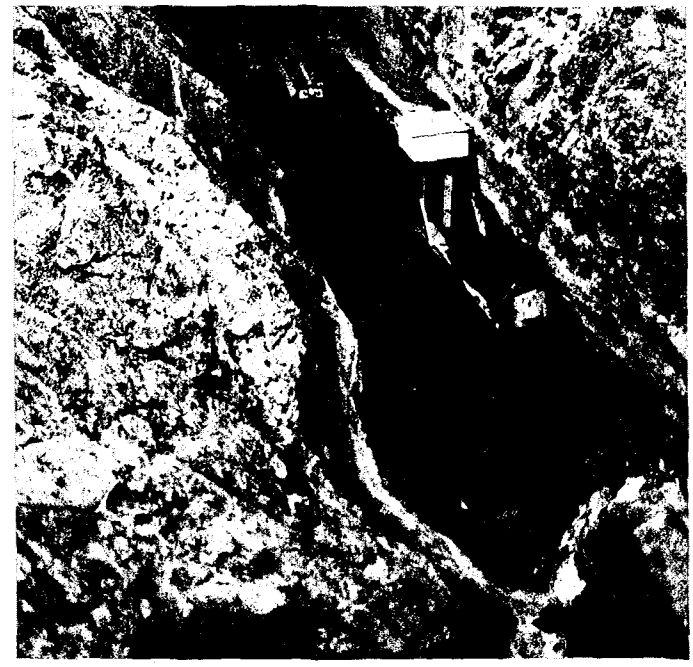
can be found in the shallow lakes north of the spring pool which results from an earthquake fault that cuts across a water table; the water percolates up the fault, continuously replenishing the spring with warm water. The temperature is quite constant, ranging from only 80 to 85°F (26.5 to 29°C). All breeding and hatching occur in the spring pool which is about 32 feet in diameter and five feet deep (ten m by 1.5 m).

Food for this fish is derived from four sources — algae that grows along the edges of the pool; flying insects that become stranded in the pools; microbial detritus from the pool bottom; and, although the pupfish are not cannibalistic, they do eat other dead pupfish.

The Amargosa River Gorge south of Tecopa (outside the monument) and a small stretch northwest of Saratoga Springs provide the only perennial pools for the Amargosa River Pupfish *(C. n. amargosae)*. The water in these pools is not heated by deep spring systems and it gets very cold in winter; occasionally it even ices over. This subspecies, like the Salt Creek Pupfish, burrows into the soft mud of the pool bottom, which is relatively warmer than the water above, to find warmth. The only drawback to this system of thermoregulation is that there is a low to non-existent oxygen level in the mud. So, in order to breath, the pupfish will work their way up until just their heads and gills are clear of the mud. This way they can obtain the oxygen they need from the water and still surround their bodies with the warmer mud.

All of these populations live within the bounds of Death Valley National Monument, and exist in stable, natural ecosystems that are being managed in order to perpetuate these populations of pupfish. The story of the pupfish populations outside the monument is not so successful.

In the area of Tecopa Hot Springs, a subspecies of the Amargosa Pupfish *(C. n. calidae)* once thrived in the outflows of several hot springs. All of these hot springs have had bath houses built over them to provide access to the "medicinal" waters. This encroachment did not in itself cause the extinction of the Tecopa Pupfish, but chlorination in the drainage flows from the adjacent public showers did. One wonders whether the people who used the baths ever knew or cared about the existence of this little fish, a relic species which has been able to adapt successfully over thousands



Devil's Hole

of years to changes in its environment. But it could not survive the ignorance of man for one season.

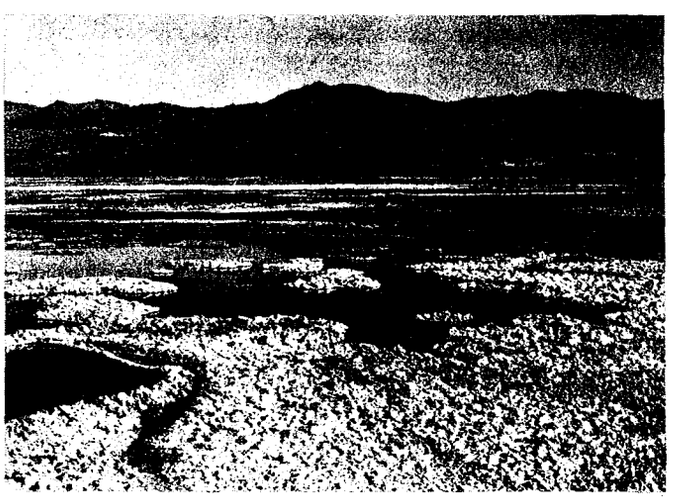
Federal mandates from Congress, of course, do not protect rare or unique life forms on private lands. Another extinction occurred at Shoshone Springs in the town of Shoshone, just east of Death Valley. Here, another subspecies of the Amargosa Pupfish *(C. n. shoshone)*, the Shoshone Pupfish, was forced into extinction because its water was diverted into a private trailer court swimming pool, and then used to water the high school football field. The world can replace a swimming pool or a football field, but it will never again see the Shoshone Pupfish. This is just another example of a land management philosophy, although not recognized as such, that sacrifices the irreplaceable in order to gain the common things considered necessary and good. It is a sad philosophy which predominates in the deserts of the west.

The Ash Meadows area, 40 miles (64 km) east of Death Valley, contains three large spring systems that support two more subspecies of Amargosa Pupfish as well as the endangered Devil's Hole Pupfish. It is an area that has seen controversy over pupfish

management in the past and will no doubt see it again in the future.

Resource problems abound in the private and public springs of this area. Exotic fish populations — mostly Mosquito Fish and Black Mollies — are out-competing the Ash Meadows Pupfish *(C. n. mionectes)* which occurs in at least a half-dozen of the lower springs in Ash Meadows. Big Spring, once owned by the Nature Conservancy but now owned by the Bureau of Land Management (BLM), faces the problem of introduced crayfish as well as the exotic Mosquito Fish. Both of these species prey on pupfish eggs. Pupfish do not compete well with other species introduced into the same niche, which is understandable since they have been isolated in springs with no predators or competing fishes for thousands of years.

The Warm Springs Pupfish *(C. n. pectoralis)* occurs in seven higher warm springs in Ash Meadows. These springs are smaller than those below, some less than six and a half feet (2 m) in diameter, and four feet (1.3 m) deep. They remain within a constant temperature range of 86 to 90°F (30 to 33°C). Because of their very limited habitat and past disturbances to these springs, this supspecies is listed by the Federal Government as endangered, but the only protection attempt was by the BLM at Schoolhouse Spring.



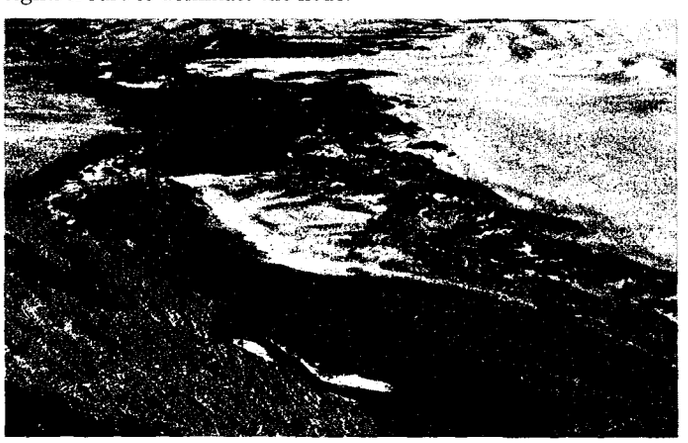
Cottonball Marsh, Death Valley National Monument

The fencing of the spring from livestock and people provided protection for the pupfish, while an artificial pond was created outside and downhill from the enclosure that was linked by a pipeline to the spring so people could see and enjoy the pupfish while not harming their habitat. Since its completion in the early 1970's, the project has fallen into a disgraceful state of disrepair. It is a fine example of a management objective that did not outlive its supporters in the Supervisor's Office. This is an important point in resource management plans — they must be written to survive the personnel changes that are sure to come later.

The most divergent species of pupfish lives in Devil's Hole, a disjunct portion of Death Valley National Monument, 40 miles (64 km) east of Monument Headquarters. It is thought to be the most isolated and restricted of fish populations in the world. Although it is the highest of the spring systems, it includes only a single springhead to an extensive, flooded cavern system. This is the only habitat that supports Devil's Hole Pupfish *(C. diabolis)*. Their total numbers hover around the 250 mark, with low counts of 150-100 in winter and high counts of 300-400 in summer and early autumn.

The pupfish inhabit only the sunlit portion of the cavern system, and all feeding and breeding take place on a small rock shelf near the surface of Devil's Hole. Algae grows on this shelf and it is here the fish get their food. In winter, when the sun is too far south to shine directly into the pool, the algae dies back, and so does the number of pupfish living in the pool.

Since Devil's Hole is the highest of the springs in the Ash Meadows area, it was the first to suffer the effects of agricultural groundwater pumping, and was the first to gain national recognition in the preservation battle that followed. Being under Federal mandate to protect the natural resources of the Monument, the National Park Service entered into litigation to stop the pumping, to maintain the water level above the vitally important feeding and breeding shelf. It was proved in the courts that the Devil's Hole Pupfish would become extinct if pumping continued. The decision by the United States Supreme Court in favor of the pupfish came six years after the onset of the problem. The fish are protected now by regulated pumping that maintains a safe water level over the shelf. But things may not remain safe for long. Just a year ago, parts of the Ash Meadows were opened to subdivision for construction of winter homes, another non-essential. To date, nothing has been built, but the threat remains, and a question of water rights is sure to dominate the issue.



Salt Creek, North View

It is clear that a resource management philosophy that favors protection of pupfish populations is only as effective as the amount of the entire spring ecosystem that is controlled. For instance, Saratoga Springs is totally owned and controlled by the National Park Service and the pupfish population is doinv well and is not endangered. On the other hand, Devil's Hole, although owned by the Park Service, is subject to water level fluctuations because the landowners in the valley below have some claims to the water. For management to work properly, entire ecosystems must be considered and planned for, not just isolated areas within a network of other plans, judicial bodies and local governments.

Death Valley is a harsh land and not the kind of place expected to support so many species of fish. With the correct philosophy and resource management in the Monument, the continuation of the highly specialized pupfish populations there is assured. It is hoped that such management may one day prevail for the three pupfish populations in the Ash Meadows area as well, but that assurance seems long in coming. The real question is whether or not the fish and their habitat can wait that long.

Researchers Visit Peru

by Helen Snyder

John Ogden, Noel Snyder and I spent the month of October in Peru working with the research scientists there who are studying the Andean Condor. Their project is a Fish and Wildlife Service contract study being done under Stanley Temple at the University of Wisconsin, and it is designed primarily to test out some of the methods for releasing captive-bred condors and for trapping and marking wild condors which we hope to use on California Condors. The Andean Condor was picked for use as a surrogate species because it is probably the closest relative to the rare U.S. Condor.

Mike Wallace is in charge of the field work in Peru, and helping him are two American and two Peruvian assistants. They have been camped in the cool, dry Sechura desert on the northwest coast of Peru since May. This rugged area was picked for the study because of its remoteness and because wild condors occur there in numbers.

On our first morning in the field in Peru, Mike drove us up a barren, rocky canyon toward one of the release pens he had built earlier. He stopped and pointed up to a wide-winged raptor soaring above the ragged skyline about half a mile away. "That's one of the released captive-bred condors" he said. "She was hatched at Patuxent." We watched in impressed silence as this young Andean Condor, wearing a numbered tag on one wing and a small radio transmitter on the other, slid through the tricky ridge currents and landed on a rocky knob.

At that moment we were witnessing the real purpose of captive breeding. In a sense this bird had always been a wild Andean Condor, and the months that she had spent in a plywood eyrie in the beech-maple bottomlands of the Patuxent Wildlife Research Center in Maryland were only minutes out of her lifetime. She was now at home in the Sechura skies, among the vultures and red-backed buzzards and condor kin, free to pair and raise her own young in her ancestral habitat.

These captive-bred Andean Condors had come to Peru from Patuxent and the Bronx Zoo. Mike's release procedure has been to keep the young birds in a pen on the ground where they can be fed and observed, and where they can watch and interact with wild condors and vultures baited in to nearby carcasses. In this way they learn what natural food looks like and what other condors do with it. In time the cage door is opened and they walk out, free. From the time the are placed in release pens the young Condors see no more of man, although they are closely watched from the blinds.

Six captive-bred birds have been released so far. One of these, a bird initially underweight and in heavy moult, refused to begin to fly and was recaptured for another attempt when the moult is finished. The other five were quick to learn to fly, to learn that vultures are a sign of the presence of food, and they have been seen to interact with wild condors (once even displacing a wild bird at food). The released birds have been seen being preened by wild adults, and they also beg from them on occasion.

Neither the released nor the wild birds appear to notice the tags and transmitters on the former captives. The transmitters enable Mike to keep track of his released birds from a distance, to follow their transition to the wild without flushing them or reminding them that humans were once a part of their lives.

During our stay we tried out three of the trapping techniques that we may use on California Condors. These are the rocket net, the walk-in trap, and the clap-trap. The rocket net is a 40' by 60' net that can be fired over a condor standing on a carcass, the walk-in trap is essentially a baited cage that is easy to walk into but hard to walk out of, and the clap-trap is a sort of double bow-net or clamshell-shaped net that can be triggered to close over a condor standing at its center on bait.

The rocket net was the only one that caught condors for us, and it worked efficiently and without injury to the birds. With it we caught four wild Andean Condors during the month we were there. Condors were very wary of the clap-trap and walk-in trap, and it does not appear that these methods offer any significant advantages over the rocket net in terms of safety.

The trapped condors were put through the full regimen of handling procedures proposed for the California Condor, including anesthesia and laparoscopy (the surgical examination of the gonads to determine sex). The four we caught were marked with wing tags and transmitters and were released to join other marked birds which Mike had trapped and released earlier.

The real highlight of the trip came in the days following the release of these radioed wild birds. With our hand-held receivers we followed the birds' intermittent signals from the mountains near camp for several days, and then we began to receive faint but steady signals from a new direction — due east, over the vast Sechura desert.

We thought at first that the birds had moved to an estuary about ten miles east of us. Then Gene Knoder of National Audubon Society arrived with a light airplane equipped for radio-tracking, and we went aloft to track our birds. The signals led us straight over the desert, 90 miles east and into the steep, dark foothills of the Andes.

All of the wild radioed birds were here where the sheer rock walls of the mountains rise suddenly from the desert and on several flights we saw, as well as heard, our marked birds below us. One was feeding on a carcass with other condors one day, and another was soaring with unmarked condors over a high ridge. The radioed birds had led us to a new area of condor activity, one that we had known nothing about.

We returned to the area by car as soon as we could and on our second morning of hiking on the dry cactus-covered ridges we made what was undoubtedly the most exciting discovery of our trip: a wild adult male condor wearing a wingtag but no radio,

photograph by Sy Oskeroff, courtesy Los Angeles Zoo

Topa Topa, at present the only California Condor in captivity.

closely accompanied by an adult female and actively defending a well-used nest site, full of old whitewash and many fresh condor tracks in the soft dirt floor. It appeared that he and his mate might be very close to egg-laying.

This was a bird Mike had tagged earlier, before he began using radios. We would never have found this individual had not the other radioed birds led us to the area. The radioed birds led us to another discovery: the local rancher is engaged in regular poisoning, using strychnine to control lion depredations on goats and horses. This is just the sort of information we hope to obtain by radio-tracking California Condors.

We learned more than we had ever hoped to during the month in Peru. One insight that came during the work was the fact that once the worry of trapping and marking the birds is over and the condors are radioed and released, it then becomes possible to study their ecology, behavior and habitat use with far less disturbance to the birds than is possible through conventional, hands-off, observation-only research methods. One can follow radioed condors at a distance for many miles, watch them feed and go to roost or nest without any risk of close approach. Their behavior is unaffected; one is truly studying a wild bird.

"Peru Trip Results" reprinted from the California Condor Newsletter, *Vol. 10, No. 3, December 1980.*

Resumption of Condor Recovery Program Urged

Thirteen years ago, nine immature Andean condors were captured in Argentina and brought to the United States Fish and Wildlife's Patuxent Wildlife Research Center in Maryland. Here they paired off and their offspring became the nucleus of a thriving captive population. In July of 1980, six young Andean condors were flown from Virginia to Lima, Peru, where they were fitted with solar-powered radio transmitters and, after becoming accustomed to their new surroundings, were released to the wild. Shortly after release, they were observed soaring alongside older birds and adopting their feeding habits. Other birds will soon be released.

The Endangered Species Technical Bulletin of the USFWS (August 1980), the source of this exciting news, concludes that "this information, along with new capture and radio-tracking techniques, may give biologists a better chance to insure the survival of both the Andean and the California condor."

A 175-day old California Condor chick was recently fledged in the wild and will soon move from its protected nest habitat. As most of us know, the California Department of Fish and Game permits for the continuance of the California Condor Recovery Program remain in abeyance since the death of another condor chick in June 1980. While deeply regretting this tragic accident, the Los Angeles Audubon Society joins with the American Ornithological Union in asking for the urgent resumption of the Recovery Program as the only feasible way to save the condor and its habitat from extinction. If you agree, please write to:

Mr. Harold Cribbs, Executive Secretary
California Fish and Game Commission
1416 Ninth Street
Sacramento, CA 95814

Public opinion may well be the most important element in influencing the permit decision.

—*S.W.*

Carter Signs Nongame Act

A bill likely to be one of the most significant initiatives in wildlife conservation within this decade was signed into law by President Carter on September 30, 1980. The Fish and Wildlife Conservation Act of 1980, also known as the "nongame" bill, is the first Federal legislation to authorize comprehensive programs for the conservation of wildlife species that are neither endangered nor hunted for sport.

Act Promotes Federal Involvement

The act is intended to promote the conservation of nongame wildlife in three ways. First, the Department of Interior is authorized to provide financial and technical assistance to states for the purposes of inventorying nongame species, evaluating their status, and developing conservation plans for their protection. At present, $20 million in Federal funding has been authorized for these purposes over a four-year period, beginning in fiscal 1982. Matching Federal grants for plan implementation will be available to those states with conservation plans that meet Federal standards.

Second, the secretary of interior is directed to study other methods of funding the act. One interesting possibility is the funding of this program with an excise tax on such items as bird seed, feeders, and birdhouses. However, this proposal has been opposed, primarily by the Office of Management and Budget, for the last few years.

Third, all Federal agencies and departments are encouraged to use their statutory and administrative authority when possible to promote the conservation of nongame species and their habitats.

Three Realities Recognized

The passage and signing of this act signals Federal recognition and acceptance of three major environmental realities. First, 83 percent of the vertebrate species native to the continental United States and its coastal waters are classified as "nongame." Without long-range planning and protection, many of these species could become endangered or threatened before the year 2000 because of habitat destruction and unwise management practices. Nongame species form irreplaceable parts of food webs essential to the survival of all species, including humans.

The second reality is that public participation in such nonconsumptive uses of wildlife as photography and nature study is increasing rapidly in relation to such consumptive uses as hunting and trapping. Several environmental planners predict that nonconsumptive uses of nongame and game species will be the dominant form of wildlife-related recreation before the end of the century. In the United States, more than $500 million is currently spent annually by the public on nonconsumptive wildlife activities.

The third reality is that it is neither ecologically nor economically feasible to manage game or nongame species as separate or single entities apart from the ecosystems that sustain them. Management practices that temporarily increase the populations of a few game species at the cost of ecosystem stability and/or diversity work to the long-term detriment of both the managed species and the ecosystem.

Reprinted from the Sanctuary, *the Bulletin of the Massachusetts Audubon Society, Vol. 20, No. 4, December 1980. Written by John H. Fitch, Director, Scientific Staff.*

Topics of Conservation

by Sandy Wohlegumuth

Though the prospect of lining up for a few gallons of water is rather remote, in one way or another water may well become as big a headache as oil in everybody's future.

The city of Los Angeles, as we well know, gets most of its water from Mono Lake and the Owens Valley. Los Angeles is also a member of the MWD, the Metropolitan Water District of Southern California, and buys a small portion of its water from that agency. The MWD extends into six counties and serves over 11 million people, including our close neighbors in Beverly Hills, Burbank, Santa Monica, Pasadena and Culver City. In 1941, the MWD built the Colorado River Aqueduct that pumps water from Lake Havasu to Lake Mathews. Since 1972, MWD has been receiving water from the State Water Project — Feather River water from northern California. Water is pumped from the Delta of the Sacramento and San Joaquin Rivers and *flows 450 miles up* the California Aqueduct, ending at Lake Perris in Riverside County. This gargantuan collection of 18 reservoirs, 15 pumping plants and five power plants, says MWD, is "the largest aqueduct development in the history of mankind" and lifts the water over 4000 feet. The Edmonston Pumping Plant at Grapevine (an excellent condor-watching spot) pushes the water 2000 feet over the Tehachapis — another dubious world record, using as much energy in a year as the entire city of Los Angeles did in 1965.

But apparently we're not to rest on our laurels. Last July, the legislature passed SB 200, the Peripheral Canal bill, and the governor signed it. This proposed 43-mile Peripheral Canal will bypass the Delta and thus greatly increase the quantity of water flowing to the southern half of our state.

A hotly contested issue for years, who's for it and who's against it? Superficially it seems to be a mini-Civil War with northern Californians reluctant to let the more numerous southerners take "their" water. But there's much more here than meets the eye: the most eloquent advocates of the Peripheral Canal are the Metropolitan Water District, agribusiness and the big real estate developers.

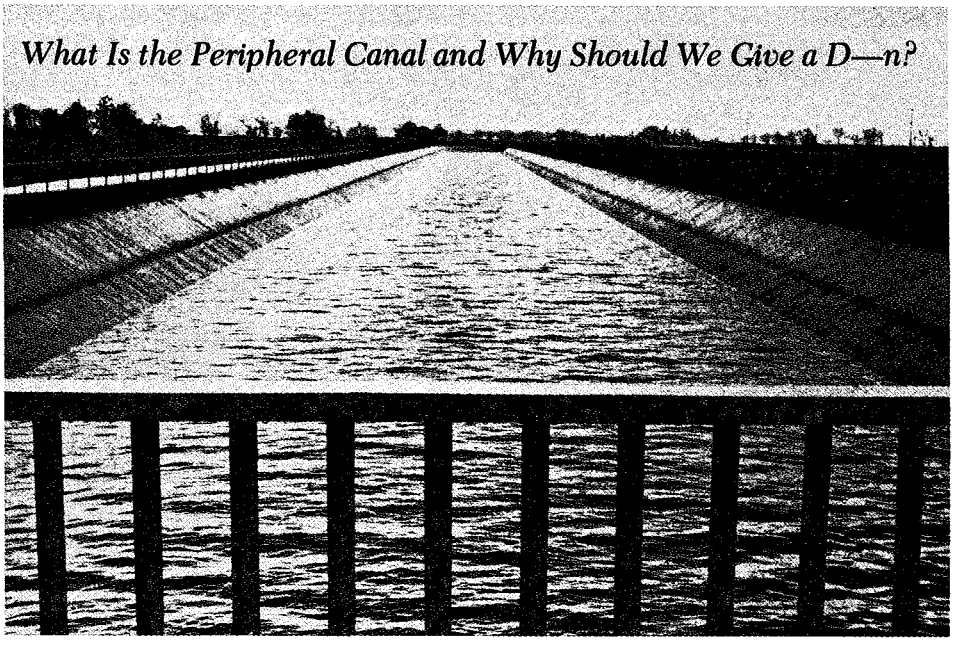
The MWD is an interesting organization. Each of the 27 member agencies (which may be cities or municipal water districts) is represented on the governing Board according to its assessed valuation. These 52 directors are appointed — not elected — and some have been on the Board for decades. Many of them, according to the Fair Political Practices Commission, have substantial interests in real estate, construction, banking and land development. The MWD is considered the most powerful legislative body in California, outside of Sacramento. Ellen Stern Harris, a former director, has called it "the *de facto* land planner for southern California". Take a look at your property tax bill. A little item nestles there every year labeled, "Metro Water Dist", and it has been on the tax bills for 50 years. So, though Los Angeles, with its own aqueduct, uses only two percent of MWD water it pays the lion's share of MWD's water bill. These taxes are for the cost of all the dams and reservoirs and pumping plants. Opponents of the Peripheral Canal point out that the MWD doesn't *need* additional water. Indeed, they quote from an MWD memo of November 1979: "For the next 20 years MWD may require substantially less water from SWP (State Water Project) than was provided in .... our water supply contract with the state." There are dark hints that the MWD, in spite of this prediction, is pushing the Canal to create additional surpluses for the benefit of agricultural interests.

Proponents of the Canal Represent Big Money

The large farms of the lower San Joaquin Valley in Kern County have been flourishing since the State Water Project was built. The oil companies, owning great tracts of dry land in the rain-shadow of the mountains — and pumping oil for years — suddenly find themselves proprietors of valuable irrigated farm land. Other large land owners, including the 300,000-acre Tejon Ranch, share this spectacular bonanza. In some cases, the new water has increased the value of their holdings from the purchase price of $5 an acre to $5000 an acre. (The Tejon Ranch, incidentally, is talking about a large recreational development in addition to expanded agriculture.) The owners of the *Los Angeles Times*, the Chandler family, hold a 50 percent share of the Tejon Ranch. *The Times*, the influential colossus of the south, has supported the Peripheral Canal editorially but has been singularly tongue-tied in its news columns about the controversial details or the charges of "rip-off."

Until water came south the farmers got most of their water by drilling into the underground aquifers. When the California Aqueduct was completed it was understood that the new water would be used to recharge the badly depleted groundwater. (So much oil and water have been pumped that some Kern County land is actually sinking.) But Tenneco and Getty and Standard and the rest took the new cheap water and developed new tracts of highly profitable crops. It may be argued that agribusiness is expanding Cali-

photograph courtesy The Planning and Conservation League



fornia agriculture — the state's largest industry — to feed the hungry. But Kern County is being planted in cotton, almonds, grapes and pistachios, all highly lucrative crops that hardly qualify as basic necessities. The neatest gift of all is the "surplus" water that is legally sold to big producers at one-tenth the normal price. This below-cost water, subsidized by the unsuspecting urban taxpayer, guarantees windfall profits to agribusiness. And because the water is so cheap there is no incentive to conserve it. The most widely used system of irrigation is furrow irrigation which is fantastically wasteful. During the 1977 drought, there was no appreciable reduction in agricultural water use.

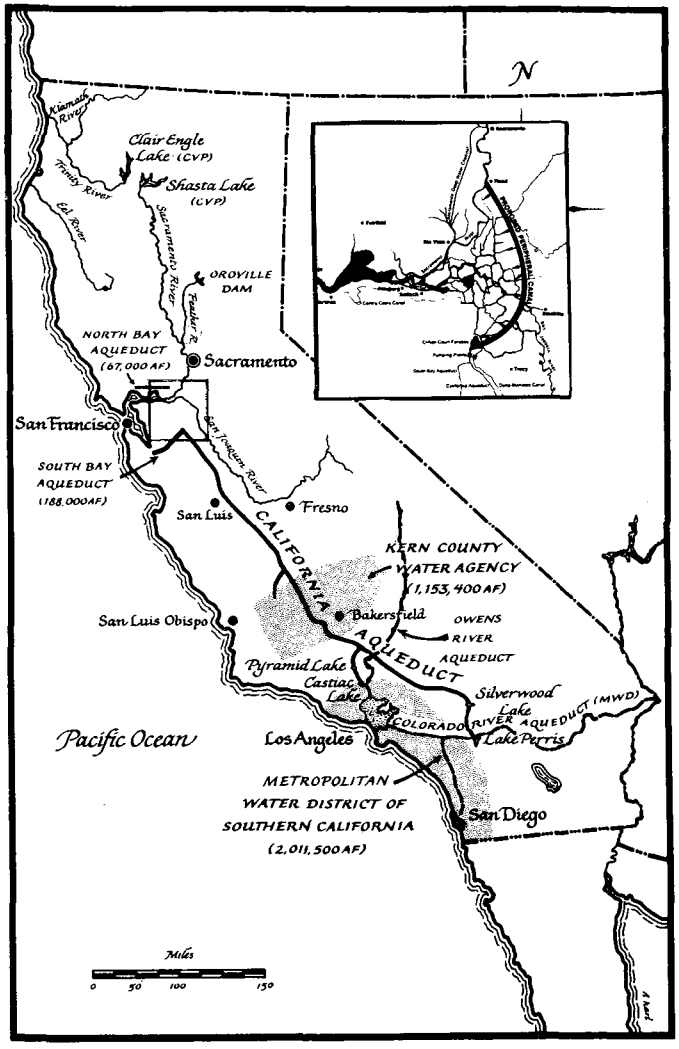
In the arid south there can be no growth without water. If William Mulholland, the patron saint of real estate development, had not brought Owens Valley water south, Los Angeles would still be a relatively small town on the fringes of the desert. As the most populous state continues to grow by 100,000 souls every year, room has to be made to put them. So, it is pretty clear where some of the powerful support for the Peripheral Canal is coming from.

Opponents of the Canal Face Difficult Fight

The opponents of the Canal include the farmers in the Delta who irrigate their land with Delta water. When the Canal cuts down fresh water inflow from the Sacramento River they will be irrigating with salt water drawn in from the San Francisco Bay. Cities in the Bay area feel that reduced flow will prevent normal flushing of the bay and will negate their expensive anti-pollution efforts. Environmentalists are concerned with the Canal's effect on the rich bird life in the Suisun Marsh and the threat to migratory and resident fish populations. Since the Delta is a vast fish nursery and the present pumping already sucks up millions of fry, the added effect of the Canal promises the demise of the fishing industry. Proponents of the Canal claim that proper controls will actually *enhance* the quality of the Delta. Opponents believe that the Delta is too fragile to be subjected to an unproved technology and possible mismanagement. An added fear is that the Canal will so lower the hydraulic pressure in the Delta that the untamed north-coast rivers will have to be dammed and re-routed to replace water pumped out. In November, the voters demonstrated their feelings on this score by passing Proposition 8 that puts protection of these rivers into the constitution. (A two-thirds vote by a future legislature could however cancel this safeguard.) The water managers, however, have talked about bringing water south from the Columbia River — and even the Yukon.!

The projected costs of the project is staggering. The Canal alone will cost $700 million. New dams, reservoirs and smaller canals raise the price to $5 billion. New power plants to move the water bring it to $11 billion. With interest, by 2035 the total is 23 billion. The State Water Project today uses four billion kilowatt hours of electricity a year and is California's largest consumer of energy. With the Peripheral Canal, consumption will jump to 11 billion kwh: 25 percent of the electricity used in the entire state.

The war is not over yet. Immediately after SB 200 was passed, opponents drew up a referendum that will give the electorate a chance to vote on the Canal. Signatures were gathered almost overnight and it will be on the ballot in June 1982. It will be an epic confrontation. The determined coalition of Kern County growers, real estate interests and the MWD has unlimited money. The voters in the south will be warned ominously and often that



California Aqueduct System and the Proposed Peripheral Canal

one of these days they "will turn on their water taps and nothing will come out" (Lt. Governor Mike Curb). Jobs will be threatened, the economy will stagnate and "progress" will be no more. Opponents of the Canal call for conservation and recycling. The drought demonstrated that city dwellers *can* save water. But residential consumers use only two percent of the state's water; agriculture, 85 percent. If farmers cut back only five percent of their use it would increase water available to the cities by 50 percent. Fair pricing of agricultural water would force agribusiness to conserve.

Anti-Canal people have their work cut out for them. Their resources are limited and they will face a massive media blitz. It will not be easy to convince the voters in the south that the simplistic specter of empty faucets is a phony lot. Or that the "enemy" is not the northerners who have all the water and won't share it, but rather their own southern neighbors selling oil and real estate and pistachio nuts. Estimates of the price to the homeowners for this $23 billion venture run as high as $100 a month in water bills and "Metro Water Dist" taxes. This will affect every Californian, north and south. And the cost of rampant growth will be catastrophic: the quality of life will take a merciless beating. Will the voters get the message?

Two Groups Offer Birding Tours

The Portland Audubon Society is sponsoring a 16-day birding trip to Texas from 18 April to 3 May 1981. Spend five days on the Rio Grande and five days at High Island looking for Eastern warblers during peak migration. $950 includes air transportation to and from Portland, motels and ground transportation in Texas. Group leaders are Jeff Gilligan and Owen Schmidt. For a detailed itinerary and further information, write Owen Schmidt at 1220 N.E. 17th Avenue, #2-D, Portland, OR 97232.

Pomona Valley Audubon Society president Dan Guthrie is leading a natural history tour to Costa Rica, 24 June to 11 July 1981. Price for the 18-day excursion is around $1400 (including air fare). Much of the birding will be in national parks and at field stations of the Organization of Tropical Studies. Among the over 300 species expected to be seen are Quetzal, Jabiru, Stork, Bellbird and parrots, hummingbirds, toucans, tanagers and flycatchers. For a detailed itinerary and complete information, contact Dan Guthrie, 285 Brook Street, Claremont, CA 91711, (714) 621-4000.

Scarlet Macaw

photograph by Herb Clarke

Tanager Mailing Rates Rise

If you are a member of LA Audubon and receive the TANAGER monthly as part of your membership in Audubon, the following news need not trouble you. If, however, you subscribe to the TANAGER separately, or if you pay the first class rate so as to receive your copy quickly in a plain, brown wrapper, the following information will be of interest to you. Because of rising postal costs, it has become imperative to raise the cost of mailing the TANAGER to you. The first class rate is now $12.00 per year, and the bulk rate subscription rate is now $8.00 per year. Even at these inflated prices, however, we feel THE WESTERN TANAGER is still a bargain! And we hope you will renew your subscriptions as they come due.

Wild Turkeys Join Eagles on Catalina

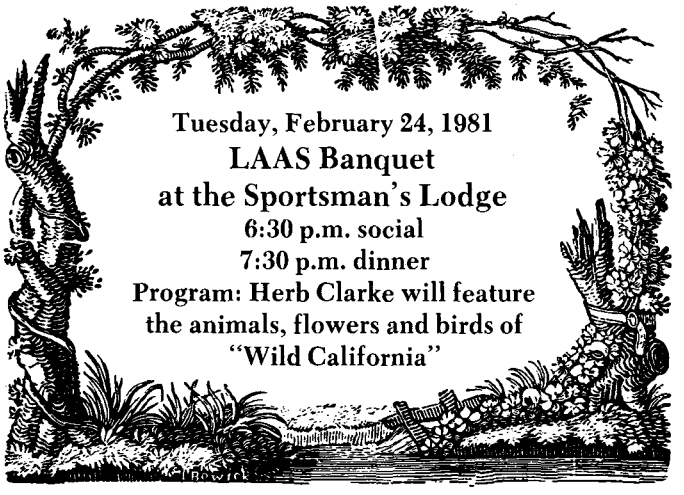
A colony of several hundred American wild turkeys are now providing a keen diversity to Catalina Island's animal life, according to Doug Propst, President of the Catalina Conservancy, the organization which cares for the island's wildlife.

A total of 24 adult turkeys were introduced to Catalina in 1968 in a cooperative effort with the California Department of Fish and Game in an attempt to help refresh the population of game on the island. These "Rio Grande" birds, which favor semiarid zones, were trapped near Sonora, Texas, and flown to the island. Their descendants now range throughout the island and are frequently seen both in the interior and sometimes in Avalon. These 15 to 20-pound birds have formed a self-sustaining breeding colony and are now considered a part of the island's permanent wildlife.

Help Plant the Sepulveda Basin

The Corps of Engineers is working on the new Wildlife Refuge in the Sepulveda Basin in Van Nuys. If you would like to help plant native plants on Saturday 21 February, call Steve Rossi at 391-5600. Please call by 14 February. (If it rains on the 21st, the planting will take place on the 28th).

Come to the Sepulveda Basin, 21 February, 9 a.m. on the south side of Burbank Blvd., just west of the San Diego Freeway. Free parking! Free refreshments!



The cost of the dinner is $13.50 per person. Send reservations to the Banquet Reservations Chairman, c/o Audubon House. Checks should be made payable to LAAS. The Sportsman's Lodge is located at 12833 Ventura Blvd., North Hollywood.

Birding the Santa Ana River in Riverside County

by Henry E. Childs, Jr.

If you start in Riverside and proceed downstream along the Santa Ana River to the west, you will find several parks which provide a variety of good birding opportunities. Although the parks are similar in many ways, the age and development of the vegetation, its composition and the amount of open water and marsh areas differ enough to lend each a unique character and thus afford each a different avifauna. And enough rarities show up each year to make these parks interesting to the expert as well as to the novice.

Rubidoux Nature Center, Pedley

Going east, leave Highway 60 at Van Buren and proceed south to Pedley. Turn left on Limonite Avenue and right on Peralta after about a mile. At the end of Peralta, turn left on Riverview to the park. Two 25-cent pieces get you into the park. Pick up a check list at the Nature Center — a good place to bring the kids.

This fine birding spot has a year-round stream, a well developed marsh with lakes and old field weeds, all bordering along the Santa Ana River. Thus, there are a variety of habitats providing good birding all year long. Winter sees many *Lincoln Sparrows, White-tailed Kites,* and a good selection of marsh birds and water-fowl. *Eastern Phoebes* have wintered here during the last two years. Spring brings *Wilson's Phalaropes,* good *warblers* and *Blue Grosbeaks.*

Fairmont Park, Riverside

Located by the freeway (Highway 60) in Riverside at the Market Street offramp, the park is immediately apparent to the south. Lake Evans provides a permanent source of water and harbors many waterbirds in winter. Also in winter, look for *Lincoln Sparrow, Yellowthroat* and *Kingfisher* along the several trails in the wild area in the drainage from the lake on the far side of the park. During migration, this is a "hot spot" for warblers and others.

Continue around the lake and park near the entrance at the children's playground. Unusual birds are always turning up in this oasis. Here, in the blooming Red Eucalyptus in winter, you may find *Western* and *Summer Tanagers, Orchard Orioles, Rufous Hummingbirds, Tennessee* and *Black and White Warblers, Yellow-throated Vireos, Coues' Flycatchers,* and *White-throated* and *Swamp Sparrows.*

Hidden Valley Park, Norco

This is another one of the Santa Ana River Regional Parks and is located a few miles downstream from the Rubidoux Nature Center. Proceed south from Pedley along Van Buren to Arlington Avenue. Turn west and go about four miles. *Canada Geese* are regular here. This park has less riparian vegetation, so one does not see the unusual wintering birds or vagrants seen other places, although *Swamp Sparrows* have been reported along the river. *Ring-necked Pheasants* are abundant here.

Proceed from here to Norco and to Schliesman Road and Millikan Avenue (north end of Hamner Avenue). Here there are good pasture ponds for shorebirds (*Dowitcher, Stilt, Avocet, Wimbrel,* both *Yellowlegs* and *Cattle Egrets*). Lake Norco is an outstanding waterfowl area in winter and boasted a male *Painted Redstart* two years ago.

Prado Basin County Park

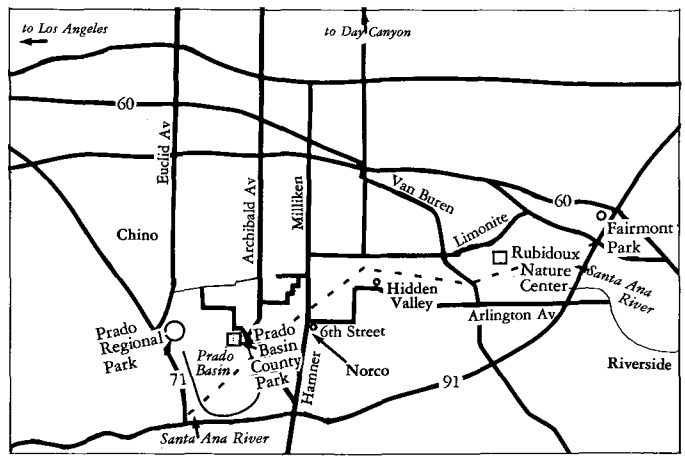
Located at Archibald Avenue and River Street on the river (this park should not be confused with Prado Regional Park which is located further downstream at the foot of Euclid Avenue, see Childs, WESTERN TANAGER 46:6, March 1980.) A naturalist is on duty at the little museum over whose door a *Black Phoebe* tries to nest each year.

Totally different from the other Santa Ana River parks, this one features a tall, dense stand of willow reaching forty feet in height. These attract migrants and house nesting *Blue Grosbeaks, Downy Woodpeckers* and others. *Vermillion Flycatchers* and *Eastern Phoebes* have wintered here recently. There are passable trails (at times) through the dense growth; birding in the willows is the closest to rainforest conditions of anyplace I've seen in the west.

Some of the rarities seen in this area have been: *Scissortail Flycatcher, Cassin's Kingbird, Vermillion Flycatcher, Bell's Vireo, Yellow-billed Cuckoo, Vesper Sparrow, Swamp Sparrow* and *Lesser Yellowlegs.* A good day along the river should turn up sixty species and maybe one of the "goodies."

Bell's Vireo

photograph by Herb Clarke



Birds of the Season

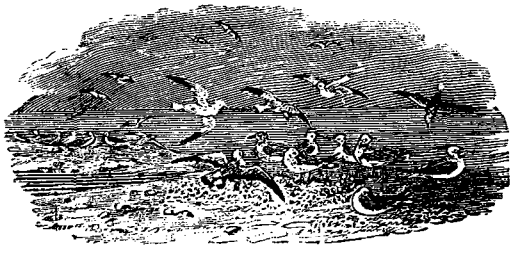
by Shum Suffel

February marks the end of winter for some birds — ducks and geese, particularly, start moving slowly northward. It is also the start of spring for a few species — Allen's and Rufous Hummingbirds arrive with the first flowers, Common Poorwills awake from winter hibernation, and, later in the month, the first swallows arrive. However, the majority of winter birds will be with us until April or even May, long after some resident species have raised their first brood.

This winter was disappointing for birders seeking northern or montane species. There were a few widely scattered reports of **chickadees, creepers** and **nuthatches** (mostly **White-breasted**) along the coast, although the LA Christmas Bird Count (CBC) found all three species in West Los Angeles (Kimball Garrett and Curtis Marantz, 4 January). **Hermit Thrushes** appeared in normal numbers, but **robins, bluebirds** and **waxwings** were absent or were reported infrequently. This despite the bumper crop of Toyon (Christmas) berries which are normally heavily used by these species. There were no coastal reports of **Bohemian Waxwings, Northern Shrikes, Rusty Blackbirds, Evening Grosbeaks** or **Red Crossbills.**

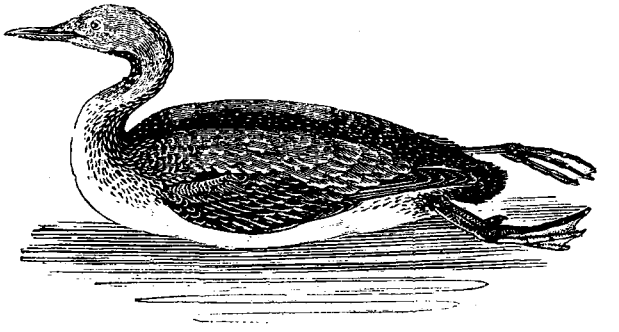
There's a saying among birders that rare birds are found in threes — unscientific but true, at least in the following small gull saga. It began on 1 November when Doug Willick reported four **Franklin's Gulls** in a flock of thousands of **Bonaparte's Gulls** resting in the Santa Ana River channel a mile or two above the ocean. While looking for the Franklin's Gulls, Hal Baxter sifted out an adult **Black-headed Gull** (21 November) for a southerly record on the west coast. While looking for the Black-headed Gull the next day, Brad Schram discovered a **Little Gull** which stayed around for the Orange County CBC on 21 December. Even before these discoveries, we knew that the Black-headed Gull and the Little Gull had returned to the Stockton Sewage Plant for the third winter! Then Richard Webster found an immature **Black-headed Gull** in the Pt. Mugu Naval Air Station. It was last seen on 18 December. Amazingly, an immature was discovered at King Harbor, Redondo Beach, by Scott Dillard *et al* on 30 December—a first for Los Angeles County. It seems probable that these two immatures were the same individual, as the timing is right, and both had two white central feathers interrupting the black tail band.

Pelagic birding continued on the dull side, even in central California, with no reports of **Laysan Albatross** or **Cook's Petrels** and, surprisingly, none of the **New Zealand (Buller's)** or **Short-tailed Shearwaters** (usually regular in small numbers). The Monterey Bay trip on 7 December found eight to ten **Black-footed Albatross** and two well-seen **Fork-tailed Storm-Petrels,** while the trip on 3 January produced only a few **Sooty Shearwaters,** a few **Northern Fulmars** and five species of alcids. Jerry Johnson watched about a thousand **Manx (Black-vented) Shearwaters** from shore at Laguna Beach on 27 November, and Phil Unitt studied a **White-vented Manx Shearwater** off Oceanside on 28 December. This is the second white-vented Manx to be critically studied off our coast, but their species identification and origin are still undetermined. A flock of **Black Storm-Petrels** seen from Pt. Fermin on 31 October was unusual near shore, as was an **Ashy Storm-Petrel** which landed at the Torrance Airport on 5 November (*fide* Eric Brooks).

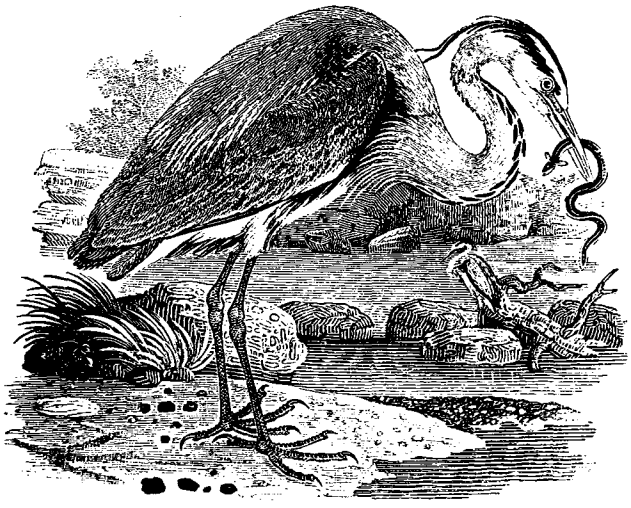


Red-necked Grebes, always unusual, were late in arriving with one at Cabrillo Beach on 3 January (Mark Kincheloe and Eric Brooks), and another (an immature) at the Santa Monica Pier on 4 January (Hal and Nancy Spear, *et al).* Some 1200 **White Pelicans** at the north end of the Salton Sea (NESS) on 3 November were a treat for Paul Sykes from southern Florida, where they are not that abundant. Los Angeles County's only **Wood Stork,** which returned to Whittier Narrows on 16 September and stayed for about ten days, was probably the same stork seen in Long Beach on 4 October (Dickie Hunt). An immature **Reddish Egret** at Bolsa Chica and Seal Beach during November was probably the same bird found in Long Beach on 26 September; it is still present as of mid-January. After viewing the three small gulls on 28 November, Donna Dittman *et al* discovered a **Louisiana Heron** in the Seal Beach marsh. Five **White-faced Ibis** at Buena Vista Lagoon on 2 November was a good number coastally (Shantanu Pfucann).

A **"Black" Brant** some distance up Ballona Creek, Marina del Rey, seemed to be sick (Bob Neuwirth, 1 November). A flock of forty-seven **Canada Geese** flying west over Altadena (John De Modena, 26 September) probably represents only a local move-



ment, not migration. More than a hundred Canada Geese on Lake Mathews, Riverside County, included twenty **"Cackling" Geese,** the small, dark race which is unusual here (Henry Childs, Jr., 6 December). There were also more than thirty **Common Mergansers** on the lake. There seems no doubt that **Blue-winged Teal** are increasing in the west — fifteen in the Prado Basin, Riverside County, (Henry Childs, Jr., 21 November), four males and three presumed females in the Los Angeles channel, Long Beach, on 27 December, and three at Whittier Narrows on 22 November. A **Eurasian Wigeon** was frequently seen along Malibu Creek above the lagoon (Tom Frillman, 13 December); two more were at McGrath State Park, Ventura, and one near Santa Barbara. A pair of **Wood Ducks** appeared on the 30-acre lake at Whittier Narrows on 22 December (Mickey Long). **Oldsquaws** were seen at Little Lake 140



miles inland in Inyo County on 26 October (Barry and Terry Clark); at the mouth of the Ventura River (Don Sterba, 27 November); at Seal Beach (Jeff Greenhouse, 29 November); at the mouth of the Santa Ana River (Dave Richardson, 3 December); and in Ballona Creek, Marina del Rey. The male **Harlequin Duck** which has been in Agua Hedionda Lagoon below Oceanside for three years was still there at year's end. A **King Eider** at Abbott's Lagoon, north of San Francisco, was the first report from California since 1974 (Dave Shuford, 13 November). A **White-winged Scoter** at NESS was unusual inland (Doug Willick, 22 November). The only **Black Scoter** reported locally was a female in Los Angeles Harbor on 27 December, but there were three in the harbor at Pt. Mugu again this winter (Richard Webster). A pair of **Hooded Mergansers** was sometimes seen at Malibu Lagoon (Sandy Wohlgemuth, 17 November), where one or more have been seen the last few winters, and a female was at Whittier Narrows after 3 November along with a female Common Merganser.

An immature **Northern Goshawk** at Oasis, Mono County, on 1 November (Bruce Broadbooks and Hal Baxter) was the only one reported. A wandering **Red-shouldered Hawk** was at Furnace Creek Ranch (FCR) on 26 October (Guy McCaskie and Larry Sansone). Three immature **Bald Eagles** at Lake Mathews were fewer than expected on that lake (Henry Childs, Jr.), but nineteen at Big Bear Lake was expected at this concentration point. One or more **Ospreys** were seen regularly at Upper Newport Bay or along the Orange County coast, and one (two in mid-August) spent the summer and fall at the fish-full Whittier Narrows "New Lakes". **Prairie Falcons** were seen on the coastal slope at Prado Basin (Henry Childs, Jr.), and in downtown Los Angeles over Grand Avenue near the freeway (Jerry Johnson, 30 October). The **Merlin** returned to the Arcadia Arboretum in November (Barbara Cohen), and others were found at Oasis, Mono County (Larry Sansone and Guy McCaskie), at Bonsall Road above Zuma Beach (the Brodkins, 22 November), and at Morongo Valley (Paul Sykes, 3 November).

Over 200 **Sandhill Cranes** "dropped in" for the Santa Maria CBC on 4 January. There were a few sightings of a **Black Rail** at Upper Newport Bay during the super high (seven foot) tides in December. The **Piping Plover** found on 1 October just north of Morro Bay later moved to the sandspit which encloses the bay. It was most easily reached via "the clam taxi" from the mainland (John McDonald). Because of land development, **Mountain Plovers** are scarce along our coastal plain; thus thirty just off the Santa Ana Freeway at Myford Road were of interest (Doug Willick). An **American Golden Plover** of the *fulva* race was on the salt flats at Marina del Rey where one or more are seen every winter. A **Pectoral Sandpiper** which stayed at Harbor Lake until at least 21 November was very late (Mitch Heindel). What may have been a very rare **Bar-tailed Godwit,** found on the afternoon of 11 November at the upper ponds of Harbor Lake, could not be located again. A detailed description was provided by Hal Ferris who found the bird. Four **Ruffs** were seen: at the Lancaster Sewage Plant (Jon Dunn, 25 October); near Red Hill, SESS (Kimball Garrett, 27 December); and two at the mouth of the Santa Maria River (Paul Lehman, late October). A **Red Phalarope** at Malibu Lagoon on 12 November may have been sick or oiled as healthy "Reds" are seldom near shore.

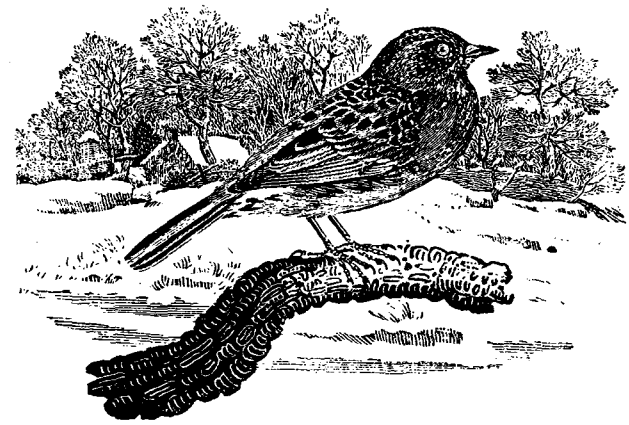
At the Salton Sea, several gulls were found which are not expected inland: both **Pomarine** and **Parasitic Jaegers** at NESS (Paul Sykes, 3 November); two adult **Mew Gulls** at Salton City on 6 January (Jon Dunn); an adult and two immature **Thayer's Gulls** there the same day; a first-winter **Heermann's Gull** at SESS on 27

December (Fred Heath and Kimball Garrett); and a **Black-legged Kittiwake** at NESS (Guy McCaskie, 6 December). A single **Franklin's Gull** was on Apollo Lake near Lancaster on 25 October (Jon Dunn). This was a poor winter for **kittiwakes** along the coast, but a very few were at King Harbor, Redondo Beach, where dozens are usually seen. **Black Tern** (uncommon coastally) was in the Ballona Creek channel on 5 October (Bob Shanman).

Reports of **murrelets** along the coast decreased as the winter progressed, with a sick **Xantus'** at King Harbor on 31 October; two **Craveri's** off the Santa Monica Pier on 9 November (Arthur Howe); and another (?) off the nearby Venice Pier on 1 December (Jerry Johnson). Two **Short-eared Owls** were flying over the *salicornia* marsh at Marina del Rey on a heavily overcast day, 4 January (Bruce Broadbooks).

A male **Black-chinned Hummingbird** (almost unknown in winter) in Long Beach Recreation Park was found in mid-December by Brian Daniels and verified a few days later by Mitch Heindel. Another male was found in Rancho Park on 4 January (the Clarks). A female of the same species (identified by call) was seen near Bolsa Chica (Lee Jones *et al,* 11 January). **Allen's Hummingbirds** seldom winter here except on the islands and the Palos Verdes Peninsula, thus a male in the Hollywood Hills was of special interest (Dorothy Dimsdale and Ruth Lohr, 12 November). A pure **"Yellow-shafted" Flicker** was apparently wintering at Whittier Narrows (Ralph Shanklin, 22 November). The only reports of **Lewis' Woodpeckers** came from FCR (Larry Sansone and Guy McCaskie, 26 October) and Malibu Canyon (Jerry Maisel, 24 December). The eastern race of the **Yellow-bellied Sapsucker** (*S. varius varius)* is very rare here. An adult male in Silverado Canyon, Orange County, was carefully studied on and after 19 December (Tom Wurster, Doug Willick *et al).* The **Red-naped** race from the Great Basin *(S. varius nuchalis)* is not so rare but is noteworthy—one at Loyola Marymount University (Arthur Howe, 14 November), and another in Sierra Madre (Shum Suffel, 31 December). A **Hairy Woodpecker** in Tapia Park, Malibu (the Clarks, 25 November), was unexpected near the coast.

The only wintering **Tropical Kingbird** was near Santa Barbara. There are usually several reports in the fall with a few sometimes wintering here. **Cassin's Kingbirds,** too, were much scarcer than last winter, with none in the Chino area where 15 to 20 wintered in 1979-80 (Henry Childs, Jr.). A **Western Kingbird,** carefully studied on the campus of Mt. San Antonio College (Phil Sayre, 25 November), was very late, but could not be relocated the next day. An **Eastern Phoebe** was found in Huntington Beach Central Park on 21 December (Tom Wurster), and on 9 January there were two there (Brian Daniels). Another **Eastern Phoebe** was at Pt. Mugu (Richard Webster). The **Gray Flycatcher** returned to the Arcadia Arboretum for the third winter and a **Western Flycatcher** was there in early December (both, Barbara Cohen). Another **Gray Flycatcher** was in the El Dorado Nature Center, Long Beach (Brian Daniels, 23 December). The **Coues' Flycatcher** also returned to winter near the merry-go-round in Griffith Park (Jon Atwood, 3 November). It was still there on 11 January and with it was the **Olive-sided Flycatcher** (third or fourth winter record)

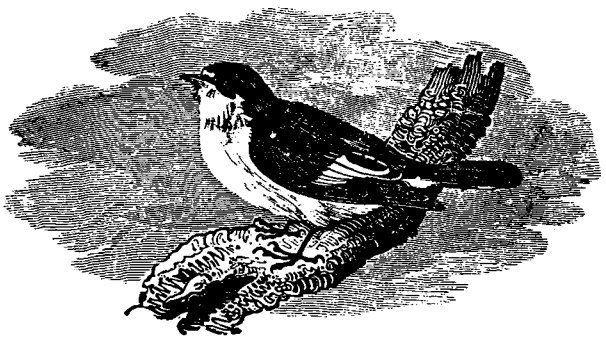


which wintered there last year (Larry Sansone). **Vermilion Flycatchers** were widely reported: a pair at Morongo Valley (Mitch Heindel, 2 November); a male at Prado Basin Park (Doug Willick, 11 November); and two in Ventura County (Richard Webster). The **Common Skylark** returned to Pt. Reyes for the third winter in late October. Several **Barn Swallows** at NESS on 3 November (Paul Sykes) and one at Whittier Narrows on 5 November (Mickey Long) were late records. California's first **(Sedge (Short-billed Marsh) Wren,** long anticipated and long overdue, was found in the marsh near Bolinas Lagoon (Dave De Sante, 4 November). It proved difficult to relocate, and was last seen on 8 November by a fortunate few. **Varied Thrushes** were seldom reported: at Deep Springs, Inyo County (1 November); at Scotty's Castle, Death Valley, (25 October); in the Oak Canyon Nature Center, Anaheim (Doug Willick, 25 November) where there was a **Townsend's Solitaire** on 4 November; and in the Tucker Sanctuary (Orange County CBC, 4 January).

A **Sprague's Pipit** (very rare here) was seen at SESS on 25 October by John Black from Saskatchewan, where he is familiar with them. Two **Solitary Vireos** (rare in winter) were found in Huntington Beach Central Park—one was the coastal race *(V. s. cassinii)* and the other was the rarer Rocky Mt. race *(V. s. plumbeus).* A **Warbling Vireo** (very scarce in winter) was in Bob Neuwirth's Arcadia yard on 27 December. Another rarity was a **Philadelphia Vireo** found at Deep Springs on 25 October (Guy McCaskie and Larry Sansone).

Eastern **Warblers,** both late migrants and wintering individuals, were eagerly sought. The **Black-and-white** was still in the big sycamores above Zuma Beach for the Malibu CBC; another was in the tall willows at Harbor Lake during November and December (Mitch Heindel); still another was in a willow clump near the Santa Ana River (Sam Berry, 25 November); and at least two were in the Santa Barbara area. The **Worm-eating Warbler** found on the Santa Barbara CBC (3 January) could not be relocated later. Single **Tennessees** were in the Newport Beach Ecology Park (Brian Daniels, 9 January); three were near Ventura (Richard Webster) and at least seven were near Santa Barbara. The **Virginia's** in Tapia Park stayed for at least two weeks after 26 October (Sandy Wohlgemuth), but the Virginia's in the Newport Beach Ecology Park was definitely wintering there. An adult **Lucy's** in the willow clump at Harbor Lake (Mitch Heindel, 26 October) stayed into December at least, and another Lucy's was near Santa Barbara. A **Magnolia** at Deep Springs on 1 November

was very late (Bruce Broadbooks). A dull immature **Cape May** on Bonsall Road was seen only on the Malibu CBC (Hank and Priscilla Brodkin, 21 December). The latest report of a **Black-throated Green** was at Scotty's Castle on 27 October (the Clarks). A female **Black-throated Blue** was in Morongo Valley (Bob McKernan, 16 November). The **Grace's Warbler** returned to the giant cypress trees in Montecito for the second winter. **Blackpolls** are rare inland—thus, one at Mesquite Springs, Death Valley, was of special interest (the Clarks, 28 October). **Palm Warblers** were seldom reported compared with the dozens in the fall and winter of 1979—one was in the Antelope Valley on 25 October (Jon Dunn) and two are wintering in Santa Barbara. A **Northern Waterthrush** at Pt. Mugu was the only definite report, although there are probably others in the San Diego area. A female **Hooded Warbler** at Deep Springs on 25 October was the only report this fall (Larry Sansone and Guy McCaskie). **American Redstarts** were at Bonsall Road on 26 October; at Scotty's Castle on 25 October; and near McGrath State Park, Ventura.



Increased interest and coverage of promising areas has shown that small numbers of western warblers other than "Audubon's" are widespread on the coast in winter. **Orange-crowneds** are expected; **Yellows** are proving to be more frequent, but still quite rare in winter—two wintered at Harbor Lake; two were on the Malibu CBC, five were on the Santa Barbara CBC, etc.; **Townsend's** are more common with six at Harbor Lake and singles in Arcadia and Huntington Beach; single **Black-throated Grays** were in Arcadia, Huntington Beach and Harbor Lake; most unusual were two **MacGillivray's**—one in Eric Brooks' yard in San Pedro on 22 December and another in Huntington Beach (Doug Willick, 25 December); and **Wilson's** are occasionally seen in winter.

Wintering orioles are usually found near flowering eucalyptus trees. An adult male **Orchard Oriole** near Ventura was the only report (Richard Webster). Reports of six **Scott's Orioles** were unprecedented: three males and a female in a monastery garden above El Toro for the Orange County CBC (Charles Rock, 4 January); a single male in Sierra Madre for the Pasadena CBC (Becky and Cynthia Null, 29 December); plus one near Santa Barbara. **"Baltimore" Orioles,** too, were widely seen: a male at Pt. Fermin Park on 9 November (Donna Dittmann and Terry Clark); a male and female on Bonsall Road (the Brodkins, 22 November); one near Ventura; and seven (!) near Santa Barbara. Not too surprisingly, **Hoodeds** were in the minority. An obvious escapee was a male **Lichtenstein's (Altamira) Oriole,** as large and as handsome as those in southern Texas, at Whittier Narrows (John Smitt, 5 December). It stayed for at least a month and was seen often.

Western Tanagers were widely reported with a maximum of five together at the Los Angeles Country Club on 4 January (Kimball Garrett, Ken Kendig). A male **Hepatic Tanager** returned to Oceanside, where one or more have been found on the past five CBC's (Dave Povey, 28 December). Our only report of a **Summer Tanager** was near Santa Barbara.

A young male **Rose-breasted Grosbeak** visited Barbara Elliott's myoporum bushes in coastal Malibu on 29 October; a female was at FCR on 29 October (the Clarks); and a male was in the Santa Barbara area. **Black-headed Grosbeaks** are probably less frequent in winter than their eastern cousins. We have only one report, a female at Whittier Narrows on 5 and 8 November (Mickey Long). Another probable escapee was a male **Painted Bunting** at Bob Rains' Temple City feeder in late December. Three **Evening Grosbeaks** at Big Bear City (6,800 ft.) were the only report (Mike San Miguel). The **Green-tailed Towhee** at the Arcadia Arboretum appeared to be wintering (Barbara Cohen, 19 October). Three **Lark Buntings** near Niland for the SESS CBC on 27 December were the only ones reported.

The high tides in late December did not produce any **Sharp-tailed Sparrows** at Newport, as they did a few years ago, but one was seen below San Diego. An adult **Black-throated Sparrow** seems to be wintering in Lew Hasting's La Canada yard. **Juncos** were present in normal numbers but few **Gray-headeds** were reported: one in Tapia Park where one or more have been in recent winters (Sandy Wohlgemuth, 26 October), and one in Long Beach Recreation Park (Brian Daniels, 20 November). **American Tree Sparrows,** too, seemed to be down: one at Santa Margarita (Arnold Small *et al,* 2 November); and one at FCR where two **Clay-colored Sparrows** were seen by the Clarks on 29 October. The only **Harris' Sparrow,** an immature, was at FCR in late October. **White-throated Sparrows** were widely reported: at Big Sycamore Park (Justin Russell, 2 November); at Scotty's Castle on 28 October and at FCR the next day (the Clarks); at Long Beach Recreation Park (Brian Daniels, 20 November); at Huntington Beach Central Park (Doug Willick, 28 December); and five in the Santa Barbara area. The Clarks also saw an **Eastern Fox Sparrow,** which is much more colorful than our western races, at Scotty's. **Swamp Sparrows** were at Finney Lake, Imperial County (Doug Willick, 22 November); plus five in Ventura County, four near Santa Barbara, and three near Santa Maria.

Longspurs were found in several locations, largely as a result of the CBC's. Two **McCown's** were at Deep Springs (Guy McCaskie and Larry Sansone, 25 October), and six more were at SESS on 6 January. A single **Lapland Longspur** was there on 27 December. The mesa above O'Neill Park again provided some fifty longspurs for the Orange County CBC, mostly **Chestnut-collared** with two probable McCown's. George Ledec and Curtis Marantz found some fifty Chestnut-collareds in a field near Lancaster on 31 December, and Arthur Howe had a single Chestnut-collared at Pepperdine University on 14 December.

The above mass of reports make it obvious that birders to the north of us, in Ventura and Santa Barbara Counties, either have better habitat than we in Los Angeles County do, or they cover it better, or both. The same situation probably exists in San Diego County, but we have few reports from that area this winter.

Resolved: more time in the field in 1981!

I'll see you at SESS on the 7th of February.

Send any interesting bird observations to:
Shum Suffel, 1105 No. Holliston Ave., Pasadena, CA 91104

On Yard Birds and Others

The Osprey and the Peahen

by Dorothy Dimsdale

Like many other birders who are lucky enough to have some greenery around their homes, I keep a yard list. We overlook a wild canyon, and I have listed some real goodies — though I can't compete with Barbara Elliot who lives above Malibu. She has a Magnificent Frigatebird on her yard list, as well as Bendire's and Sage Thrashers. My best yard bird is an Osprey and my worst was a Peahen. The Osprey appeared from nowhere and perched peacefully for four hours on our "Hawk Tree", and then flew off to disappear forever. But for me it was a blissful four hours.

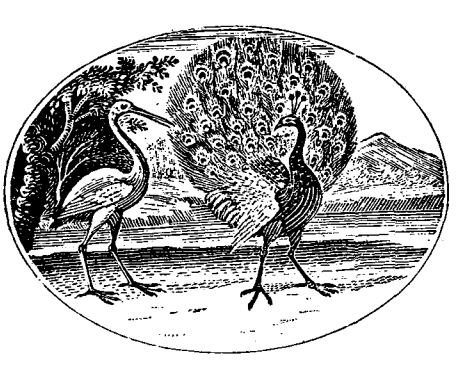
The Peahen was a very different story. It was my worst bird because it was almost certainly an escapee and so I couldn't count it, and apart from that it created problems.

One morning I woke to the sound of elephant-like clomping feet on the roof, accompanied by raucous shrieks. Cautiously, I went outside just in time to see a Peahen take off and land on a spindly maple tree where it proceeded to sway wildly while liberally showering the plants beneath with huge droppings. It was comparatively tame, and I fervently hoped it would return to wherever it had escaped from, if left alone. It was not to be.

We endured three days of thundering feet on the roof, dislodging the rock, which tumbled noisily into the gutters and from there to the ground. We also suffered the ghastly unmusical shrieks — not to mention the huge droppings which were slowly but surely blanketing home and garden in wintery white.

Both my husband and I got bored with Peafowl in general. If the bird wouldn't go away, we decided we would capture it and try to find its owner. This was easier said than done. After two hours and with great difficulty, we persuaded the bird to enter the garage, whereupon we slammed down the door and peace reigned, except of course, anywhere near the garage, where strange tappings and muffled shrieks could be heard. There are several windows in the garage, and so it wasn't dark in there. The old Peahen wasn't inclined to snooze in daylight hours. Rather foolishly, we had neglected to move our cars out, and so we had to hurry with our next move.

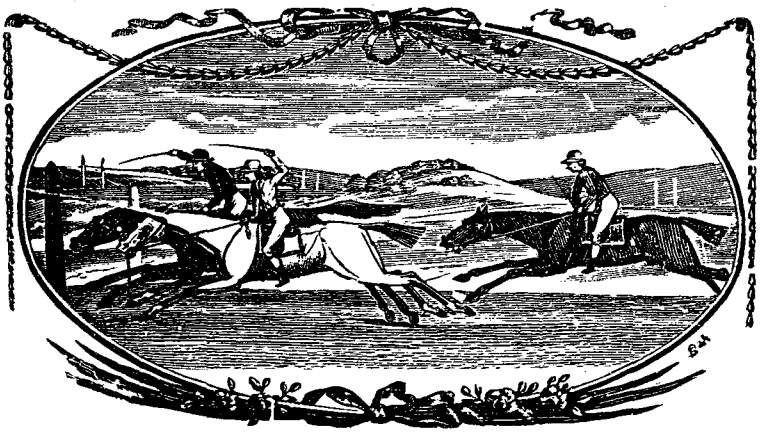
We finally prevailed upon the Department of Animal Regulation to come and pick up the bird. With an audience of a dozen neighbors, we opened the garage and there was the Peahen, enthroned on top of the newest car which was so splattered with droppings that even Earle Scheib would have upped his price to respray it. The Animal Regulation man walked up to the bird, said "Come here, Gertrude", grabbed her and stuffed her in his van. We haven't heard from him since. It was near Thanksgiving and I have always wondered about "Gertrude's" fate.



Yard Lists Lead to House Lists

The Suffels added a bird to their house list. We were first aware of it early on the morning of October 2, 1980, when we were awakened by beating and scratching noises on the screen of the open french doors at the head of the stairs. Upon opening one screen door, we saw a terrified Scrub Jay make its escape. But how did it get into our carefully locked-up house? Ashes scattered on the rug in front of the fireplace told the story. It had come down the two-story chimney into the ashes of last winter's fires, and then thrashed its way through the ashes and between the curtains of the firescreen, across the livingroom, and up the stairs toward the light of the open, but screened doors. And how many species constitute our house list now? Exactly one.

—S.S.



Birding the Opening Day at Santa Anita

They were off at Santa Anita on the day after Christmas — all 66,599 of them; the temperature was 84° F and the skies were blue. Togetherness with wife, son and friend was the object of the day. After a half-hour wait to buy seats in the grandstand, we settled in just in time to see a flock of seven Killdeer flushed from the Innercircle by the rapidly increasing crowd. One of the Killdeer, a loner, landed in front of the grandstand and rested under the Totalisator Board, where it watched the first four races, only to be flushed by the fifth race on the turf.

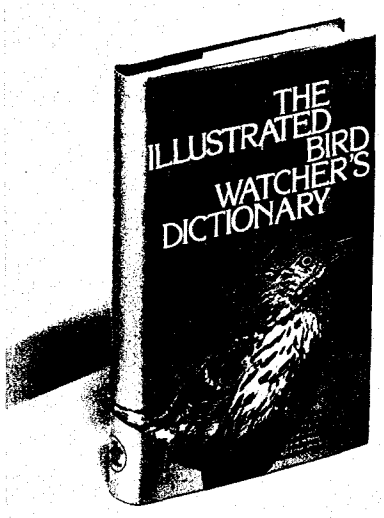
Willie Shoemaker was making his bid on the far turn when he put up a flock of 18 Spotted Doves, the most numerous species seen during the afternoon — 89 altogether. The Budweiser Clydesdales flushed nine Meadowlarks as they came on the track to do their bit for entertainment. Seventeen Ringbilled Gulls circled the Infield, nine adults in basic plumage and eight like the crowd (in various stages of immature plumage and behavior). During the last race, a lone Starling came into the stand to roost. Three House Sparrows, two House Finches, a flock of five Starlings and a possible White-crowned Sparrow completed the day's lists.

Just across the street at the Arboretum, Barbara Cohen was seeing all kinds of good birds, and as it says on my bumper sticker — "I'd rather be birding."

— *H.E.C., Jr.*

Books

Briefly Noted:



The Illustrated Bird Watcher's Dictionary

Donald S. Heintzelman, 164 pp, Tulsa, OK, Winchester Press

This unique and essential reference guide fills a longstanding gap in ornithological literature. No longer will birdwatchers have difficulty with terms like *anatidae, boil, cere, crop, eclipse plumage, endemic* and *Zugunruhe.*

In addition to concise explanations of most nature terms, the book offers common regional or idiomatic names for birds, as well as brief biographical paragraphs on ornithological luminaries such as Baldwin, Baird, Van Tyne and many others. The book contains over 1100 entries and includes over one hundrd black and white photos, hand-drawn maps and other illustrations.
(Not for sale in Audubon Bookstore)

WESTERN TANAGER

EDITOR Mary Lawrence Test

Published ten times a year by the Los Angeles Audubon Society, 7377 Santa Monica Blvd., Los Angeles, CA 90046.

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A Guide to Bird Finding East of the Mississippi

Olin Sewall Pettingill, Jr. 689 pp. New York: Oxford University Press.

This book is exactly what the title states. Pettingill has, however, extensively revamped his 1951 book of the same title, as the American environment and the distribution of birds has changed a great deal since then.

For each of the twenty-six eastern states, Pettingill lists the main species of birds for each of the states' habitats and the dates of bird concentrations. Following this, he gives the main birding locations in the state with directions as to how they can be reached, and birds to be expected. In most cases, directions are adequate and one can always make local inquiries.

This new edition of the guide has 80 pen and ink drawings by George Miksch Sutton, and includes three maps inside the covers with all state locations numbered and listed.

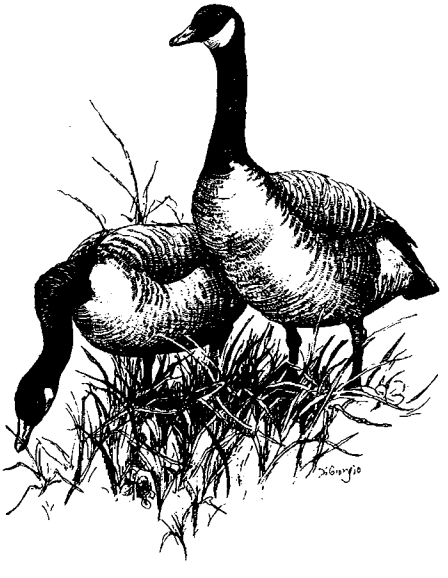
All in all, this is a thorough, well-compiled up-date, and traveling birders will find it very worthwhile.

— *Ruth Lohr*

A Life Outdoors: A Curmudgeon Looks at the Natural World

Wayne Hanley, 115 pp, Brattleboro, VT, The Stephen Greene Press.

A Life Outdoors is the 1980 volume of the Man and Nature Series of the Massachusetts Audubon Society. For 16 years, from 1964 to 1980, Wayne Hanley was editor of publications for Massachusetts Audubon, and he wrote a weekly column that was distributed to newspapers and radio stations throughout New England. Some of the best of these columns are gathered in this volume, juxtaposed with touching autobiographical sketches. "It has to be wild and natural or it does not interest me", says Hanley. If the wild and natural interest you, you will not fail to enjoy these dry, instructive essays written by a very articulate naturalist, as well as the accompanying drawings by Michael A. DiGiorgio.
(Not for sale in Audubon Bookstore)



CALENDAR

Los Angeles Audubon Headquarters, Library, Bookstore, and Nature Museum are located at Audubon House, Plummer Park, 7377 Santa Monica Blvd., Los Angeles, CA 90046. Telephone: (213) 876-0202. Hours: 10-3, Tuesday through Saturday.

Audubon Bird Reports:

Los Angeles *(213) 874-1318*

Santa Barbara *(805) 964-8240*

LAAS Pelagic Trip Reservations — 1981 Schedule

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, c/o Audubon House.

No reservations will be accepted or refunds made within two weeks 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. *Please send a separate check for each trip!*

Important: Because of the rapidly rising cost of motor fuel, all listed trip prices are subject to change. Please bring an extra five dollars in one dollar bills to cover possible fuel surcharge. Boats will not leave port until trips have been paid in full, including any surcharge.

SUNDAY, APRIL 26 — San Pedro to Osborne Bank. 7:30 a.m. to 5:30 p.m. Cost: $18 per person. The *Vantuna* departs from San Pedro (44 spaces plus two leaders). This is an LA County trip! Leaders: Fred Heath and Shum Suffel.

SATURDAY, MAY 30 — San Miguel Island and out to sea. *Ranger 85* (with galley, no ice chests) departs from Oxnard Marina at 2:00 a.m. Board after 9:00 p.m. Friday 29th. Return 4:00 p.m. on Saturday. Cost: $38 per person. 54 bunks plus two leaders. Leaders: Fred Heath and Lee Jones.

SUNDAY, JUNE 28 — Anacapa Island and out to sea. This is a beginners' trip — come look for the American Oystercatcher! Cost: $22 per person. *Sunfish* departs Ventura Marina 8:00 a.m., returns 5:00 p.m. 43 spaces and two leaders. Leaders: Olga Clarke and Art Cupples.

SUNDAY, AUGUST 2 — San Pedro to San Clemente Island. The *Vantuna* departs San Pedro at 5:30 a.m., returns 6:00 p.m. Cost: $25 per person. 44 spaces plus two leaders. Join leaders Shum Suffel and Phil Sayre in the search for the Red-tailed Tropic Bird.

SATURDAY, AUGUST 29 — San Miguel Island and out to sea. Cost: $38 per person. Boat departs Oxnard Marina; board the *Ranger 85* (with galley, no ice chests) after 9:00 p.m. Friday 28th. Return at 4:00 p.m. on Saturday. 54 bunks and two leaders (to be announced). This boat will go to Cortez Ridge.

SATURDAY, FEBRUARY 7 — Bird the **Salton Sea** with Hal Baxter (355-6300) and Shum Suffel (797-2965). Meet at 8:30 a.m. at the Wister turnoff on Highway 111. A great day with the wintering species!

SATURDAY, FEBRUARY 7 — Ballona Wetlands. Come join the shanmans (545-2867, after 6) on this popular trip through a local wetlands. Meet at 8 a.m. at the Pacific Avenue bridge. To get there, take 90 West (Marina Fwy.) to Culver Blvd. (end). Continue west on Culver, turn north on Pacific Avenue, straight to bridge.

TUESDAY, FEBRUARY 10 — Evening Meeting. 8 p.m. Plummer Park. For the second year in a row, you will have a chance to meet the LAAS Board and participate in an open discussion regarding *your* society. Do come!
Conservation Committee Meeting, 6:45 p.m.

SATURDAY, FEBRUARY 21 — Meet at 8 a.m. at the Nature Center to bird **Whittier Narrows** with Mary Thompson (456-8779) and Stephanie King (558-0516).

TUESDAY, FEBRUARY 24 — LAAS Banquet at the Sportsman's Lodge. We will raffle a Bausch & Lomb Discoverer telescope and a Bushnell tripod. Speaker: Herb Clarke.

SATURDAY, MARCH 7 — Bird **Ballona Wetlands** with the Shanmans (545-2867, after 6). Same details as Feb. 7.

SATURDAY, MARCH 7 — Spend the morning at **Harbor Lake.** Meet at 8 a.m. at the Boat House to bird the area with Tom Frillman (456-8779).

TUESDAY, MARCH 10 — Evening Meeting. 8 p.m. Plummer Park. **Dean Hector** will describe his work with the Aplomado Falcon and will discuss its habitat, its range (formerly into the US), as well as other raptors in the region.
Conservation Committee Meeting, 6:45 p.m.

Los Angeles Audubon Society
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Los Angeles, CA 90046

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