



# TULARE TAPPINGS

## Tulare County Audubon Society

In the Heart of California's San Joaquin Valley  
Gateway to Sequoia and Kings Canyon National Parks

SEPTEMBER 2010

### Chapter Meeting and Program: Screening of the "Ghost Bird"

Tulare County Audubon Society will co-sponsor the community screening of the documentary film "Ghost Bird".

"Ghost Bird" tells the fascinating story of the Ivory-billed Woodpecker's controversial rediscovery in 2005 in the remote Cypress wetlands of Arkansas. Believed extinct for over half a century, the iconic bird's resurrection was heralded around the world as proof that conservation efforts on behalf of threatened species were making the critical difference between life and death.

Informative, moving and beautifully filmed, this feature-length documentary raises important questions while featuring illuminating interviews with David Sibley, Nancy Tanner, Dr. Rick Prum, Dr. Jerome Jackson and David Luneau.

The Ivory-billed Woodpecker is, or was, one of the largest woodpeckers in the world, roughly 20 inches in height with a 30 inch wingspan. The species inhabits dense old growth forests in the Southeastern United States. Intense habitat destruction and some hunting led to it's probable demise.

Join us this **Friday, September 17, 2010, at 7:00p.m.** for this first ever co-sponsored meeting with Sierra Club Mineral King at the Tulare County Office of Education building (at the corner of Woodland and Burrell Avenues in Visalia).

### Articles for Tappings

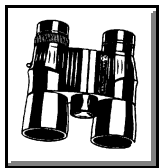
TCAS welcomes submissions of articles on bird sightings, conservation, and environmental issues, book reviews, and whatever else you think may be of interest. Please submit by the 15<sup>th</sup> of each month for the next month's newsletter. Articles in electronic format (disk, CD, or E-mail) are highly encouraged to save time and trees! Send to John Lockhart, 1910 Liberty Ct. Visalia, CA 93292 or email to [j\\_f\\_lockhart@sbcglobal.net](mailto:j_f_lockhart@sbcglobal.net)

### Contents

<b>Help Needed from TCAS Members Now!....</b>	<b>2</b>
<b>Field Trip Report.....</b>	<b>2</b>
<b>Return of the Cranes Event. ....</b>	<b>3</b>
<b>Gulf Oil Spill Discovery.....</b>	<b>3</b>
<b>Avian Piracy: Part 2 of 2.....</b>	<b>5</b>
<b>Field Trip: Valley Wetlands.....</b>	<b>5</b>
<b>Solar Power: More Coming Soon.....</b>	<b>6</b>
<b>Sage Grouse Update.....</b>	<b>7</b>
<b>Calendar of Events.....</b>	<b>7</b>

### Help Needed from TCAS Members Now!!!

Welcome to a new and exciting TCAS season of trips afield, social gatherings, and of course, birds, birds, and more birds! We, the TCAS board, wish to extend a heartfelt thanks for your continued support in your annual renewals, field trip participation, Bird-A-Thon patronage, and making all our social gatherings more memorable and special. While your continued contributions have helped carry TCAS into 2010, we would like to ask of you to go the extra distance this year. We currently have an urgent need for help in the form of president, and vice president and program chair. People who step forward to fill these slots will be provided support and training to do their jobs by TCAS board members who have held these positions in the past. Anyone who can do an occasional job or even temporary help just for a month is needed. In addition, we are losing the editor of the Tappings newsletter, Jihadda Govan, who is taking another position out of state. We are happy John Lockhart has stepped forward to take her place. If you have the time, or wish to co-occupy one of the vacated slots with your spouse, please inform Brian Newton 627-3571; Mary Merriman 732-5459; or Joanne Hoyt, 627-4308. Again, many thanks to you all!



#### Field Trip Report: Chimney Creek, Saturday, June 26, 2010.

Bright and early on June 26, a small group of hardy birders met at the Kern River Preserve in Kern County with John Lockhart, our excellent field trip leader. Almost the first 2 birds that were spotted as we entered the Preserve were the endangered Southwest Willow Flycatcher and the all-red Summer Tanager! A short walk near the parking lot turned up Western Bluebird, Ash-throated Flycatcher, Western Tanager, Yellow Warbler, Nuttall's, Hairy and Downy Woodpeckers, Northern Flicker, Western Wood Pewee, Lazuli Bunting, Bullock's Oriole, Lawrence's Goldfinch and California Quail. In the little brown bird class were House Wren and Bushtit, as well as several other common birds such as Tree Swallow, Red-winged Blackbird, Turkey Vulture, Lesser Goldfinch and a

juvenile Brown-headed Cowbird pestering its surrogate parent, a Song Sparrow. A Great Blue Heron flew overhead.

A tromp through the swamp near the KOA campground and a great deal of patience amid mosquitoes and nettles revealed a secretive Yellow-billed Cuckoo, well-camouflaged in the high Cottonwood branches and Common Yellowthroat singing everywhere. A tip from Reed Tollefson, preserve manager, led us to Fay Ranch Rd where a pair of Vermilion Flycatchers were spotted. That brilliant red seems to be glowing! Heading up Chimney Peak Rd we spotted Roadrunner and Loggerhead Shrike. At an area of willows we had a curious sighting of what appeared to be a Flycatcher entering a tree cavity!

Entering Tulare County near Chimney Creek campground, Plumbeous Vireo was calling through the arid pine/oak woodland. A Gray Flycatcher was spotted on a nest built on a horizontal branch just above eye level. Chipping Sparrows sang constantly. Other birds found were Stellar's Jay, White-breasted Nuthatch, Mountain Chickadee, Bewick's Wren, Western Tanager and Black-headed Grosbeak. On this trip whenever we were intently searching for some unusual bird, the Western Tanager was common and ready to entertain with its brilliant plumage and soft song.

On the drive to Troy Meadow, we found a flock of Pinyon Jays hanging around Western Bluebirds and House Finches and coming down to a seep along the road.

We camped at Troy Meadows campground, not yet inundated with ORV riders due to the late snows. It was quiet and alive with birds. From our campsite we spotted Clark's Nutcracker, White-headed Woodpecker, Northern Flicker, Townsend Solitaire, Warbling Vireo, Western Tanager, Green-tailed Towhee, Townsend's Solitaire, Robin, Western Wood-Pewee and of course Oregon Junco. Here the common bird was a Red-breasted Sapsucker which stayed right there. Penny was able to walk within 2 feet of the bird as it fed on a tree trunk. At dark, an owl started calling just outside our campsite. It flew right over our heads making unusual calls. John was able to find it in his strong flashlight and it turned out

to be a Northern Saw-whet Owl--a life bird for some of us! It continued calling on and off all night. At the same hour after dark, we heard the calls of Common Nighthawk. From dusk until morning we heard the calls of Sora from the meadow.

This is the first time Sora have been found at this meadow near a small beaver pond.

Walking through the meadow early revealed 6 species of Sparrows--White-crowned, Savannah, Vesper, Song, Chipping and Dark-eyed Junco. There were 3 White-faced Ibis resting on the beaver dam, Yellow Warbler, Pine Siskin, Lesser Goldfinch, Northern Rough-winged Swallows, Mountain Bluebird, Pygmy Nuthatch, Red-tailed Hawk, Brewer's Blackbird, Tri-colored Blackbird. Last but not least were 3 Red Crossbills which came close enough to see those amazing curved bills!



**Return of the Cranes, Saturday, November 13, 2010, Pixley National Wildlife Refuge**

Join us Saturday, November 13, 2010, to witness the evening fly-in of up to 8,000 Sandhill Cranes as they come into roost. Last year, the Pixley Refuge hosted birders and nature enthusiasts from Kern and Tulare Counties for the first annual Return of the Cranes event. Over 50 people participated in this event that started at 4:00 p.m with a social hour, brief introduction of Sandhill Crane ecology and the importance the Pixley Refuge for this population, then a stroll to the observation platform to see the Sandhill Cranes fly-in. This year, we'd like to double the number of participants by providing transportation of up to 30 people from Visalia, to the Pixley Refuge, and back again. For more information, contact the Kern/Pixley National Wildlife Refuge office at 661-725-2767.



**GULF SPILL: Undersea plume vanishes, degraded by previously unknown bug. By: Paul Voosen, E&E reporter**

The Gulf of Mexico's undersea oil plume is no more. For nearly a month, scientists sampling the site of a deepwater plume stretching southwest from BP PLC's failed well in the Gulf have been foiled. Their sensors have gone silent. Where once a vibrant -- if diffuse -- cloud of oil stretched for miles, 3,600 feet below the surface, there is now only ocean, and what seems to be the debris of a bacterial feeding frenzy.

"For the last three weeks, we haven't been able to detect the deepwater plume at all," said Terry Hazen, a microbiologist and oil spill expert at Lawrence Berkeley National Laboratory who has had a clutch of researchers monitoring the Gulf since late May. The disappearance is backed up by government sampling data. The plume is simply gone. And Hazen knows why. "This all fits with the fact that the bugs have degraded the oil," he said.

Despite press accounts to the contrary, the disappearance of this deepwater oil plume, whose midsummer existence was detailed last week by the Woods Hole Oceanographic Institution, is far from a shock, at least to scientists. Undersea bacteria -- the single-cell janitors of the marine world -- along with currents and diffusion likely combined to degrade or isolate the dispersed oil to undetectable levels, Hazen said.

Indeed, once the spill was plugged, "eventually you get to this point where the signal-to-noise ratio of your sensor cannot detect the oil," said Richard Camilli, the lead author of last week's Woods Hole report. The plume persisted while the oil flowed, but it was only a matter of time before the oil would degrade or fall to such low levels as to avoid detection, he said.

Left in the plume's wake are flocks of cellular debris, likely the remains of a mass die-off of bacteria that followed the purging of the plume's oil, though that needs to be confirmed, Hazen said. In the Gulf's cold, deep waters, the debris looks like marine snow, he said, and oxygen levels have dipped, indicating that the microscopic life has begun to feed on itself.

The likely source of that debris is a previously undiscovered, cold-loving microbe that surged in response to the plume, a development Hazen details in a new study to be published later this week in the journal *Science*. It is the first peer-reviewed report to

provide direct evidence of how undersea microbes responded to hydrocarbons in the Gulf's deep waters.

"This enrichment of [cold-loving] petroleum degraders, with their rapid oil biodegradation rates, appears to be one of the major mechanisms behind the rapid disappearance of the deepwater dispersed oil plume," Hazen said.

The bugs' success in degrading one plume does not invalidate fears of how the ecosystem may have reacted to the multiple, invisible mists of oil that stretched out from the Macondo well while it was flowing, or the lingering taint of diffused oil and methane or hard-to-degrade, if nontoxic, petroleum components like asphalt. But Hazen's report should go a long way toward assuaging concerns that microbes in these depths were not up to the task of breaking down oil's complex cocktail of chemicals, scientists said.

"It's comforting that these organisms can degrade, quite rapidly, hydrocarbons at that depth," said Ken Timmis, a microbiologist at Germany's Helmholtz Centre for Infection Research who helped discover, a decade ago, an oil-loving bacteria closely related to Hazen's microbe.

"The numbers are fairly typical with what people have measured so far [in shallower waters], which is comforting," Timmis said. "It might not have been that way. It might have been that the degradation rates down there were significantly lower."

### Biological account

Previous reports of bacteria activity in deep waters, including the Woods Hole study, have relied on the amount of dissolved oxygen in the plume to serve as an indirect proxy for microbial life. (Like humans, many of the most efficient oil-degrading bacteria use oxygen for respiration.) While most scientists have reported marked, but not stark, drops in oxygen use -- a result supported in Hazen's study -- these reports have given only the vaguest outlines on the actual biology ongoing in the plume.

Hazen's study amounts to a first draft of that biological story.

Comparing samples from the plume and similar, non-plume sites taken more than 20 miles away from the

Macondo well in late May and early June, the researchers found a startling increase in one long, rod-shaped bacteria, closely related to the *Oceanospirillales* family. Under normal conditions, the microbe's DNA constituted 5 percent of the sequences analyzed, but at multiple sites in the plume, the bug made up more than 90 percent of all the detected DNA.

The unknown bug -- which, in true scientific fashion, Hazen has not even nicknamed yet -- was not the only microbe to be significantly enriched by the plume, though it showed by far the largest increase. Sixteen species increased, nearly all of which were "known to degrade hydrocarbons or are stimulated by the presence of oil in cold environments," the authors wrote.

Field trials and lab tests found that oil in the plume had a half-life between 1.2 and 6.1 days, the researchers found. This half-life, which measures the time needed for oil to reduce in size by half, includes mixing and dilution, but bio-degradation is likely playing a large role in reducing the oil's alkanes, a principal component, the paper says. There are strong correlations between complex alkanes, which resist dissolution, and cell density, it notes.

The overall behavior of the unknown bacteria closely resembles that of several other oil-loving species that have been identified in the past decade, all of which play a significant role in removing petroleum from marine waters. Typically, these bacteria subsist off very low nutrient levels, and then surge once their environment is saturated with their preferred, oil-based diet.

"There is a surge in number, but the total number is not very dramatic," Timmis said. "The nice thing is that these organisms seem to be very, very active." The particular bacteria identified by Hazen are perfectly adapted for the Gulf's deep waters, which sit under high pressure and remain cold, hovering around 5 degrees Celsius, despite their near-tropical locale.

"They actually degrade oil faster at 5 degrees than they do at 20 degrees," Hazen said.

### How the bacterium was identified

Even five years ago, it would have been difficult for Hazen's team to identify the microbe with such speed.

The team relied on a recently developed microarray designed at the Lawrence Berkeley National Laboratory, called the PhyloChip, which allows rapid testing for more than 8,000 bacteria species. The array quickly revealed a microbial community that was significantly altered by the plume.

After the array tests, Hazen's team puts its samples through several other hurdles. They found that the dominant fatty acids in the plume have also been reported as vital byproducts in a consortium of oil-degrading bacteria. Microscopic analysis of the unknown microbe found it hewed closely to the distinctive look of *Oceanospirillales*. And another chip-based analysis of the 5,000 mixed-up genes found in the samples flagged more than 1,600 related to oil degradation, many of which significantly increased in the plume.

Much work remains to be done, Hazen stressed. His team is currently sequencing the genome of their primary degrader, and further tests are likely that can directly tie the microbe to oil degradation, rather than relying on strong correlations. Sediment sampling is beginning this week, and his researchers are releasing oil-soaked traps deep underwater to test how microbes colonize the oil.

It remains too early to say if the bacterial activity validates BP's decision to spray large amounts of dispersants at the wellhead, which was intended to increase the surface area of oil available for biodegradation. Marine bacteria are far more efficient degraders than soil bacteria, Hazen said, but there are too many data gaps to say this efficiency outstrips toxicity concerns to deepwater ecology. However, "it certainly looks like that [dispersants] helped," he added.

While it can be difficult to accept, if there is one disaster the Gulf is poised to handle, it is a leak of its own light crude, Hazen added. The bacteria have had millions of years to adapt to the oil, the petroleum itself is light and readily degraded and, in the plumes at least, the oil was already in low concentrations.

Hazen's study may finally raise public awareness that oil spills nearly always trigger substantial microbial hydrocarbon degradation, a fact that is too frequently ignored in initial responses, Timmis said. Future strategies to deal with oil spills must fully integrate

measures to harness the microbial capacity to remove hydrocarbons, he said. "It has to be part and parcel of the strategy," he said. "And that I think will become very important".

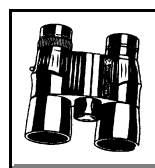


### Avian Piracy: Part 2 of 2

Interestingly, dabbling ducks, including American Wigeons and Gadwalls, often pirate aquatic vegetation from coots. The latter can dive deeper, and thus the ducks can dine on pond weeds that ordinarily would be out of their reach. They also may save energy in some circumstances by pirating rather than dabbling, since American Coots have been observed to simply drop their food plants immediately upon surfacing when approached by a pirate. Although coots can be quite aggressive, they seldom attack the pirates, perhaps because the extensive preening required after agonistic interactions would consume too much time that could be more profitably spent feeding. Coots can be pirates as well as victims; groups of two to five juvenile coots have been known to snatch aquatic vegetation from the bills of diving ducks and swans.

But most groups of birds do not practice piracy. It is unknown in most songbirds and not recorded in pigeons, doves, or game birds. Apparently piracy is a behavior that evolves under rather special ecological circumstances. Most birds seem to have the greatest reproductive success collecting their own food, rather than running the risks of stealing it from others.

From: [www.stanford.edu](http://www.stanford.edu)



**Field Trip: Valley Wetlands and Fall Migration. Saturday, September 25, 2010.**

Join us on our first field trip of the season as we  
*Continued...*

revisit some of our local wetlands and ponds such as Tulare Sewage Ponds, the Stockyard Ponds, the Kansas Avenue Ponds, the Toledo Pits, the Hanford Sewage Ponds, the Jersey Avenue Ponds, and the Nevada Avenue Ponds.

Some of the highlights from past trips to this area are resident breeders like the sleek Black-necked Stilts, the elegant American Avocets, the loud Killdeers, the strange-looking White-faced Ibises, Great Blue Herons, Great Egrets, Ruddy Ducks, Mallards, Cinnamon Teals, American Coots, Eared and Pied-billed Grebes, and possibly Redheads.

Another wetland that we will explore is the Stoil Ponds, which are almost directly across Highway 43 from the Pixley National Wildlife Refuge. This site, intermixed with marshes, mud-flats, grasslands, and shallow ponds, hosts the largest concentrations of American White Pelicans, gulls, night-herons, and shorebirds in Tulare County.

Some of our migrating shorebirds seem to be found at only one or two of these ponds, apparently having more specialized habitat requirements, causing us to explore many different ponds just to add these birds to our list. These more specialized migrants do not winter in our area, but only pass through on their way to South and Central America, stopping only briefly for a quick pit stop to fill up their fuel tank. We can only enjoy the company of these migrants in our area for a short two or three-week window, making these birds a real treat to find. Some of these uncommon temporary migrants include Wilson's and Red-necked Phalaropes, Lesser Yellowlegs, and Marbled Godwits.

As this past winter was rather dry, we will "play it by ear" so to speak this day and visit other nearby wetland areas as needed.

Directions: To join us on this memorable trip, meet at the south side of the Sears parking lot in Visalia (corner of Mooney and Caldwell) on Saturday, **September 25<sup>th</sup>** at 7:15 a.m. We will leave promptly at 7:30 a.m. Bring family, friends, binoculars, a spotting scope (if you have one), bird book, a hat, sunscreen, plenty of water, and a lunch. For more information, please contact John Lockhart at 559-303-9706 or [j\\_f\\_lockhart@sbcglobal.net](mailto:j_f_lockhart@sbcglobal.net)

## **Solar Power: Calif. approves first in line of big solar thermal plants. By: Debra Kahn, E&E reporter**

California regulators yesterday approved their first concentrated solar thermal plant in two decades, a harbinger of more desert solar development to come.

The California Energy Commission unanimously approved the 250-megawatt Beacon Solar Energy Project, by Beacon Solar, a subsidiary of NextEra Energy Resources LLC. Located on fallow agricultural land at the edge of the Mojave Desert in Kern County, it will use parabolic mirrors to concentrate energy into a heated fluid and then a thermal generator. Since it will be on private land, it does not need approval from the Bureau of Land Management.

The facility is the first of nine solar thermal plants slated for consideration in the next several months, CEC spokeswoman Sandy Louey said. The 2,000-acre plant went through a lengthy application process that started in March 2008. Beacon had originally planned to start construction in the third quarter of 2009 and begin generation two years later. Regulators completed the application process in time to make Beacon eligible for funding through the 2009 American Recovery and Reinvestment Act.

"Today's action begins the journey of increasing clean renewable energy in California," said CEC Chairman Karen Douglas. The plant will cost \$1 billion, according to the CEC. Beacon does not yet have a buyer lined up for the power.

The 620-page decision contains a number of requirements for Beacon to mitigate harm to endangered species. The company must buy 115 acres of land to compensate for the potential killing of Mojave Ground Squirrels and transient desert tortoises, as well as for damage to Mojave Creosote Bush scrub nearby.

The project would use a wet cooling tower for power plant cooling. Water for cooling will be tertiary treated recycled water, while mirror washing and other uses will be supplied from on-site groundwater wells.

**Wyoming governor expands Sage Grouse protected area**

Wyoming Gov. Dave Freudenthal (D) yesterday increased the Greater Sage Grouse protected area to 400,000 acres by executive order. The governor revised the state's Sage Grouse core population area policy, which was first enacted in 2008 to protect the bird. The Sage Grouse is considered endangered even though it is not federally listed.

The policy restricts activities within the core area, including drilling, agriculture and recreation. Unlike the U.S. Bureau of Land Management, the policy requires developers to prove before breaking ground how their activities will protect the bird population.

While more restrictive inside the core areas, the updated policy is more lenient on development outside the boundaries, even if Sage Grouse are present, Freudenthal said. The drilling industry and environmentalists applauded the revisions, which were based on new information gleaned from a \$500,000 study funded by the Wyoming Legislature. "That's not to go in there and take out the population of the grouse," said Cheryl Sorenson, vice president of the Petroleum Association of Wyoming. "But if we're going to be more restrictive in these high-value areas, then we need to have a little bit more flexibility outside."

University of Montana professor Dave Naugle has published several papers on the Sage Grouse and said the policy should be implemented in other Western states. "The governor's executive order represents a proactive approach for maintaining large and intact Sage Grouse populations, rather than providing palliative care to small and declining ones," Naugle said in an e-mail.

While some activities, such as uranium mining, will continue inside the core areas, new wind energy development is strictly prohibited. U.S. Fish and Wildlife Service considers wind turbines "incompatible" with grouse protection. Wyoming Power Producers Coalition, a group of wind energy developers, plans to research how wind could be developed without harming the Sage Grouse (Dustin Bleizeffer, Casper [Wyo.] Star-Tribune, Aug. 26). -- LP



**Calendar of Events!**

- Sept. 17 Chapter Meeting and Program**

“Ghost Bird”, the documentary. TCAS will co-sponsor the screening of this film about the “rediscovery” of the Ivory-billed Woodpecker.
- Sept. 25 Field Trip**

Valley Wetlands. Come out and bring a friend while we visit local wetlands to warm us up for the next season afield!
- Oct. 15 Chapter Meeting and Program**

Keiller Kyle, Audubon California’s new Tricolored Blackbird Conservation Biologist, will discuss the ecology and conservation of this imperiled bird.
- Oct. 30 Field Trip**

Merced NWR. The field trip to another local Wildlife Refuge produced a memorable day afield. Join us on this annual trek to the nearby north for glimpses of Snow Geese, raptors, and waterfowl.
- Nov. 19 Chapter Meeting and Program.**

Hilary Dustin, Conservation Director for SRT. Hilary Will update us on our local land trust’s land protection activities and vision into 2011-12.
- Nov. 20 Field Trip**

Yokohl Valley Road. Come and join us on this annual fall favorite trip as we search for raptors and a possible glimpse of Badgers!