

This Month's Program



Peregrines, Politics & Falconry

Doug Bell, Senior Biologist at SFBBO, is responsible for the water bird programs. In particular he studies the birds of the South Bay

water habitat and salt ponds. He's currently monitoring terns, gulls and nesting shorebirds. Doug is also a falconer. His presentation entitled, "Peregrines, Politics and Falconry", will focus on the training and flying of falcons. Assisting him will be his bird, "Grommet".

The New Champion

A few years back, Santa Cruz researchers tied fathometers to elephant seals at Ano Nuevo and discovered the big-nosed pinnapeds regularly dove to depths of 1100-2300'. Now researchers have found bottlenose whales diving to more than 2600 feet with one whale descending to 4700 feet below the surface.

Mountain Lions Give Bighorn Sheep a Setback

Bighorn sheep clinging to crags in California's Sierra Nevada have become disturbingly rare. Never very common, with a peak number of perhaps 1000, their current population probably consists of no more than 100 adults.

Last April the US. Fish and Wildlife Service assigned the sheep emergency endangered status. Mountain lions — protected by a hunting ban since 1972 — have increased and are killing the sheep.

The problem is greatest in winter when bighorns usually leave the high country to forage and they can become lion prey. Those that do not descend to forage may starve.

Five groups have dwindled to fewer than 25 animals and a captive-breeding program is in the planning stage.

From the President

A Morning With Mr. Bluebird Robin Smith



On a bright, sunny fall day I spent a morning with Mr. Bluebird. Mr. Bluebird is my name for Howard Rathlesberger, the San Mateo County Coordinator for the California Bluebird Recovery Program. He's the person who recruits the volunteers who monitor the bluebird trails in

our county. And a very skilled recruiter he is, too. Almost before I realized what I was doing, I'd signed up to monitor a trail with several other birders.

Our team met on that sunny morning at the Sharon Heights Golf Course in Menlo Park. It was a Monday, which was important, because it is maintenance time on the course. No dodging whizzing golf balls or careening golf carts on Monday! This day we were in the carts traveling around the course searching for optimum spots for the bluebird boxes.

We started by putting a row of boxes on one of the fences. Their clever design lets you place them firmly on the chain links. Each box has a deep overhang to discourage predators while one side opens to let the monitor check the contents, hopefully a nest full of baby bluebirds. These were the easy ones!

The next group were hanging boxes. Sharon Heights Golf Course has lots of wonderful, mature trees, mostly pines and deciduous oaks. It was in these trees that the hanging boxes would be placed. It sounds easy, doesn't it? Just hang them in the tree! There was more to it than that, a lot more.

The first time I tried to hang a box, I felt like a juggler in the circus. The bluebird box fits inside another open-topped box that is fastened to the end of a loooooooooong pole. The outer box swings back and forth as you try to maneuver it toward the targeted tree branch. I had to do a kind of "soft shoe" with this apparatus held over my head while aiming it at the branch. Of course, I got the giggles and dropped it.

After a little practice all of us were able to get the boxes in the trees facing the right direction. Placement is important. The boxes can't be too close to each other or out in the blazing sun. We also had to avoid putting them in the path of the sprinklers. Lots of things to think about when you're setting up a bluebird trail!

Now our team is just waiting for bluebird nesting season to begin. I can just envision our boxes full of those cute bluebird nestlings. Or they might be swallows or perhaps wrens. Not all bluebird boxes are home to bluebirds; other cavity nesters use them also. Ask Sue Cossins about her trail; she's an experienced monitor. Another Sequoia member, Lee Franks, will be banding the baby birds. That should be fun to see!

You can spend a morning with Mr. Bluebird, too. Volunteer to monitor a bluebird trail of your own!

Just call Howard at 367-1296.

(See Page Six for more on Bluebirds.)

The mission of Sequoia Audubon Society is to participate in environmental education, and conservation and in the restoration, preservation, protection and enjoyment of our native natural resources with emphasis on birds and their habitats.

The S A S Calendar

THURSDAY, FEBRUARY 3 — BOARD OF DIRECTORS MEETING — 7:30 PM — At the Sequoia Audubon office. All members are welcome. Call ahead to make sure that there will be enough room.

THURSDAY, FEBRUARY 10 — GENERAL MEETING — Peregrines, Politics & Falconry by Doug Bell, the Senior Biologist at SFBB and a falconer. His presentation entitled will focus on the training and flying of falcons. Assisting him will be his bird, "Grommet" At the San Mateo Garden Center on the Alameda at Parkside. Informal; get-together at 7:30 PM with the meeting beginning at 8 PM.

SATURDAY, FEBRUARY 12— SEA CLOUD PARK

This is our monthly beginners' field trip. It will include information on the use of binoculars and field guides with opportunities to ask questions. Sea Cloud Park in Foster City is reached by taking Hillsdale Avenue east from 101 and making a right turn on Edgewater Boulevard. Go 1.3 miles and turn left on Pitcairn Drive. Look for the park entrance on the right and meet at the far end of the parking lot at 9 AM. Half day.

HEAVY RAIN CANCELS.

LEADER

GARTH HARWOOD

SATURDAY, FEBRUARY 19 — CHARLESTON SLOUGH

This area is good for wintering waterfowl as well as many other species, including the now resident Black Skimmers. We will meet at **8 AM** at the far end of the parking area on Terminal Road. To get there take 101 south and exit San Antonio Road east. Follow San Antonio Road until it ends at Terminal Road. Half Day.

HEAVY RAIN CANCELS.

LEADER

MERRY HAVEMAN

Highway Hibachi

Years ago while on a field trip, I was startled to see former SAS President John Silliman lift up the hood of his little VW pickup and snatch a couple of cans off the engine block. One was Dinty Moore's Beef Stew and the other a screw-top can containing coffee. While we had been driving around birding, John had been warming up his lunch!

Now, as cited in *VLA*, the AAA's magazine, two guys named Chris Maynard and Bill Scheller have come up with an actual cookbook, *Manifold Destiny: The One! The Only! Guide to Cooking on Your Car Engine!* (Villard Books). According to the magazine, the book lays out everything you need to turn your engine into an oven on wheels. There are even several road-tested American regional and international recipes — such as Hyundai halibut with fennel, Melrose Avenue chicken, and Merritt Parkway veal scaloppini. The book retails for \$9.95.

— Cliff Richer

News from Audubon Canyon Ranch

Betsy Stafford

Bolinas Preserve — For the past few years Len Blumin and his feisty crew of weed-busters have been attacking the scourge of cape ivy in Volunteer Canyon. While there's no real substitute for hand-pulling the weed, this back-breaking work has become daunting. After much research it was decided to call in the four-legged ivy-busters and so a herd of hungry goats arrived this fall to munch up several acres of the rampant non-native. So far, so good, reports our Resident Biologist Greg de Nevers. We'll share our findings with others, including the Park Service, whose lands are also victimized by cape ivy. Would a controlled burn work better? Stay tuned.

Bouverie Preserve — Our guided nature walks through lovely Bouverie Preserve in Sonoma's Valley of the Moon continue on the following Saturdays: March 11 and 25, April 8 and 22, and May 6 and 13. Call 707-938-4554 for a lottery form.

It's not too early to fill out your 2000 calendar with our always popular free lunches (coinciding, conveniently, with our Spring Work Days). Please save the Saturday mornings of February 12 at Bouverie and March 5 at Bolinas Lagoon.

Two ACR staff members have recently been honored. Our remarkable Biologist and Education Specialist, Rebecca Anderson-Jones, has been appointed to the State Department of Education Environmental Education Committee. And Cristina Valdez, the director of the cross-cultural Environmental Leaders Program (sponsored for the last 5 years by ACR and now sponsored by the National Audubon Society), was just presented the first Hannah Creighton Environmental Justice Award.

Watch for Banded Shorebirds

Marbled Godwits, Willets, and Black-necked Stilts have been color banded in southern Alberta. Each bird has a metal band (usually on the lower leg) with a white flag on it sticking out from the leg, plus from 1 to 3 color bands (all on the upper leg). The white flag may be missing on some birds. The colors used are red, orange, yellow, light green, dark green, & light blue. Two bands of the same color MAY be on the same part of the leg. Please note position (upper or lower, left or right leg) and color of any of these banded birds that you see. Some Willets also have various patterns of orange dye on the wings or rump. and Stilts may have patterns of orange dye on breast and/or rump. Send information with as much detail as possible [certainly including DATE and PLACE where each color marked bird was seen, and by whom to:

CHERI GRATTO-TREVOR,
Canadian Wildlife Service,
115 Perimeter Rd.,

Saskatoon, SK S7N 0X4 CANADA.

Or e-mail the report to: cheri.gratto-trevor@ec.gc.ca.

From the Conservation Committee

Leslie Flint

The Sequoia Audubon Conservation Committee reviews critical issues related to wildlife habitats and comments to cities, agencies, and other jurisdictions. To attend, phone Leslie Flint at 573-6279.

YES ON 12! YES ON 13!

Two very important bond issues will appear on the March 7, 2000 ballot.

Proposition 12, the Safe Neighborhood Parks, Clean Water, Clean Air, and Coastal Protection Bond Act of 2000, was placed on the ballot by the Legislature in 1999 in recognition of the tremendous need California has for more parks, open space, and recreation for its growing population. It provides funds, totaling more than \$2 billion, for all the state agencies that protect land and recreational resources for future generations, and also makes grants to local agencies that perform the same function. The bond act gives greatest emphasis to urbanized areas, providing special funds to heavily urbanized areas, including funds for urban conservation corps, recreation for at-risk youth, open space protection in fast growing suburbs, and protection of remaining wildlife areas in our fastest growing counties. The bond act is divided into more than a dozen categories. For information about the exact funding breakdown, see the www.safeparks.org website.

Proposition 13, the Safe Drinking Water, Clean Water, Watershed Protection, and Flood Protection Bond Act. The Legislature placed this Bond Act on the ballot to solve several California water problems.

- Provide a safe drinking water supply to all Californians
- Increase the reliability of our water supply in the event of a drought or emergency
- Provide common sense flood protection by avoiding development in the path of floods, and by building necessary flood control projects
- Improve the quality of our rivers, streams, and coastal waters
- Protect and restore fisheries and wildlife habitat along rivers and streams.

This \$1.97 billion general obligation bond act has the potential to improve California's water supply by one million acre feet through water conservation, wastewater reclamation, groundwater storage, watershed improvement and other programs. According to the Planning and Conservation League (PCL), this measure will yield three times the water than the controversial Auburn Dam proposal for less than the total cost of that dam. Most important to our county would be that the bond act creates programs to restore stream water quality — fish and wildlife depend on healthy streams.

For additional information on the Safe Drinking Water Bond Act, see PCL's website at www.pcl.org.

The Conservation Committee of Sequoia Audubon urges you to get out and vote in favor of these two bond acts on March 7!

SAN FRANCISCO AIRPORT

While you are on the web you might want to review the Report of the San Francisco Airport Science Panel.

On October 20, 1999, the National Oceanic and Atmospheric Administration, on behalf of the San Francisco Bay Conservation and Development Commission and other state and federal regulatory agencies, convened an independent panel of scientific experts at Fort Mason help frame the scientific issues associated with the San Francisco Airport proposed runway expansion, which involves up to four square miles of bay fill. This report can be found at BCDC's website:

<http://www.ceres.ca.gov/bcdc>.

Redwood Shores Levee Project

Robin Smith

At the end of November, Sequoia Audubon Society filed a sixty day notice of intent to sue directed at both the US Army Corps of Engineers and the City of Redwood City. The following explains why your board took this action.

In April, 1997, the US. Army Corps of Engineers granted Redwood City a permit to raise the levees in portions of Redwood Shores to a height above the 100 year flood level. The 1700 homes to be built in this area, the Lido development, would then be protected from flooding

and would qualify for the Federal Flood Insurance Program and for disaster funds if there should be a flood that topped the levees.

The Fish and Wildlife Service, in its accompanying Biological Opinion issued in September 1996, stated the terms and conditions to be met through mitigations designed to protect the two Federally Endangered Species affected by this levee project, the Clapper Rail and the salt marsh harvest mouse. Mitigations were to include public use restrictions — fencing and gates on approximately 1.5 miles of the 6 miles of levees in Redwood Shores; and a predator management plan to be conducted after the fencing was in place. Both conditions are designed to reduce disturbance to the two Endangered Species living in the area.



At this time, the levees have been raised and most of the 1700 homes have been built but the mitigations for the Endangered Species have not been put in place even though they were to be initiated as soon as the levee work in the area was finished. The permit time limit for completing the work is February 28, 2000. Our Board of Directors, with the 60 day notice of intent to sue, is encouraging Redwood City to come into compliance with the permit conditions and encouraging the Corps to enforce the permit.

On January 5th, Leslie Flint, Bob Wilkinson, Craig Breon and I met with some members of the Redwood City Council on this matter. Nothing concrete was decided and we felt that Redwood City was trying to delay any action for as long as possible. Another meeting is scheduled for late January (too late to meet the *Needles* deadline). We expect that this meeting will be attended by representatives of US Fish and Wildlife Service, the Corps of Engineers, BCDC and Congressman Tom Lantos.

Prince William Sound — a Scorecard

Ten years after the Exxon Valdez spill, Prince William Sound looks pristine ... until you get close. At close range, globules of oil tar lurk here and there and turning over the sand and gravel may reveal a black oily layer somewhere under the surface.

It is generally conceded that natural wave action has been much more effective at cleaning the environment than all the chemical and steam insults delivered by the professional "cleaners" hired by Exxon.

Biologists and other restoration scientists now concede that all the bird and otter rescue efforts were probably a "feel-good" effort and a waste of time. The otters, in particular, were apparently so traumatized by the spill *and the clean-up* that few survived more than a few days after being released. The current thinking is that — at least in cases of a major oil spill — attention should be concentrated on protecting the habitat.

One of the habitat benefits following the Prince William disaster is the use of Exxon penalty money to buy back or "re-tire" native American tribal lands which were scheduled to be logged or otherwise developed. Conservation packages of these lands have been assembled to preserve salmon and trout streams.

The ecosystem is clearly recovering, but more slowly, on the western, most heavily impacted, side of the sound. The most mobile wildlife species, especially the bald eagle, seem to have fully recovered, as have the murre and the salmon. Other waterbirds — guillemots, murrelets and harlequin ducks do not seem to be recovering. Of most concern are the herring, which are the backbone of the food chain. These fish were on the decline before the spill, so the total impact is hard to assess but they are critical to the recovery of many other species of seals, sea lions and sea otters.

There are other matters for future concern. Even though Exxon and other oil-related companies have made substantial investments to prevent future spills, many Alaskans have reconciled

themselves to the inevitability of another oil-related disaster. The Trans-Alaska pipeline had a 20 year life expectancy when it was built 24 years ago. The pipeline parallels the Copper River, crossing many of its feeder streams. A serious pipeline break could ruin one of the greatest salmon-producing watersheds in the world.

There are only three double-walled tankers operating out of Valdez at this time and it will not be until 2015 that double walls will become mandatory.

Oil company spokesmen maintain that their safeguards now "guarantee" that only an earthquake or tsunami could trigger another spill. There have been at least four such major events in Alaska since 1900. And remember, that at Chernobyl it required a half dozen conscious acts by "responsible" senior managers to override the measures that "guaranteed" reactor safety.

Cannibalism Rare — It Can be Deadly

Why is cannibalism in nature so rare? David Pfennig of the University of North Carolina experimented with four separate groups of cannibalistic tiger salamander larvae. One group ate healthy salamander larvae of a different species. The second ate diseased larvae. A third group ate healthy tiger salamander larvae and the last ate sick larvae of their own species. All the groups thrived except the one that ate its sick brethren. Nearly half that group died from bacteria carried by its own kind.

A New Kind of Chapter

In July the Greenwich Audubon Society merged with National Audubon's Education Center in Greenwich to form the Audubon Society of Greenwich. The new organization is poised to become "the most important and effective environmental organization in the region," according to Ann Sawyer, chapter president and member of the new organization's board of directors.

The Greenwich center was National Audubon's very first education center. Since 1941, the center has served as the national nucleus for teacher education and outreach activities. Currently, it has 27

full and part-time staff members and a \$1 million budget to support the 522 acre sanctuary and its education projects.

Since the mid-1950's, the Greenwich Audubon Society (GAS) has operated as a chapter of National Audubon (NAS) and has grown to serve an important role in furthering environmental causes in the community. The chapter, with an annual budget of \$50-60,000 and a cadre of active volunteers, owns six sanctuaries covering more than 160 acres, conducts programs, and focuses on local and community-based environmental issues.

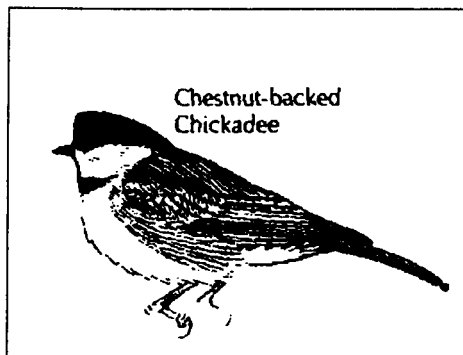
With encouragement from NAS President John Flicker, the chapter board members and center staff decided to take the bold, step of recreating Audubon in Greenwich. "The merger opens up a great deal more potential than either group had on its own," states Sawyer

A new board of directors, partly comprised of former directors of the chapter and partly of new directors from the local community will lead the Audubon Society of Greenwich. Some chapter members initially expressed concern about the potential loss of local autonomy but Sawyer says that the opposite result has been achieved; "For the first time, town members have control over the organization and facility in their own town. This is very reassuring," said Tom Baptist of National Audubon, who feels that the merger will provide leverage to protect local resources.

The new Audubon Society of Greenwich has embarked on a \$12 million capital campaign to renovate the center, including construction of a new nature education center, dormitories for resident students and teachers, site improvements and habitat restoration. The staff and board have also scrutinized their overall environmental education program.

In June, Tamar Chotzen, NAS Senior Vice President for Centers, led a special team of experts and staff on a review of center programs, "leaving no stone unturned." The plan they prepared should enhance and improve education activities.

While there are areas where one can see future conflicts arising between national and local policies, or in funding the Center, or in personality clashes between paid staff and volunteers, the overall future for this organization looks bright.



WINTER 2000 BIRDSEED SALE ORDER FORM

ALL ORDERS WITH PAYMENT MUST BE RECEIVED BY WEDNESDAY, FEB. 9

Proceeds support local Audubon conservation and education programs

Check preferred pickup location. Pickup dates will be Feb 17-20, 2000

Confirmation and details will be sent via mail.

San Bruno____ Burlingame____ Half Moon Bay____
Pacifica____ San Mateo____ Atherton____ San Carlos____

	# BAGS	\$-COST-\$
AUDUBON WILD BIRD MIX.....20 lb @ \$10.00/bag	_____	= _____
red & white millet plus black oil sunflower		
RED/WHITE MILLET MIX.....20 lb@ \$9.00/bag	_____	= _____
BLACK OIL SUNFLOWER.....25 lb@ \$12.00/bag	_____	= _____
WHITE PROSO MILLET.....25 lb@ \$8.00/bag	_____	= _____
THISTLE.....5 lb@ \$8.00/bag	_____	= _____
SUNFLOWER CHIPS.....25 lb@ \$22.00/bag	_____	= _____

SALES TAX IS INCLUDED IN ALL PRICES ABOVE

Contribution to Sequoia Audubon Society (tax deductible).....

CHECK # _____ GRAND TOTAL _____

THE NEXT SEED SALE WILL BE APRIL 2000

Please enclose a **stamped self-addressed envelope** to receive your order confirmation and directions to pickup location. Mail check and order to: **SEQUOIA AUDUBON SOCIETY**

Name _____ 30 West 39th Avenue, Suite 202
Address _____ San Mateo, CA 94403
City _____ Zip _____ (650) 345-3724
Phone (Home) _____ (Work) _____
E-Mail _____

The Bluebird Journal

Howard Rathlesberger

San Mateo County Coordinator

The Sharon Heights Golf Course

Trail is complete for now with a total 18 boxes, 10 on the western perimeter fence along 280, one on a fenced weather station, and 7 hanging from limbs in trees.

Hopefully, all are out of the way of sprinklers. The monitor team includes, Robin Smith, Anne Moser, Penelope and Bob Bowman, and Red Pendleton.

The new trail at Filoli on the Dun Dag Hill and along Willow road is also complete. Another development at Filoli is a trail around the perimeter fence of the new/old orchard. The perimeter is about 2900 feet. The fence posts are 10 feet apart, so 30 poles equals 100 yards, the suggested interval for bluebird boxes. We should be able to place about 9 boxes and pair some to avoid Violet Green Swallow competition. This should be excellent habitat as Filoli plans to mow and keep the grass short. When the orchard was originally laid out by Mr. Bourne in 1917 it had 1000 trees.

The CTETA horse park on Whiskey Hill and Sand Hill Roads is also ready for action with a total of 17 boxes and room for more. Art Middleton, who lives on Whiskey Hill Road, is monitoring.

So our year 2000 should be interesting with this additional capacity.

Robin Smith and I attended a meeting at Cal Audubon in Sacramento November 29th concerning the Transcontinental Bluebird Trail (TBT), sponsored by the North American Bluebird Society (NABS), the California Bluebird Recovery program (CBRP), and Cornell Labs. It's not a linear trail, but a matrix of trails and individual boxes across the continent.

More later. Note that our e-mail address is now

Rathlesberger@email.msn.com

Bluebirds at Duck Days

UC Davis will hold their annual celebration of ducks on the Davis campus on Feb. 19 & 20.

Featured speaker on the 20th will be **Don Yoder, Program Director of the California Bluebird Recovery Program** giving his slide show on bluebird trails

and nestboxes. In addition, County Coordinators Kevin Putman (Sutter Co.) and Hatch Graham (El Dorado Co.) will be building nestboxes in their workshop session.

Tame (?) Condors

Despite the best efforts of zoo personnel at both the Los Angeles and San Diego zoos it would seem that the captive-bred California Condors associate humans with food.

Near the Los Padres National Forest enclave of Pine Mountain Club the condors have been hanging around the buildings and trash piles and have, in at least one case, slashed through screen doors to get at food sources inside the buildings.

The victims of this avian burglary attempt were, ironically, two former Sierra Club Directors who opposed the California Condor captive breeding program.

A Thousand Cranes

The California Academy of Sciences in Golden Gate Park: is presenting "A Thousand Cranes" exhibit beginning January 29, 2000 and running through July 30, 2000. Featured will be photographs by Wu Shao-Tung, who has traveled all over the world to photograph all fifteen species of cranes. His photographs include cranes from Africa, India, China, Japan, Siberia, Canada, America and Australia.

Thanks to SAS member, Paul Amaud, retired entomologist from the Academy, for bringing this to our attention.

Shorebird Breeding Strategies

So far scientists have been unable to explain huge variations in Arctic shorebird incubation behavior. There seems to be considerable differences in strategy -- with no apparent obvious advantage to any particular approach.

The surprise discovery of a threesome Semipalmated Plover partnership incubating the same clutch of eggs, taking turns, has shed new light on the mysteries surrounding shorebird incubation strategies. The three plovers, all color-banded for

identification, two males and one female, were observed on June 23, 1999, and thereafter, on Cape Churchill, Manitoba, rotating incubation duties every two hours or so, day and night. Such threesomes have been reported in oystercatchers, but very rarely in other species.

Shorebird incubation strategies are known for their abnormalities, many of whose functions baffle scientists. Although there are some parallels among closely-related species, overall there is no real pattern.

In Lesser Golden-plovers, males incubate by day, females by night, switching about 7 a.m. and 7 p.m. Gaudy males compensate for increased visibility with elaborate self-sacrificial distraction behavior if intruders come too near to the nest. Whatever the benefits are, the plovers' strategies are so highly effective that these birds live to, and breed at, especially old ages.

In Semipalmated Plovers, new data shows males incubate by day, females by night, but for two hours around midnight there is a temporary, and inexplicable, switchover. These plovers are also long-lived, and breeding adults of 13 or 14 years of age are not unusual. They improve their nest success by selecting, in successive years, nest sites with a proven history of brood production, some sites being used for several years in a row, and not necessarily by the same parents.

Whimbrel parents incubate randomly, usually rotating duties every two to three hours. So do Short-billed Dowitchers. But in both species there is tremendous, and unexplained, daily variation in elaboration and complexity of distraction behavior in both sexes. Intruders might be greeted with indifference one day, and frantic distraction display the next.

Male Stilt Sandpipers incubate at night, females by day. Hudsonian Godwits have the same strategy. Dunlins are the complete reverse.

Phalarope females lay eggs, but males do the incubation. Such a strategy allows females to allot more energy reserves to producing larger eggs with more robust embryos.

Clearly, there is no rhyme nor reason to these occurrences. A theory that explains one species' behavior is clearly contra-indicated for the next species.

West Nile Virus Goes Beyond Crows

The virus that can cause West Nile encephalitis in humans is not only found in crows, according to scientists at the US Geological Survey's National Wildlife Health Center in Madison, Wisconsin. USGS has released a list of 18 bird species that the Centers for Disease Control and Prevention (CDC) confirmed as having tested positive for the virus:

Black-crowned Night-heron
Laughing, Ring-billed and Herring Gulls
Sandhill Crane Mallard Bald Eagle
Red-tailed and Broad-winged Hawks
American Kestrel Belted Kingfisher
Yellow-billed Cuckoo Blue Jay
American and Fish Crows
American Robin

"Although the cause of death has not been determined in all cases, we can assume that these birds were exposed to the virus in the tri-state area of New York, New Jersey and Connecticut," said Dr. Robert McLean, USGS biologist and director of the Madison Center. "Some of these species could play a significant role as we track the spread of this disease."

McLean added, "The variety of birds is disturbing because these species migrate to other areas and could potentially disseminate the disease elsewhere. The good news is, with the exception of American crows, there were only a few individual birds from each respective species that tested positive. It is still too early to tell if this is because they are not as susceptible or they were not as readily observed as crows."

Monitoring mortality in crows is especially important because crows appear to be highly sensitive to the virus.

"At this time it is difficult to assess how many birds have died from this disease. While some of the affected areas have reported very high bird mortality, especially in crows, a number of the birds have died from other causes," said USGS wildlife disease specialist Linda Glaser. "About 49 percent of the 392 birds tested by the USGS and CDC have tested positive for West Nile virus."

McLean and his team of USGS

biologists have been taking blood samples from migratory and non-migratory birds in the New York area to get a sense of the extent that bird populations and various species were exposed to the virus. "This information will be used in establishing an effective surveillance network to track the virus and ultimately learn how it could impact our native bird populations."

There is still much that is unknown about the ecology of the virus and how it will respond to its new environment in the United States. "Once a bird is infected, the virus can be transmitted to mosquitoes only for about 4 to 5 days. Although this appears to be a short time, many birds can migrate hundreds of miles within that time. It will be important to find out what species are involved in the transmission of the virus and if migratory birds, including crows, are capable of moving the virus to new locations," said McLean.

The USGS will continue to focus on collecting information that will help determine the extent of the species involved, the geographic and temporal distribution of the virus, and whether the disease is continuing to expand to new sites.

McLean emphasized that with so many state and federal agencies involved in the West Nile investigation, he is optimistic that scientists will learn what role migratory birds may play in determining if the virus will find a permanent home in this hemisphere and what impact it will have on our native species.

Periodically, the USGS issues Wildlife Health Alerts to keep natural resource agencies apprised of wildlife health or disease issues that may threaten wildlife. USGS, along with several state and federal and local natural resource public and animal health agencies, is diligently monitoring the spread of the virus by conducting field investigations, processing wildlife specimens, and keeping these agencies informed through the USGS Wildlife Health Alerts.

The USGS is also developing digital maps to monitor the expansion and range of the disease. The maps can be quickly updated and used with overlays to show other pertinent information such as climate, vegetation, bird and mosquito species ranges for the area being studied.

West Nile virus is closely related to

St. Louis encephalitis virus but generally causes a milder disease in humans. Both viruses are transmitted by a mosquito, which acquires the virus when it bites an infected bird. If the same mosquito subsequently bites a human it can pass the virus to a human host. This is the first time West Nile virus has been recognized in the United States or any other area of the Western Hemisphere.

Backyard Bird Count

The 2nd Annual Great Backyard Bird Count (GBBC) will take place February 19th - 22nd, 2000. Organized by National Audubon and Cornell Lab of Ornithology, the Count is sponsored this year, in part, by Wild Birds Unlimited and Ford Motor Company. The goal is to have at least one million of the 50 to 60 million North Americans who watch birds contribute data. The count is reported on individually by counters with computers who send their data directly to the Cornell lab. **(Sequoia will provide computer access for those of you who want to participate but are Intel-impaired. Send us your lists and we will submit them.)**

As the event evolved last February, its educational potential was recognized. Fourteen thousand citizen-scientists studied their backyards last February. This year, in addition to individuals and families, it is hoped that 50,000 classrooms across the continent will get involved.

The GBBC offers the classroom teacher the opportunity to teach environmental literacy through an inquiry-based science activity and state-of-the-art technology. National Audubon will provide instructional materials for the classes and suggest additional related activities.

The data collected this year will allow ornithologists to begin to look for trends, population shifts and the impacts of unique weather patterns.

FOR MORE INFO., CONTACT: Sally Conyne, Dir., NAS Citizen Science; Rushland, PA 18956;

e-mail: sconyne@audubon.org

OR Cornell Lab, 159 Sapsucker Woods Rd.; Ithaca, NY 14850; 1-800-843-BIRD
OR Alicia Craig-Lich, Wild Birds Unlimited; 1-888-302-2473, or 317-571-7100;

e-mail: craiglich@wbu.com

Deghi Resigns from Board

Citing possible conflicts of interest with his current job assignments, Gary Deghi reluctantly submitted his letter of resignation from the SAS Board of Directors at its January meeting.

Gary was an outstanding contributor to the Board during the past 2+ years and will be missed.

Thank you, Gary.

Annual Fund-Raising Letter Produces Outstanding Results...Again!

The results from our December fund-raising letter were outstanding. All donors will be acknowledged in a future issue of the Needles.

Sequoia **NEEDLES** is published monthly except in January, July and August. Members are encouraged to submit material to be published in the **NEEDLES**. The deadline for the submission of materials is the first day of the month preceding publication. These may be original articles, original artwork or cartoons, or uncopyrighted material from other sources. Items dealing with conservation issues must be submitted to the Conservation Committee prior to publication.

Information for all officers and chairpersons should be mailed to 30 West 39th Ave., Suite 202, San Mateo, CA 94403-4561. Please send **RENEWAL MEMBERSHIPS** directly to National Audubon in the envelope accompanying your renewal notice.

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