



HUMMIN'

PALOS VERDES/SOUTH BAY AUDUBON SOCIETY DEC/JAN 2006 Vol. XXVII No.6

CONGRESSIONAL ASSAULT ON ENDANGERED SPECIES

By Lillian Light

In 1973 Congress enacted the "Endangered Species Act" (ESA) to prevent species from becoming "extinct as a consequence of economic growth and development", and to "preserve their aesthetic, ecological, educational, historical, recreational, and scientific value to the nation and its people." Thirty two years later on September 29th, to their everlasting shame, our House of Representatives passed legislation aimed at dismantling the protections of one of our nation's strongest conservation laws. (The vote was 229 to 193.)

Now fate of the landmark ESA depends on the Senate. Only continued pressure by strongly motivated environmentalists can save it now!

The purpose of the ESA is to provide "a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved," and it does so by creating a list of imperiled species, protecting them from direct harm, and safeguarding habitat critical to their survival and recovery.

Our Senators are being lobbied by a powerful, well-funded coalition of mining, logging, ranching, petroleum, and development interests to allow them access to the millions of acres of land and to the thousands of miles of rivers that currently receive additional protection because they are critical to the survival of endangered species.

Today, species are vanishing from the earth at a rate of one a day, surpassing even the mass extinctions 65 million years ago when the dinosaurs perished. Those ecosystems that provide the life-support system for our own species are being destroyed. The rising numbers of endangered species are clearly canaries in the coal mine indicating peril to the health of humans. The fundamental truth is that our

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Chapter Get-Togethers

The Chapter will continue its new series of Chapter Get-Togethers in the New Year. On January 17, Tracy Drake, the naturalist manager of the Madrona Marsh Preserve, will provide an overview of efforts involved in setting aside such a large tract of open land as habitat and will discuss goals for the future. Tracy has been very effective in directing the management of the Marsh in a way that has increased habitat and ensured that bird, insect and mammal species have an environment that is conducive to sustainability, which is very difficult in a preserve in the middle of an urban jungle.

On February 21 Dr. William "Bill" Ailor. Bill, founder and current President of the Palos Verdes Peninsula Land Conservancy, will provide insights about how the Conservancy has been instrumental in setting aside the huge tract of land that will be known as the Portuguese Bend Nature Preserve. We will learn about future plans for the Preserve and necessary steps ahead to procure additional land in order to secure what is now in danger of becoming part of a multi unit housing development.

Future speakers include:

- *March*: Ann Lynch, South Bay Wildlife Rehab;
- *April*: Bill Brand on plans for a wetland preserve at the old powerplant site in Redondo Beach;
- *May*: Jess Morton on spiders of the South Bay;
- *June*: Phil Barnes on the technical details of how the albatross remains aloft without flapping its wings .

Get-togethers, which include bird quizzes and raffle prizes from Wild Birds Unlimited , begin at 7:00PM and are held at the Madrona Marsh Preserve.

PRESIDENTS' COLUMN

by Frances Spivy-Weber

Palos Verdes/South Bay Audubon has three presidents, Martin Byhower, Bob Shanman, and me. As a group of three, we make a whole, each bringing special talents to the chapter. One of my contributions is experience with environmental issues, particularly those related to water. In my "day" job, I am the Executive Director for Policy of the Mono Lake Committee, and for nine years, I have promoted water conservation policies in Los Angeles and statewide. There is so much hopeful news now on our state's more efficient use of water that I wanted to take the opportunity of the *Hummin'* Presidents' Column to share it with you.

In my view, future generations will judge today's political leaders in part on how well their water supply strategy anticipated future risks, such as earthquakes, global warming, and drought, while meeting the water needs of people, the economy, and environment. Based on what we know today, those with water conservation as the centerpiece to their strategy will undoubtedly get high marks. Individuals, too, have a role to play at home and in the work place or school. Make water conservation a NEW YEAR's Resolution.

The following plans and reports on California's water future published in 2004 and 2005 provide useful background.

The California Water Plan 2005

(www.waterplan.water.ca.gov): The new water plan concludes that the State can meet its projected urban, environmental, and agricultural water needs in 2030 if water users adopt some, but not all of the cost-effective conservation measures currently available. Further, the Plan says this is true for Southern California, but not the Sacramento/San Joaquin River, or North Coast regions. See www.waterplan.water.ca.gov/docs/cwpu2005/highlights/Highlights-web.pdf for a summary of what water is available statewide.

Water for Growth: California's New Frontier, by the Public Policy Institute of California (www.ppic.org): Using data from the California Water Plan 2005, this report finds that there are plenty of opportunities for balancing the supply and demand of water. The state will have to play a role in creating the right incentives at the local level, and local and regional agencies will have to make sure they are taking full advantage of the options

available to them—conservation, storage, proper pricing, and thoughtful planning of new developments.

CA2025: Its Your Choice, by the Public Policy Institute of California (www.ppic.org): This report recommends Californians resist more building of dams and other water structures to meet the projected demands of a growing population, but rather meet the water needs of the future through managing demand and encouraging conservation.

Investment Strategy for California Water, Project of Water for California, coordinated by the Planning & Conservation League (www.pclf.org): This document estimates the State will need 3-3.4 million acre feet of additional water to meet future water supply demands. More than that amount can be had from urban water conservation (2-2.3 maf), agricultural water conservation (.3-.6 maf), recycled water (1.5 maf), and groundwater treatment and desalination (.29).

Waste Not, Want Not: The Potential for Urban Water Conservation in California, by the Pacific Institute (www.pacinst.org): This report estimates one-third of California's current urban water use—more than 2.3 maf—can be saved with existing technology. At least 85% of this can be saved at costs below what it would cost to tap into new sources of supply and without the many social, environmental, and economic consequences that many types of major water project will bring.

Energy Down The Drain: The Hidden Costs of California's Water Supply, by the Natural Resources Defense Council and the Pacific Institute (www.nrdc.org): This review underscores the value of urban and agricultural water conservation to reducing energy use and energy bills. The single largest user of energy in California is the State Water Project (SWP), which accounts for 2-3% of all electricity consumed in California. The annual operating cost of the SWP is about \$900 million, of which at least a third is related to power costs. When water conservation in Southern California reduces the need for importing water through the SWP, the State saves money and energy statewide.



PALOS VERDES CHRISTMAS BIRD COUNT

This year the Palos Verdes/South Bay Audubon Chapter is hosting its 40th Annual Christmas Bird Count. The chapter CBC Committee, whose members include Dave Moody, Kevin Larson, Eric and Ann Brooks, and Martin Byhower, has taken steps to update and improve many aspects of the count. We have compiled more user-friendly lists and introduced some state-of-the-art procedures to make our count what we hope will be one of the nation's foremost, in terms of coverage, accuracy, scientific validity, and (the fun part!) number of species sighted.

The 2005 count will be on Monday December 26, sun up to sundown, with an optional potluck and tally at the end. We may even have some pre-dawn Owling. We average 159 species a count. The high count was 185 species in 1994. We have tallied a total of 318 species over the last 39 years. Several exotic species a year are noted in addition. Almost every year something totally unexpected has been discovered. Whether a Laughing Gull, a Gray Catbird, a Blackburnian Warbler, or a Clay-colored Sparrow--all are unusual species in the winter here in L.A. County.

You don't need to be a top-notch birder to help out, but it helps if you are a competent one, interested in improving your skills as well as furthering the goals of using field science to further conservation. There are orientation classes coming up at Madrona Marsh on Dec 10 (Martin Byhower) and 17th (Bob Shanman). You might wish to attend our chapter's monthly walks at SCBG, Ken Malloy/Harbor Regional Park, and Madrona Marsh if you wish to freshen up on local bird life (see Calendar.)

BIRDING ETIQUETTE

Chaparral Naturalist, the newsletter of the Pomona Valley Audubon Society, recently adapted the American Birding Association's Code of Birding Ethics for an article on birding etiquette for beginning and long-time birders.

1. Promote the welfare of birds and their environment.

- Support the protection of important bird habitat.
- Avoid stressing birds or exposing them to danger—exercise restraint and caution during observation, photography, sound recording, or filming.
- Limit the use of recordings and other methods of attracting birds.
- Before advertising the presence of a rare bird, evaluate

the potential for disturbance to the bird, its surroundings, and other people in the area.

- Stay on roads, trails, and paths where they exist; otherwise, keep habitat disturbance to a minimum.

2. Respect the law, and the rights of others.

- Do not enter private property without the owners permission.

- Follow all laws, rules, and regulations governing use of roads and public areas, both at home and abroad.

- Practice common courtesy in contacts with other people. Your exemplary behavior will generate goodwill with birders and non-birders alike.

3. Ensure that feeders, nest structures, and other artificial bird environments are safe.

- Keep dispensers, water, and feeders clean.

- Maintain and clean nest structures regularly.

- If you are attracting birds to an area, ensure the birds are not exposed to predation from cats and other domestic animals, or dangers posed by artificial hazards.

4. Group birding, whether organized or not, requires special care.

- Respect the interests, rights, and skills of fellow birders, as well as people participating in other legitimate outdoor activities. Be especially helpful to beginning birders.

Jess Morton Photo Exhibit

In all that he does, Jess Morton brings class and commitment. This is as true of Jess's work for the conservation of the South Bay's wildlife and open spaces as it is of his other endeavors, including the graphic arts, education, poetry, and photography.

Anyone who has accompanied Jess on a birdwalk, really a nature walk, has come away with a new understanding of some or several parts of the world around them. The same may be said about reading Jess' poetry or having an opportunity to hear Jess share his poetry in his own voice.

The Madrona Marsh Nature Center is offering a chance to learn in yet another way from Jess. Between November 5 and December 17, the Center is hosting an exhibit of Jess's photos entitled "The Light I See..." See page 11 for a black-and-white example from the show.

BIRDS OF THE PENINSULA

September and October 2005

by Kevin Larson

Though this fall will not be remembered for the impressive numbers or great variety of migrants and vagrants found locally, there was a number of amazing records that will be recounted in local bird lore for many years to come. As reported in the previous issue, our first local Curlew Sandpiper was found in August. Another first area record came soon after. A Red-faced Warbler photographed in El Segundo in August was among the astonishing reports received in September. A Red-tailed Tropicbird found at Cabrillo Beach in September is another species previously unrecorded here. Other September highlights included the long-awaited—twenty-six years to be exact—second local record of a Painted Redstart, and the third Mississippi Kite ever reported locally. Birding excitement in October, a month during which innumerable rarities have been found in the past, was excruciatingly slow to develop. When it seemed our October bounty would only include a small number of the rare-but-regular vagrants, a good wave of vagrant warblers finally arrived 21-25 October.

The last three weeks of summer were fairly cool and often cloudy from low pressure or onshore flow. A vigorous thunderstorm passed through the area on 20 September; one-quarter of an inch of rainfall was enough to break the record for the date at LAX. High pressure taking control from 28 September to 15 October coincided with generally poor birding locally. Raising coastal temperatures to the mid-nineties at times, a dry offshore flow was recurrent during this period. Just over an inch of rain fell at LAX 16-18 October; this weather system's effect in grounding hoped-for vagrants was negligible. The only good vagrant wave came while a deep marine layer, drizzle, and a complete lack of sunshine loomed over our area 21-25 October. Vagrant warblers found at this time included a Black-throated Blue, a Black-throated Green, a Black-and-white, and a Mourning.

Six Wood Ducks were found at Alondra Park (AP) on 23 Oct (David Moody-DM); two remained on 27 Oct. Another was at Charles Wilson Park on 23 Oct (Kevin Larson-KL). An ailing **Red-tailed Tropicbird** picked up at Cabrillo Beach on 19 Sep and taken to a rehab facility in San Pedro furnished our first area record (fide Kimball



Black Skimmer
(Gary Kramer, USFWS)

L. Garrett, photographed by Susan Kaveggia). This highly-pelagic species of tropical and subtropical waters is completely unexpected along our shores. An American Bittern found at the Ballona Freshwater Marsh (BFM) on 3 Oct was a fall arrival (David Bell-DB), as was one at Harbor Park (HP) on 8 Oct (KL). Three Cattle Egrets at Ballona Creek near the 90 freeway on 15 Oct were the only ones reported (KL). Four White-faced Ibises flew over Torrance on 26 Sep (KL), and one was at BFM on 4 Oct (Richard Barth-RB).

Seven White-tailed Kites in the Ballona Area on 22 Oct was a high count (Jonathan Coffin-JC). Very rare in California, a subadult **Mississippi Kite** was over the South Coast Botanic Garden (SCBG) on 18 Sep (KL). One flying north over Portuguese Bend on 26 Sep 1992 (Jon Atwood) and one over Torrance on 30 Apr 1994 (Mitch Heindel) are the only previous reports from our area. A Prairie Falcon over Green Hills Memorial Park (GHMP) in San Pedro on 18 Sep is one of few modern records for our area (Steve Sosensky-SS)

Single Solitary Sandpipers were seen at the L. A. River (LAR) on 1 Sep (DB), 3 Sep (KL), and 30 Sep-1 Oct (RB). A juvenile Red Knot at LAR in Paramount on 1 Sep was the only one found (RB). An estimated twenty-three juvenile Baird's Sandpipers visiting LAR 6 Aug-24 Sep made a good total (RB, KL). Only about nine juvenile Pectoral Sandpipers were found at LAR 29 Aug-1 Oct (RB, KL). Daily counts never exceeded two individuals; last year, twenty were counted on 26 Sep alone. Unrecorded in our area since 2002, a Black Tern flew south past Pt. Vicente on 10 Sep (KL). Two juvenile Black Skimmers were inland at LAR near Willow St. on 4 Sep (RB); one remained the next day. A Pigeon Guillemot at the Marina del Rey harbor mouth on 10 Sep was a rare record of a dispersing juvenile along our coast (DB).

Two White-winged Doves were at SCBG on 4 Sep (Russell Stone-RS); singles were at BFM on 4 Oct (RB, Don Sterba) and at Madrona Marsh (MM) on 21 Oct (Doug McNair). A Burrowing Owl was in the Ballona area 29-30 Oct (JC). A migrant Lesser Nighthawk was over Mar Vista at dawn on 14 Sep (KL). For the seventh consecutive fall, a Common Poorwill found refuge in Brad and Amy Henderson's Lawndale yard; it was present on and after 8 Oct. Two late Costa's Hummingbirds were at DeForest Park (DP) in Long Beach. An immature male remained in the northern portion of the park 12 Sep-5 Nov while a female kept a similarly small territory at the south end 22 Oct-5 Nov (KL). Another Costa's at Sand Dune Park (SDP) on 16 Oct was the only other report in our area this fall (KL). In addition to a male Nuttall's Woodpecker at DP 6 Aug-5 Sep, a female made an appearance 3 Sep-25 Oct (KL); another was found at AP on 2 Oct (DM). A well-described **Hairy Woodpecker** moved through MM on 24 Sep (Tracy Drake, John Small); few records exist here.

A Least Flycatcher at Ballona Lagoon on 14 Sep was documented by excellent photographs (DB). Two Hammond's Flycatchers was about average total for a fall season; one was at SDP 17-18 Oct (RB) and another was at DP on 22 Oct (KL). Single Gray Flycatchers were at Banning Park (BP) on 10 Sep and at SDP on 20 Sep and 29 Sep (KL). Single Dusky Flycatchers at SDP on 2 Sep and 9 Sep were believed to be different individuals; another was at SCBG on 4 Sep (KL). Returning for its third winter, the male Vermilion Flycatcher at Columbia Park in Torrance was present as early as 28 Sep (DM); a female at Earvin Magic Johnson Recreation Area in Willowbrook, first seen on 17 Oct, was undoubtedly the individual that spent the previous winter



Bufflehead

(Donna Dewhurst, USFWS)



Bobolink

(S. Maslowski, USFWS)

there (RB). Tropical Kingbirds were found at HP on 2 Oct (KL) and 29 Oct (Martin Byhower-MB). Present 11 Oct-5 Nov, a Bell's Vireo had returned for its third winter at DP (RB). A Plumbeous Vireo at Wilderness Park on 18 Sep may be our earliest fall record (KL); others were at Recreation Park in El Segundo on 20 Oct (RB), and at DP 25 Oct-1 Nov (RB). Though Cassin's Vireo is generally a scarce fall migrant, it was unusual not to hear a single report.

A Bank Swallow over LAR at Willow St. on 17 Sep was only the second spotted locally this fall (KL). A Brown Creeper was at SDP 3-18 Oct (RB); this specialist of mountain conifers was favoring the Brazilian Pepper trees in the park. A Golden-crowned Kinglet was at Peck Park in San Pedro on 23 Oct (KL). Western Bluebirds continue their residency in the vicinity of Highridge Park; two were present on 13 Sep (Sally Moite). Generally rare as a fall migrant, a Swainson's Thrush was at SDP 20-24 Sep (KL). A Sage Thrasher at BFM 16 Sep-12 Oct (DB) was the second in as many fall seasons there. Difficult to find in recent years, two Phainopeplas at BP on 3 Sep were the only ones reported this fall (KL).

The twenty-three warbler species recorded 22 Aug-24 Oct made a decent total despite the fact that rarities were scarce during the first three weeks of October. We could not find an American Redstart this fall. Chestnut-sided Warblers were seemingly found with ease elsewhere in the county, but this species eluded us here. Mark Conrad (MC) found a Tennessee Warbler at SDP on 25 Sep. Single Virginia's Warblers were recorded at Ballona Lagoon on 3 Sep (DB), and at MM on 11 Sep (KL). An adult male **Black-throated Blue Warbler** at SDP 21-25 Oct was very cooperative for several

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Endangered Species Act, continued from page 1

civilization can survive only if its roots are in healthy and diverse natural systems. These efforts to help our native species survive ensure more open space, free flowing rivers and healthy environments for people.

Without the Endangered Species Act, the Condor, Bald Eagle, Wolf, Grizzly Bear, Florida Panther, Manatee, California Gray Whale and hundreds of other species would be extinct today. The Act is also moving species toward full recovery at a rapid rate. Seventy percent of the 1300 endangered species listed are showing stable or improving recovery. The Key Deer, American Crocodile, Whooping Crane, California Least Tern, and the Least Bell's Vireo are just a few of the many species whose population numbers have dramatically increased since being placed on the endangered species list.



Senators Inhofe (R-OK) and Crapo (R-ID) are introducing a bill similar to the travesty passed by the House of Representatives. It would repeal the requirement to protect "critical habitat", and will allow federal agencies and industry to harm imperiled species without first consulting with the US Fish and Wildlife Service or

National Marine Fisheries Service. Whereas the ESA requires that all decisions be made on the best available scientific information, the bill allows the Secretary of the Interior, a political appointee, to determine what science can be used to make decisions about a protected species. The bill also bankrupts the ESA by requiring the federal government to pay landowners to not violate the law. It actually begs developers to plan projects that allow them to extort payment from government.

The ESA requires that federal recovery plans be implemented by federal agencies, and that species be protected until they are fully recovered. The new bill allows federal agencies to ignore recovery plans, and requires that species be delisted within individual states even though the species as a whole is tumbling toward extinction. It is obvious that many of these proposals rip the heart out of America's most important wildlife protection law.

The outlook for species and the environment under the current administration is particularly bleak, since fewer species have been listed than in any previous administration. The only hope for saving our imperiled wildlife is a wave of popular support for maintaining a strong Endangered Species Act, and indignant outrage at these attempts to destroy it. Each one of you needs to contact your senators and demand that they filibuster any anti-ESA bill that comes before the Senate. Not taking action on this issue will result in a flood of extinctions followed by environmental dangers strongly impacting our generation and those that come after us.

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Endangered California Least Tern
(Ryan Hagerty, USFWS)

GOOD PLANETS ARE HARD TO FIND— AND HARDER TO SUSTAIN!

By Allen Franz

Science fiction tales of extraterrestrial life date back more than a century—for millennia, if we include mythologies. Yet, a hundred years ago, no one had any clear idea of what powered the sun, no one realized that there were myriad galaxies far beyond our Milky Way. No one imagined that we would be able to see virtually to the ends of the universe and the beginning of space-time. The Big Bang. Scientists of that age knew nothing of the chemical composition or atmospheric conditions of our neighboring planets in the Solar System. Most opined that we could *never* know.

In that near vacuum of factual information, speculation prevailed. The early astronomer Percival Lowell became convinced that the faintly discernible seasonal changes on Mars were the product of a dying civilization, making a desperate effort to transform its landscape to stave off impending doom. Edgar Rice Burroughs, famous for his *Tarzan* series of adventure books, wrote an equally enthralling, if wholly implausible, series recounting the imagined escapades of *The Warlord of Mars*. With the development of rocketry and nuclear power in the 1940s and 1950s, writers and film makers had a field day contemplating what might lurk beyond the Moon (*klaaatu barada nikto?*).

Systematic scientific explorations of the possibility of life elsewhere in the universe didn't begin in earnest until former UCLA astronomer Frank Drake articulated what became known as the Drake Equation. This formula postulated that the likelihood of finding advanced civilizations elsewhere in the cosmos could be calculated by multiplying a string of factors. These included the number of stars, the fraction of stars with planets, the fraction of those planets occupying their stars' habitable zones, the number of planets with Earth-like concentrations of metals and other geochemical resources, and so on.

At the time—in the 1950s—none of the factors in the equation could be expressed even in general probabilities much less hard numbers. Still, Carl Sagan inspired the imaginations of millions with his discussion of the Drake Equation on the immensely popular PBS series *Cosmos* in the 1970's—even if he was not much closer to specifying any of the variables in the equation.

A quarter of a century after *Cosmos*, we have made



Image of Jupiter taken by Voyager I in 1979.

remarkable progress in a number of areas of extraterrestrial research, although the Search for ExtraTerrestrial Intelligence Project has failed for decades to detect any recognizable signal from alien civilizations. More powerful telescopes, equipped with ever faster and sharper imaging technologies, and computer-driven innovations, have dramatically increased the range of Earth-based observatories in the visible and radio frequencies.

Simultaneously, space missions such as Voyager, Galileo, and Cassini, as well as orbital observatories like the Hubble Space Telescope and its companion instruments have dramatically extended our grasp of what lies outside of the envelope of atmospheric gases that has nurtured life on Earth. These advances have fueled a renewed and widened interest in astrobiology. In the course of the last fifteen years or so, spectroscopic analyses have identified the electromagnetic “bar code” signatures of water, carbon dioxide, and over a hundred organic compounds—including a number of simple amino acids, the building blocks of life—in interstellar gas clouds.

Extremely precise observations of the relative motion and brightness of nearby stars has led to the identification of a growing roster of extra-solar planets (over 150 at last count). As ever more sophisticated technologies go online, we will be able to refine many of the factors in the Drake Equation with ever-greater precision, thereby achieving, at the least, a more empirically-grounded sense of the general likelihood of life existing outside of our home planet.

Of course, we'll never know for sure unless we find that life. However, our *not* finding it doesn't prove that it's not out there somewhere!

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Birds of the Peninsula, continued from page 5

observers (KL). A **Black-throated Green Warbler** afforded excellent studies at SCBG on 23 Oct (KL). The only Palm Warbler was at MM on 10 Oct (Thomas Miko). Five Blackpoll Warblers were found: one at BP on 16 Sep (Mike San Miguel); one at AP on 29 Sep (DM); one at DP on 1 Oct (KL); and two at MM on 12 Oct (DM). Different Black-and-white Warblers were at BP on 10 Sep (KL) and 21 Oct (Andrew Lee); another was at the north end of HP 8-15 Oct (KL). An immature **Mourning Warbler** was a great find at SDP 24-25 Oct (DB, KL, Todd McGrath). A beautiful photograph of a **Red-faced Warbler** in the El Segundo yard of Jennice and Karl Dobroszczyk on 22 Aug was received in September. Through 2003, only fourteen officially-accepted records of this species existed for our state; it is the first for our area. Outstanding was a **Painted Redstart** at MM on 13 Sep (DM, Tracy Drake); our only existing record was of one at SCBG 13-14 Oct 1979 (fide Mitch Heindel). A migrant Yellow-breasted Chat at SDP on 27 Sep was the only one found this fall (KL).

A Summer Tanager was in Playa del Rey 24-25 Oct (DB). Clay-colored Sparrows made a good showing; singles were at GHMP on 18 Sep (SS), at MM 23-27 Sep (DM), at DP on 1 Oct (KL), and at HP on 2 Oct (KL). Brewer's Sparrows were unusually numerous this fall. After an exceptionally early individual was found in Westchester on 7 Aug, fourteen were recorded locally 10 Sep-21 Oct. This total included an amazing count of seven at MM on 23 Sep (DM)—likely the highest single day count ever here. The only Vesper Sparrow was at HP on 30 Sep (MB). A Lark Sparrow was at SDP on 12 Sep (KL); on 24 Sep, singles were at Entradero Park (KL) and at HP (MB). A "Large-billed" Savannah Sparrow was on the jetty at the mouth of Ballona Creek on 6 Oct (Barbara G. Johnson). This postbreeding dispersant from the Gulf of California has now been found at Ballona Creek in eight consecutive years. A Swamp Sparrow heard giving song and calls at BFM on 3 Oct was on the early cusp of this fall migrant's arrival timing along the coast of southern California (DB). An early White-throated Sparrow was at HP on 8 Oct (KL).

DM's Blue Grosbeak at MM on 24 Oct is the latest found in recent years; exceptional was one he saw there on 18 Nov 1992. A female-type Indigo Bunting along the bluffs in northern Westchester on 10 Sep was well-described (RS). Two Bobolinks were at GHMP on 18 Sep (KL), and one was at MM on 20 Sep (DM). An Orchard Oriole was at HP on 10 Sep (KL). Often a scarce migrant or winter visitor in our area, single calling Purple Finches

flew over south Torrance on 20 Oct and 25 Oct (KL).

Following are the earliest dates on which these fall migrants were noted this year: Bufflehead—25 Oct BFM (Don Sterba); Sharp-shinned Hawk—24 Sep Rancho Palos Verdes (window-killed, fide MB); Merlin (*F. c. columbarius*)—16 Sep DP (RB); Dunlin (2)—17 Sep LAR Long Beach (KL); Ruby-crowned Kinglet—24 Sep MM (DM); Hermit Thrush—21 Sep SDP (MC); Cedar Waxwing—22 Sep Torrance (KL); Yellow-rumped Warbler (Audubon's)—18 Sep Friendship Park (KL); Yellow-rumped Warbler (Myrtle)—30 Sep DP (RB); Fox Sparrow—27 Sep Rolling Hills (MB); Lincoln's Sparrow (3)—18 Sep HP (MB); White-crowned Sparrow—22 Sep BFM (MC); Golden-crowned Sparrow—27 Sep Rolling Hills (MB); "Slate-colored" Dark-eyed Junco—29 Oct HP (MB).

Following are the latest dates on which these fall migrants were noted this year: Lesser Yellowlegs (2)—15 Oct LAR (KL); Wilson's Phalarope (2)—15 Oct LAR (KL); Western Kingbird—26 Oct MM (DM); Black-headed Grosbeak—15 Oct DP (KL); Blue Grosbeak—24 Oct MM (DM).

Thanks to all who reported sightings during the period. Please send your sightings to me at cbirdr@comcast.net for the Palos Verdes/South Bay and vicinity, including areas east to the L.A. River, north to about the 105 freeway, and along the coast up to Marina del Rey.

Acronyms in Birds of the Peninsula

AP: Alondra Park
 BFM: Ballona Freshwater Marsh
 BP: Banning Park
 DB: David Bell
 DM: David Moody
 DP: DeForest Park
 GHMP: Green Hills Memorial Park
 HP: Harbor Park
 JC: Jonathan Coffin
 KL: Kevin Larson
 LAR: Los Angeles River
 MB: Martin Byhower
 MC: Mark Conrad
 MM: Madrona Marsh
 RB: Richard Barth
 RS: Russell Stone
 SDP: Sand Dune Park
 SS: Steve Sosensky

Good Planets, continued from page 7

Peter Ward and Donald Brownlee are two scientists who have played a prominent role in recent developments in astrobiology. The two were brought together more or less by chance nearly twenty years ago at a college forum. If not for that fortuitous encounter, the two University of Washington professors might well have played out their careers each never knowing that the other existed. Ward is a paleontologist perhaps best known for his research on the fossil evidence for early life forms in South Africa. Brownlee, on the other hand, is an astronomer particularly interested in comets, asteroids, and other smaller objects in the Solar System. He is chief project scientist on the NASA Stardust mission, which rendezvoused with comet Wild 2 in January of 2004, and will return to Earth in January 2006 with samples of the comet for Brownlee and other scientists to analyze.

The forum that brought Ward and Brownlee together was a discussion of the merits of a hypothesis that created controversy at the time: that the dinosaurs and their Cretaceous contemporaries were wiped out by an asteroid impact. Ward and Brownlee found time between their other commitments to continue the dialogue begun at the forum. That interdisciplinary partnership has produced two fascinating books on the emerging field of astrobiology. Their best-selling first effort, *Rare Earth: Why Complex Life is Uncommon in the Universe* (Copernicus, 2000), is in some measure a reformulation of the Drake Equation. The book assesses the importance of key terrestrial and extraterrestrial factors that make life possible on Earth, and might be expected to affect the prospects for life elsewhere.

Research conducted since the formulation of the original Drake Equation has clarified which conditions are most critical to creating a "habitable zone." In addition to such "intrinsic" characteristics as a suitable blend of carbon, oxygen, nitrogen, potassium, sodium and a roster of other vital elements, intermixed in appropriate concentrations in a suitable range of temperature, a planet also needs, for example, sufficient mass to retain surface liquids and atmospheric gases. Ward and Brownlee also point out the critical importance of a number of key "extrinsic" factors such as the spectral class of a star, and the distribution of sibling planets, moons, and smaller objects in a solar system.

Stars "burn" by the gravitationally-induced fusion of hydrogen (and perhaps other elemental fuels) in their cores. Larger stars have more mass, and therefore stronger gravitational compression forces. As a result, they burn their "fuel" faster. Supergiant stars can burn out in a life span of "just" a few million years, while slow-burning dwarf stars can linger on for at least tens of billions of



Image of the asteroid 951 Gaspra taken by the space probe Galileo in 1997.

years.

These interacting considerations affect not only the temperature on surrounding planets, but also their habitable life spans. The fossil record tells us that it took perhaps three billion years for life to move from the earliest single-celled organisms to the earliest nucleated, multi-celled organisms, and another half-billion years or so to produce the earliest vertebrates. If Earth is at all typical, then planets need billions of years of relatively constant conditions in order to allow even something as seemingly primitive as a slime mold to evolve. Bigger stars may not last long enough, and smaller stars may not impart enough energy to their orbiting planets.

Our solar system includes an array of other critical components apart from the Sun. Our planet, Earth, is livable in part because it has a large moon which has gravitationally stabilized its orbital wobbling. The solar system is filled with eccentrically orbiting debris left over from its formation, in the form of comets, asteroids, Kuiper Belt objects, the Oort cloud, and so on. Any of these may periodically collide because of gravitational interplay among them. The extinction of the dinosaurs linked to the impact of an asteroid is just one of at least five great mass extinctions on Earth. Other extinctions may have been linked to extraterrestrial factors.

One key factor which has reduced the frequency of meteoric impacts on Earth is the planet Jupiter. Because of its huge size—317 times the mass of Earth—the planet acts as a gravitational magnet, sweeping the planetary zone free of most potential impact hazards. (Readers may remember the stunning 1994 crash of the comet Shoemaker-Levy into Jupiter's atmosphere, televised from the Jet Propulsion Laboratory in Pasadena.) Without Jupiter's protection,

Continued on page 10

Good Planets, continued from page 9

Earth would have been more frequently smashed by such roving objects, probably obliterating life before it had time to evolve to more complex forms.

Ward and Brownlee present a number of lines of evidence—from geology, biology, astronomy, and other disciplines—that lead them to their “Rare Earth Hypothesis.” The two scientists hypothesize that conditions for supporting simple, primitive life forms are probably comparatively widespread in the cosmos. But, the probability of stable, long term planetary environments, permitting the evolution of complex life, is observably *much* lower.

Ward and Brownlee’s second collaborative effort, *The Life and Death of Planet Earth* (Henry Holt, 2002), shifts from retrospect to prospect: mapping out the future of the Earth, and life on Earth.

Among the inescapable realities is the inevitable life-cycle progression of the Sun. At an age of about 4.7 billion years, the Sun is thought to be middle-aged. As it ages further, the Sun will gradually expand, eventually heating the Earth to the point that the oceans and atmosphere boil off into space. Well before reaching this extreme, climate and weather conditions on Earth will be altered to the point that they are untenable for complex life forms. Many primitive life forms can tolerate wide extremes of temperature and other environmental conditions that would quickly extinguish complex life, but even those extremophiles have their limits.

In addition to the irreversibility of the Sun’s aging to a red giant star, it is also inevitable that the Andromeda Galaxy will “collide” with our Milky Way Galaxy, as a result of their mutual gravitational attraction. Although the hundreds of millions of stars and other objects in the two galaxies will in all likelihood pass by each other without any actual physical impacts, the gravitational effects of the pass-by will create havoc with the structure of both

galaxies and their star systems. Thanks to recent technological advances such as the Hubble Space Telescope, we now have information on a long list of other colliding galaxies, and we can see the resulting deformation of the galaxies. This process will surely affect the habitability of star systems throughout both galaxies.

Among the most valuable lessons that Peter Ward and Donald Brownlee have drawn from their work is an enhanced appreciation for the special nature of our home planet. We may never know if there is life “out there.” But we see with increasing clarity the fragility and vulnerability of our planet and the life on it. And, we must recognize that we have the power to alter the habitability of our planet—for better or worse.



Hummin’ is published six times per year by the Palos Verdes/South Bay Audubon Society. Authors’ opinions do not necessarily represent those of the Society. Send articles and suggestions to MLeoWeber@aol.com.

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Hummin’ subscriptions for non-PV/SB Audubon members are \$7.50 per year.

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Meet Learn Enjoy Restore

Sunday, Dec. 4, 8:00AM: **Bird Walk at South Coast Botanic Garden.** Leader: Ollie Coker. Charge for nonmembers of the SCBG Foundation, and you can join at the entrance. Also Jan. 1

Wednesday, Dec. 7, 7:00PM: **Audubon Board and Members' Holiday Party.** At Madrona Marsh. EVERYONE is Welcome!

Saturday, Dec. 10, 8:00AM: **Orientation class for Christmas Bird Count** at Madrona Marsh with Martin Byhower.

Saturday, Dec. 10, 9:00-10:00AM: **George F Canyon Preserve Walk.** Sponsored by the Palos Verdes Peninsula Land Conservancy. For questions call, 310-541-7613 or info@pvplc.org.

Wednesday, Dec. 14, 8:00AM: **Bird Walk at Madrona Marsh** with Bob Shanman.

Saturday, Dec. 17, 8:00AM: **Orientation class for the Christmas Bird Count** at Madrona Marsh with Bob Shanman.

Wednesday, Dec. 21, 8:00AM: **Bird Walk at South Coast Botanic Garden.** Leader: Georgene Foster.

Monday, Dec. 26, sun up to sundown: **Annual CHRISTMAS BIRD COUNT.** Contact Martin Byhower or Eric and Ann Brooks.

Sunday, Jan. 1, 8:00AM: **Bird Walk at South Coast Botanic Garden.** Leader: Ollie Coker.

Wednesday, Jan. 8, 8:00AM: **Bird Walk at Madrona Marsh.** Leader: David Moody.

Saturday, Jan. 14, 9:00-11:00AM: **Walk on Upper Malaga Cove Fire Road,** Palos Verdes Estates. Sponsored by Palos Verdes Peninsula Land Conservancy. See contact info, Dec. 10.

Tuesday, Jan. 17, 7:00PM: **AUDUBON MONTHLY GET-TOGETHERS featuring Tracy Drake,** the Naturalist Manager of Madrona Marsh. Come to Madrona Marsh and socialize with friends, enjoy the bird quiz, raffle and prizes from Wild Birds Unlimited. See Dec. 7 for directions.

Sunday, Jan. 15, 8:00AM: **Banning Park in Wilmington with Martin Byhower.** See contact information in box.

Wednesday, Jan. 18, 8:00AM: **Bird Walk at South Coast Botanic Garden.** Leader: Georgene Foster.

CALENDAR

MEETING LOCATIONS AND INFORMATION SOURCES

:George F Canyon Preserve: 27305 Palos Verdes Drive East, Rolling Hills Estates. Southwest corner of Palos Verdes Drive East and Palos Verdes Drive North.

:Madrona Marsh Preserve: 3201 Plaza del Amo, Torrance. Between Maple and Madrona Avenues.

:South Coast Botanic Garden: 26300 Crenshaw Blvd., Palos Verdes.

:Eric and Ann Brooks organize birding classes in the South Bay and field trips throughout the region and statewide. Contact them directly for details: motmots@aol.com.

:Martin Byhower also provides guided field trips. See his birding website at <http://birdingsocal.com>. Or contact him at avitropic@sbcglobal.net.

:Palos Verdes Land Conservancy sponsors walks and other activities on the peninsula. For information, consult their website at <http://www.pvplc.org/>, or contact them by email at info@pvplc.org or by telephone at 310-541-7613.

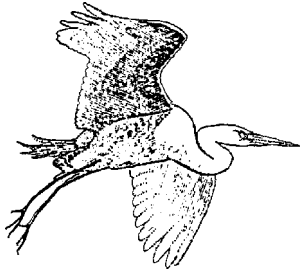


*Pacific Tree Frog
(Photo by Jess Morton)*

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HELP NEEDED!

Audubon YES!: Contacts with South Bay schools and teen youth groups are wanted. If you are a teacher looking for extra-credit opportunities for your students, or if you are an adult advisor to a teen group looking for volunteer activities, become an active part of Audubon YES!, our Youth Environmental Service program. Audubon wants to work with you and your kids! For more information, call Jess Morton at 310 832-5601 or visit us online at www.AudubonYES.org

The Chapter also would welcome a **volunteer** to assist in talking with participants in our various outings regarding **membership** in the local Audubon Chapter. If this opportunity seems attractive to you, please contact Frances at 310-316-0041.

Pick up postage-paid envelopes at Wild Birds Unlimited at PCH and Crenshaw to **recycle your HP or Lexmark Inkjet cartridges**. For each cartridge sent in these envelopes, \$2.50 is donated to our Chapter or to South Bay Wildlife Rehab. This is a great way to reduce waste and to support your favorite organizations.