

El Tecolote

NEWSLETTER OF THE SANTA BARBARA AUDUBON SOCIETY



March 1994

Vol. 32, No. 5

The Marvel of Migration

► Scott B. Terrill and Michael Rigney

TWICE A YEAR, a small miracle occurs in California: both awe-inspiring and thought-provoking, it is the miracle of migration. Anyone with an interest in the natural world has probably witnessed flocks of waterfowl or shorebirds sweeping through marshes and wetlands, heralding the change of seasons. But few except ardent birders and ornithologists have seen the thousands of brightly colored migrants in the tiny desert oasis of Butterbrecht Springs or wave upon wave of miniature rufous hummingbirds in their determined ridgecrest flights along the outer Coast Range.

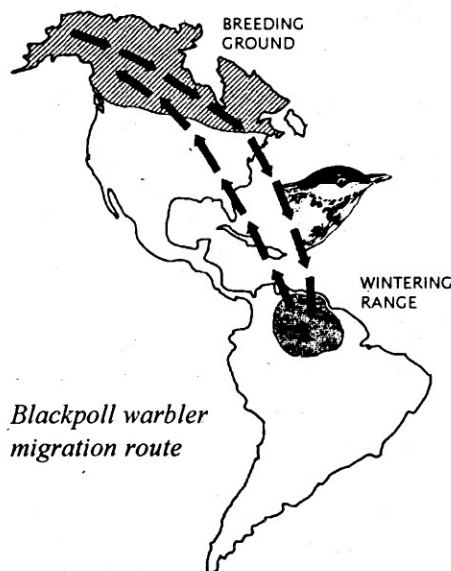
For those who have had the opportunity to witness and study bird migration, it turns out that the event is truly remarkable, and it seems that the more we learn, the more remarkable the feat of migration becomes. Consider that vast numbers of

birds travel thousands of miles and arrive on wintering grounds specific to their species or subspecies, with very few individuals missing the mark. Consider also that after making these long journeys, individual birds can return to exactly the same breeding or winter location over consecutive years. The ability of an inexperienced, juvenile blackpoll warbler, for example, to migrate from western Alaska to Venezuela by first crossing Canada, then flying nonstop across the Atlantic Ocean from New England, only to return to the spot it was born via a far different route (across the Caribbean and up the North American continent) stretches the imagination.

What is not beyond imagination is the fact that these long journeys require tremendous expenditures of energy and are fraught with danger. Why then do so many birds migrate? And how do they know where to go and how to get there? These questions have intrigued scientists and naturalists for many years, and we have only recently made significant strides in understanding the biological rationale for migration.

With respect to the first question, most recent theories consider that migration enables birds to avoid physiological stresses of unfavorable climates and to exploit food supplies that are available only at limited times each year. Temperate and Arctic regions undergo tremendous blooms of food resources (primarily insects) during the summer months, which in turn provide a high energy/high protein diet for rapidly developing

(See **Migration** on page 3)



Blackpoll warbler migration route

March Program

Friday, March 25

Farrand Hall, S.B.N.H. Museum
7:45 p.m. Refreshments
8:00 p.m. Slide program

"An Evening with Anne Gabeler"

The last time we saw and heard Anne Gabeler, she was part of the husband and wife team that produced the nationally famous multimedia show called "Synesthesia." This photography/poetry/music art form expressed in a new way the physical and spiritual relationship of humans with nature.

Now Anne is returning to this artform with a new and revised repertoire. Combining her own photographs with her poetry and the music of various classical masters, she will present the première of "Letters to the Earth," a selection titled "Woodwings" (dedicated to Santa Barbara Audubon Society), a revised and updated version of "Persephone" (her most well-known creation), "Patterns of Earth and Sky" and "Continental Leasing Program" (based on poems written by Angie Bjorklund and Anne Gabeler).

This program is the first in an occasional series dedicated to exploring different aspects of our eternal fascination with birds and nature; it asks the question "Is there more to birding than just naming that bird?" Come see, hear, feel and decide for yourself.

Activities Calendar

Thursday, March 10: Chapter Board Meeting.

The board meets on the second Thursday of the month at 7:00 p.m. at the Goleta Community Center, Room 5B.

Sunday, March 13: Botanic Garden and Mission Creek.

A Sunday field trip for those of you who have to work on Saturdays. Join **Jim Greaves** and his keen pair of eyes to spot wintering warblers, stragglers and vagrants, as well as the usual host of goodies. Meet at the S.B. Botanic Garden at 7:30 a.m. We'll visit several localities in the area and should be back by lunch. Call Jim at 966-3984 for info and rain update. No charge.

Saturday, March 19: Lotusland.

If you missed the first tour last autumn, here's your chance to see at last the botanic splendor that is Madame Ganna Walska's legacy. Help us compile a springtime bird list for this 40-acre estate in the heart of Montecito. Join Lotusland docent and field trip leader **Jeff Chemnick** for the two-hour tour. Advance paid reservations of \$10 per person are necessary to secure your place on the tour. Contact the Audubon office at 964-1468 to make reservations and payment. We'll meet at the Andree Clark Bird Refuge at 9:10 a.m. No videotapers, tripods, children, smoking, or latecomers! Call Jeff at 965-0895 for info. and rain update.

August 1994: Southeastern Arizona.

Stay tuned for details of an exciting week-long trip to the birding capital of America. Although it is still in the planning stage, I would appreciate tentative reservations from interested parties for estimating and coordinating purposes. Please contact me, **Jeff Chemnick**, at 965-0895 if you would like to participate. The dates depend on demand, but early in the month is best for Mexican rarities, spectacular thunderstorms, and bizarre insect and reptile life, as well as the multitude of hummingbird and owl species for which the area is so well-known.

Conservation Report

Our chapter is gearing up for a tree-planting project. We will plant trees in a denuded or riparian area and hope to involve the community. Anyone wanting to help out, or who has native trees to donate, call **Ron Hirst** (967-0138) or **Dave Wass** (682-6962).

The recent designation of a least Bell's vireo "critical habitat" in the Santa Ynez Valley area was aided by letters we wrote to the U.S. Fish & Wildlife Service a year ago. I am convinced letters we write on topical issues do make a difference.

The proposed Mobil Oil Corp. "Clearview" project next to Devereux Slough is being heavily promoted. Our chapter is concerned about unanswered questions regarding biological impacts, traffic, noise, coastal industrialization, neighborhood health and safety issues, and land-use policy inconsistencies. Minerals Management Service officials of the Department of the Interior are considering an alternative whereby Platform Holly would be removed and a new platform built further offshore.

Members interested in conservation issues are welcome to attend our monthly conservation committee meetings. These generally take place at the SBAS office at 7 p.m. on the second Tuesday of every month. These meetings are a good way to find out what conservation projects are coming up so that you can volunteer or lead a project.

— Ron Hirst

And the winner is . . .

Joy Parkinson won the Oct. to Dec. membership drive. Joy signed up four new members plus one *El Tecolote* subscriber. Her grand prize for this accomplishment is a pelagic birding trip donated by Shearwater Journeys out of Monterey.

Ron Hirst came in second and wins the whale-watching trip on the 'Condor.' **Nancy King** placed third, winning a \$25 gift certificate from Pacific Travellers Supply. Winners **Susie & Carroll Barrymore**, **Jan Montgomery** and **Tomi Sollen** had a three-way tie for the fourth and fifth prizes.

1994 Western Regional Conference

March 26 – 29

With a tradition begun 46 years ago, the Western Regional Conference of the National Audubon Society at Asilomar has grown into the largest regularly scheduled environmental gathering in the West.

This year's conference theme focuses on Audubon's new and compelling *Birds in the Balance* program. Among the most exciting new initiatives on the conservation horizon is the effort to sustain healthy and viable populations of neotropical migratory songbirds. These include warblers, vireos, tanagers, swallows, swifts, flycatchers, grosbeaks and buntings.

The conference will feature top-notch speakers, interactive workshops and a variety of field trips. Presentations and workshops will draw special attention to key migratory bird habitats including forest, wetland and riparian landscapes, and the work being done to protect and restore those habitats. The great restoration work of many chapters throughout the Western Region will also be highlighted.

Also concurrently featured will be a full youth program directed by the educational staff of the Richardson Bay Audubon Center and assisted by chapter volunteers as part of the conference.

The *Birds in the Balance* program touches every part of the Western Region. It will be a truly valuable experience for the 800 or more people in attendance. Please contact the S.B. Audubon office (964-1468) NOW if you want to attend.

Migration (Continued from page 1)

nestlings. Thus, many species can breed in the more northern latitudes during the brief but insect-rich summer and then fly south to the more hospitable climate of the southern United States, Mexico, or Central and South America.

Although the relationship between food availability and migratory behavior may seem somewhat straightforward, the diversity and dynamics of migratory strategies indicate a complex evolutionary history. Some migratory systems appear to have evolved in the tropics, while others came about in temperate regions. It is also worth keeping in mind that patterns of migration that currently exist are but a snapshot in the evolutionary process. The forces of natural selection are constantly modifying migratory behavior, and changes can occur very rapidly. In certain resident species, some migratory populations are currently developing; some migratory populations are becoming resident. In the past several decades, a new wintering population of blackcaps (Old World warblers that breed in central Europe and normally migrate to the Mediterranean to winter) has developed in the British Isles; this population is increasing explosively.

With respect to the second question, how birds know where and when to migrate, recent work on a select few species of migrants has yielded some answers. Research performed on long-distance migrants, primarily Old World warblers of the genus *Sylvia* by Dr. Peter Berthold and his colleagues at the Max Planck Institute in Germany, has indicated that the basic "program" for migration is passed among generations of birds via genetic material. It was initially noted that the longer a migrant species traveled from the breeding to the wintering grounds, the more intense and the longer the duration of that species' nocturnal activity (restlessness associated with migration, observed in captive birds). The second breakthrough came when Berthold and his colleagues hybridized two populations of the common European migrant blackcaps, one a long-distance migrant, the other a short-distance migrant, and found that the offspring showed perfectly intermediate levels of migratory activity. The third

major finding was that the direction of migratory orientation was also transmitted genetically. As it turns out, migrants inherit the ability to orient their migratory movements using a complex set of "instructions" derived from the Earth's magnetic field, the stars, the sun, and polarized light. Remarkably, recent evidence indicates that birds may even possess a "magnetic map" that apparently enables them to locate their position anywhere on the globe!

Needed for Migration: Habitat

Although birds appear to inherit most information about when to go and how to get there, this information alone does not get them where they need to go. Only the opportunity to obtain adequate food and water before and during migration, plus the availability of appropriate habitat in which to rest and refuel (replenish stored fat deposits) along the migratory route, enables the birds to actually survive the journey.

While most research that has focused on factors responsible for the recent decline of many migrant populations has concentrated on the breeding and, more recently, the wintering grounds, it is important that we not overlook the third crucial season in the life history of migrant birds: the migration period itself. Breeding habitats, the wintering grounds and migration stopover areas must all be examined to fully understand current pressures on these populations.

Preliminary work on the importance of habitat along the migratory route is addressing several pieces of the migrant decline puzzle. Feeding and resting habitat can be very important, especially in inclement weather. Some habitats, such as deciduous forests along the coast of the Gulf of Mexico and desert riparian areas may be consistently important feeding areas for birds that have crossed or will cross major ecological barriers — oceans, mountains, deserts, etc.

We also know that while birds that migrate vast distances over major ecological barriers often accumulate large fat stores to fuel nonstop flights, many other species migrate shorter distances or are not forced to cross major ecological barriers. The migratory strategy associated with these birds involves more stopping and refueling along the way

rather than loading up for a major flight. For this group, especially well represented in western North America including California, habitat along the migratory route may be critically important. In some cases, this habitat may be a narrow riparian corridor, a city park, a desert oasis or a clump of trees in your backyard. Studies of Pacific-slope flycatchers, captured in a central California riparian corridor barely 100 feet wide, showed that they lingered during migration an average of four days on the site and gained an average of one gram. Some individuals gained as much as three grams (30% of their arrival weight) in body weight before continuing their journey. Additionally, birds arriving with



Pacific-slope flycatcher

relatively low body weights tended to put on more weight than those arriving with greater body weights. This refueling process is much the same for other western migrants and points out the necessity for habitats — even less than pristine ones — to support the miracle of migration.

As we begin to fathom the mysteries of migration we can only hope that our understanding will strengthen our abilities to stem the tide of decline in migratory bird populations.

(Reprinted from the Point Reyes Bird Observatory Quarterly Journal, Fall 1993, entitled "On Behalf of Songbirds." Scott Terrill is research director and Mike Rigney is executive director of Coyote Creek Riparian Station in the south San Francisco Bay area.)

President's Message

While it is with great pleasure that Santa Barbara Audubon recognizes former board member **Elan Sutton** as Executive Director of "Earth Day" this April, it is also with regret that our board accepted the resignation of at-large member **Chris Lange** (whose coastal preservation efforts, work and family commitments proved greater than expected). If you want to volunteer for Audubon's Earth Day booth this year, or to work with Elan on the overall committee, please leave your name at the Audubon office (964-1468). If you have suggestions for the at-large vacancy on the board, call the office and relay them to Nominating Committee member **Tomi Sollen**.

On the first weekend in March, the National Audubon Society's quarterly board meeting will be at Dana Point, Orange County. Saturday, March 5 is "Members Day," with an open luncheon and a 6 to 8 p.m. Members Reception. Since space is "very tight," please call our Audubon office (964-1468) immediately if you want to attend.

If you like birds, Nature, Audubon or Monterey, you definitely want to consider going to the Western Regional Conference at Asilomar State Park, just south of Monterey, March 26 to 29. Themed *Birds in the Balance*, the conference will feature leading scientists and political leaders, including Paul Ehrlich and Interior Secretary Bruce Babbitt. For more information, call Western Audubon

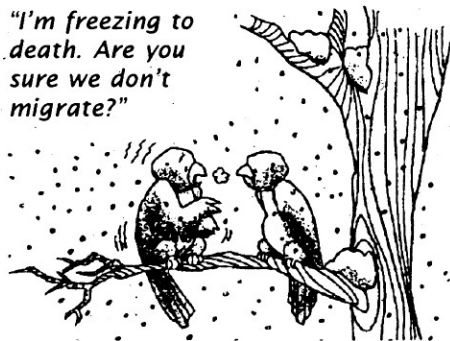
HQ at (916) 481-5332.

Recognition is due board members **Jeff Chemnick** (Field Trip Leader) for the outstanding, witty presentation he made as our January Program speaker on the seven National Parks of Argentina (marvelous!), and to Program Director **David Wass** for helping coordinate an excellent 3-part series on Impacts of Immigration for Adult Education at the Downtown Library. (Dave also trains as a "public video" cameraman for Cox Cable's Community Access programs.)

Besides Earth Day, April will also feature a conference on Sustainable Economics, through the Community Environmental Council and American Institute of Architects, and a conference on county coastal protection (including the option of a future National Seashore designation) sponsored by the Audubon Society. Keep your calendars clear for fun and knowledge in April.

— Lee Moldaver

"I'm freezing to death. Are you sure we don't migrate?"



SANTA BARBARA AUDUBON SOCIETY

OFFICERS & COMMITTEE CHAIRS

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Vice President: Sally Walker	569-5388
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(vacant)	
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Bird Refuge Census: Helen Matelson	966-3217
Rare Bird Reporter: Karen Bridgers	964-1316
Rare Bird Alert	(805) 964-8240
SBAS Office	(805) 964-1468

OFFICE HOURS

Monday	11:00 a.m. - 4:00 p.m.
Tuesday	11:00 a.m. - 4:00 p.m.
Wednesday	11:00 a.m. - 1:00 p.m.
Thursday	11:00 a.m. - 4:00 p.m.
Friday	11:00 a.m. - 2:00 p.m.

MEMBERSHIP

Special new member rate	\$23
Individual	\$35

Please send *only* new member applications and *El Tecolote* subscriptions to: Santa Barbara Audubon Society, 5679 Hollister Ave., Suite 5B, Goleta, CA 93117.

EL TECOLOTE

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Santa Barbara Audubon Society

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