



# The Timucuan

December 2006 - January 2007

Newsletter of the

Volusia-Flagler Sierra Club

P. O. Box 929, Daytona Beach, Florida 32115

[www.florida.sierraclub.org/Volusia](http://www.florida.sierraclub.org/Volusia)

The next business meetings of the Volusia-Flagler Sierra Club's **Executive Committee** will be held on **November 29th** and **December 27th** at **5:30 p.m.**, at **Daytona Beach Regional Library (City Island Library Center), 105 E. Magnolia Avenue, Daytona Beach.**

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## **PROGRAM FOR DECEMBER MEETING IN NEW SMYRNA BEACH**

**St. Peter the Fisherman Church,  
4220 Saxon Drive**

**WEDNESDAY, DECEMBER 6th, at 7:00 p.m.**

## **Sierra Club Holiday Party**

We will celebrate in New Smyrna Beach in the Parish House behind St. Peter the Fisherman Church. For those who have not been to New Smyrna Beach meetings, this location is absolutely beautiful.

It overlooks the marsh, and the weather in December should be perfect.

In lieu of a program, we will share a meal at 7:00 p.m., followed by a white elephant gift exchange. Sierra Club will provide turkey, ham, drinks and paper products. Attendees should bring a dish to serve 6 - salad, hot veggie or dessert - for a good old-fashioned pot luck. If you want to participate in the gift exchange, bring a wrapped gift. Pull out your comfy holiday duds and join us for a great meal and fun time!

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## **PROGRAM FOR JANUARY MEETING IN DAYTONA BEACH**

**Daytona Beach Regional Library  
(City Island Library Center),**

**105 E. Magnolia Avenue, Daytona Beach.**

**WEDNESDAY, JANUARY 3rd, at 7:00 p.m.**

## **Nancy Long,**

South Daytona Councilwoman and longtime environmentalist, will discuss the recent local and national elections and the anticipated impact on environmental issues.

JANUARY 3 marks Sierra Club's return to a **permanent meeting location** in the auditorium of City Island Library in Daytona Beach.

As usual, the meeting will begin at 7:00 p.m. The meeting is open to the public.

Everyone is welcome.

Come early to enjoy refreshments and social time.

Car pools from outlying areas for the December & January meetings will leave at **6:00 p.m.:**

**DeLand** meets at Wendy's parking lot, corner of 17/92 and U.S. 92.

For information, call **Dennis Elster** at **386-943-9415**

**New Smyrna Beach** arrangements for January meeting to be made on an individual basis. For information, call **Pam Powell** at **386-428-9312**.

For the December meeting, **Daytona Beach** meets at the Daytona Beach Regional Library (City Island Library Center), 105 E. Magnolia Avenue, Daytona Beach.

For information, call **Marsha Lewis** at **386-258-1605**.

## 2006 Election Wrap-Up

Folks, Volusia-Flagler Sierra Club came out in really good shape in the elections.

In Florida House, District 28, we backed **Joyce Cusack** who won against a well-spoken, well-financed land developer.

In County Council District 1 we backed **Andy Kelly** who won.

The bad news was County Council District 3. We backed **Barbara Herrin**. She lost in a close race. That was bad news because she was our best environmentalist.

In County Council District 5 we backed **Pat Northey** who won.

For the Volusia Soil and Water Conservation Board, we backed four candidates who call themselves the Green Team: **Michelle Moen, Tony Cole, Don Spence** swept their races, putting the environmentalist in the driver's seat. The fourth candidate? Sierran **Dennis Elster** was not on the ballot because he was unopposed.

With the House and Senate under new management we might even get an honest voting system.

-- *Mike Thompson, Political Chair*

## A GIFT TO WILDLIFE

The nesting season for wood ducks and screech-owls will be in full swing in a couple of months.

You have a timely window of opportunity to assist these cavity nesters and make a handsome addition to your yard or local park. Habitat destruction has resulted in a serious reduction in good cavity nesting sites. The Memorial Nesting Box project sponsored by the Polk Sierra Group helps to address this need. The boxes provide a great benefit to birds in our increasingly urban environment.

The boxes are beautifully constructed from rough cut inch-thick cypress and are easy to put up. All donations in excess of the actual material costs are donated to Richard Coleman's Scholarship Fund at New College. Richard was Sierra's Kissimmee Restoration Issue Chair for close to 34 years. The boxes can be obtained by making a minimum donation of \$50; shipping costs vary depending upon distance but average \$15 for most Florida locations.

For that special difficult-to-buy-for person, a nesting box would be a perfect gift! Contact **Bob Taylor** at [RTa33851@aol.com](mailto:RTa33851@aol.com) or **863 439-2251**.

## Florida Sierra Club Outings in December

**Withlacoochee State Forest Day Hike, December 2nd:** A moderate hike of 4 miles on rolling forest trails. We will be visiting the beautiful sandhill ecosystem and the intriguing karst formations of the forest. 9:00 am to 1:00 pm. Space is limited on all outings. For more information, contact **Steve & Julie Royer** at [venturing415@hotmail.com](mailto:venturing415@hotmail.com) or call **1-352-465-5233**. Sponsored by Naturecoast Sierra Group.

**Overnight Backpack trip to Hidden Pond in the Ocala National Forest, December 2nd & 3rd.** We will explore the Juniper Wilderness Area trail and discover our National Forests, A moderate hike of about 9 miles over two days. Learn about National Forest issues. Co-Leaders: **Mike Pici, 727-798-9227** and **Ben Berauer, 727-392-2821**. Sponsored by Suncoast Sierra Group.

## THANK YOU! to Mark Mills!

Mark designed and maintains our website last year, AND became a member of the Volusia-Flagler Sierra Club Executive Committee. Now he has offered to continue as Webmaster *at no charge* to our Group. He made the announcement at the September ExCom meeting, and everyone heartily seconded the "motion." Please visit our great web site at

<http://florida.sierraclub.org/volusia/>

***Volusia-Flagler Sierra Club Welcomes New Members and Transfers***

**Daytona Beach**

Evelyn Rolf  
Richard Lester  
Molly Barath  
Lori Besser  
Annie Hicks  
Marsh  
Robert  
Winegardner  
Cindy Nour  
Linda Ehrlich

**South Daytona**

Betty Sonneborn  
Patricia Puzzo  
Kimberly Vaughn

**Port Orange**

Dennis Maurey  
Susan Schwadron  
Donald Specht  
Ronald Hogan  
Devon  
McFall  
Barbara Walker  
H. Lusky

**Edgewater**

Seth Greenstine  
Robert Joye  
Mel Schack  
Pat Card

**Florahome**

B. A. Askew

**Osteen**

Lee Jones

**New Smyrna**

**Beach**

Alissa Mongato  
Eugenia Holliday  
Kenyon MacLeod  
Holly Rose  
Ann O'Connor  
Robert Carns  
Carole Pollack  
Ramona Ortiz  
Dr. Mary Ann  
Lederhaus  
Janet Bernhard  
Kelly Nicely  
Robert &  
Christine  
Grosse

**Palm Coast**

Sharon Ellis  
S. Hatcher  
Jane Miklo  
Bebe Kelly  
Sharon Young  
Charles Osner  
Joseph Urgese  
Kimberly White  
Joann Beyer  
Robert Foley  
Elke Brentar  
Daniel Lenihan

**Clermont**

Patricia Keyser  
John Yates

**Ormond Beach**

Yvonne Lingo  
Richard &  
Yvonne Punnett  
Richard Murphy  
Roger Kerr  
Anne Broughton  
Linda Heverin  
Bruce Nilsson  
Mary Nilsson  
Douglas Romine  
John Williams  
Paula Szabo  
Dewey Christmas  
V. Kramer  
Catherine &  
Richard  
Crittenden  
Jamie Baldwin

**DeBary**

W. Daskam  
Myra Mason

**Flagler Beach**

Noel Giambalvo  
Ted Gregory  
Al Hadeed  
Frances Moore  
Mike &  
Geraldine  
Trebilcock

**Bunnell**

Richard Bosman

**DeLand**

Eileen Gardner  
William Mantz  
Joseph Master  
Carolyn Litke  
Carol  
Cottingham  
Jack Booton  
Pierson Rintz  
Stephen Suttle  
Michael Barbieri  
Debbi Smith  
Joan Pataky  
Rev. Ralph  
Luman  
Kristin Hilton  
Norma Lenhert

**Deltona**

Gerald  
Warbourton  
Julie Jeffries  
Gloria Groot  
Jo Kovach-  
Kelsch

John Edelmann  
Julie Jeffries

**Lake Helen**

Ann Brogan

**Orange City**

Ken Bradley  
Harold Sawyers

**Minneola**

Gary Lybik

# CONSERVATION CONFERENCE REPORT

-- Alexa Ross, Conservation Chair

Another wonderful annual Conservation Conference has come and gone and only four members of our group attended!

Please do yourself a huge favor next year and join us in this inspiring and educational event in beautiful surroundings. This year we met at Pine Lake Retreat, a 7th Day Adventist camp near Leesburg, two hours away with a resident trio of sandhill cranes. I left inspired and horrified, and eager to share with you some of the valuable information if not the fellowship of a great weekend.

**WETLANDS:** Our first speaker was Janet Reno's sister, Maggy Hurchalla, a Martin County Commissioner with twenty years of expertise. *Soils* are the best indicator of wetlands. Start with a local comprehensive plan amendment protecting **all** wetlands. Developers like to argue against 'non-functioning' 'mudholes;' beware of phrases like "in the public interest" and "net benefit" - slippery slopes. It's best to require restoration and management before agreeing to development. Mitigation, once the last resort, has become the first and worst choice. She cautioned us not to allow mitigation as a reason for wetland destruction, or the promise of a land swap. Twenty-five-foot buffers are useless; they will disappear with time. Illegal negative impacts must be corrected, not just fined. Staff shortages mean wetlands mitigation is not monitored or maintained. Trash and invasive vegetation must be removed, and native plants restored. Post development drainage must be compatible with the natural hydrology of an area. Her entire talk will be posted to the Florida Sierra Club Conservation Conference website.

**BIOFUELS.** Next came a math lesson - calories, BTUs - from Ben Fusaro. Corn ethanol is trumpeted as "green", but is it any better than gasoline, considering the intensive use of fuels in fertilizer (corn requires more than any other crop), planting and harvesting, not to mention government subsidies and lower MPG?

A cord of hardwood measures 4' X 4' X 8', or 16 50-foot high oak trees. It yields 30 million British Thermal Units. A proposed 75MW biomass power plant for Tallahassee operating continuously would use up 500 cords of wood a day. That would consume the entire Apalachicola National Forest within a month! And the efficiency of converting wood to electricity is only 30%.

Ben took us through an energy cycle. Say the earth captures 8,000 calories per square meter per day. Using a simplified food chain, sunlight nourishes bacteria, which feed plants which are consumed by mice, which nourish snakes, which are eaten by owls. The energy efficiency of the process is 1/1000,000,000! It takes 160 units of sunlight, or 6 units of wood or 3 units of coal to produce 1 unit of electricity. Coal's efficiency is 33%. Sierra's legal eagles are fighting the introduction of more coal-burning plants in Florida. (The Vice President says we need to build a new coal-burning plant every week to keep up with demand.) Coal production destroys mountains (it's cheaper to blast them apart than to mine them), streams, and air quality, releasing soot, mercury, and greenhouse gases.

**ELECTIONS** Good news and bad. Dan Hendrickson, the spouse of our Florida legislative lobbyist, Susie Caplowe, told us Florida had the lowest percentage turn-out in our history. Only

45% of registered voters made it to the polls, 10% fewer voters than in the last election.

It was also our most expensive election, according to the Center for Responsive Politics, about \$3 billion was spent. (Some of that was our cities spending our money 'educating' us to vote against the county charter amendments.)

John Tierney of Massachusetts is leading the Clean Money Clean Elections campaign, but this initiative was voted down in California, despite its success in other states. Special interests spent \$550 million in California fighting Clean Money and resolutions on oil and tobacco. Exit polls showed the number of voters declined there, too, turned off by big money TV ads and mailings. Disenchantment means disenfranchisement. The average voter is looking again like the earliest voters of the Republic: male white landowners. Though Caucasians are a minority in California, 73% of the voters were white and 60% over 60. Those voting are far more conservative than the general population.

Getting back to Florida, Charlie Crist had four times the campaign funds of Jim Davis, including \$20 million in public funding. But in the Florida House, there is a net gain of 7 Democrats, who can at least slow down procedurally the passage of bad bills. Florida Sierra endorsed both Crist and Davis in their primaries, and Davis mentioned his Sierra endorsement in the first televised debate. **Charlie Crist is now a member of Sierra Club!** Davis gave up his seat in Congress to run for Governor; Kathy Castor, who has replaced him, is said to be better on the environment.

Ironically, Amendment #3, which makes it harder for citizens to amend the Constitution by raising the bar from a simple majority to 60%, was the least favored of the state amendments, garnering only 53% of the vote statewide! Could it be the death knell for Florida Hometown Democracy? Sarasota County passed a referendum requiring a paper trail for voting; it would have helped close races (Christine Jennings) now in dispute. There are horror stories of election day: 18,000 undervoted ballots in a hot race, the disappearance of a race from the printed ballot, and the odd fact that more people voted for public hospital candidates than the Christine Jennings race.

Most counties passed purchases of conservation land, but the state is now doing a land inventory for affordable housing, so these open spaces may be at risk. Newspapers are favoring incumbent candidates. In Wakulla County a last minute personal attack ad against Howard Kessler resulted in a line of yellow-shirted supporters 2 miles long along the main county thoroughfare. In another conservative county, the first African-American since Reconstruction was elected, George Green.

On a national level, Sierra Club particularly targeted eight states, and Endangered Species-hater and Abramoff crony Richard Pombo of California was defeated by a wind-power expert. The new Ohio Governor, Ted Strickland, is a leader in clean energy, and Governor-elect Bill Ritter of Colorado favors wind and solar. Pennsylvania's Bob Casey, who defeated Rick Santorum, is our foremost global warming ally, but we need to keep

informing our friends. Sierra-endorsed Florida Congressman Ron Klein bought the Special Interests line on streamlining permitting coal and nuclear plants, so our work is never done. Senator Bill Nelson (Katherine Harris won in a dozen counties!) is a moderate, but does oppose off-shore drilling.

This year State Sierra made history, contributing \$500 apiece to worthy local candidates and they were glad to have our endorsements, too!

**SOLAR ENERGY** Ed Brown of Gainesville says we are better off putting \$20,000 into solar housing than the stock market. There is no cost in building solar in the first place - passive is just positioning your house correctly, having a white roof, not black - and now solar products in Florida are tax-exempt. The \$100 million Florida Energy Act features a \$2.5 million rebate incentive for solar, or 15 cents per person! PV incentives are \$4/watt, solar pool heaters \$100, solar water heaters \$500 (with a five-year payback) to a maximum PV incentive of \$20,000. The typical off-grid home uses a quarter of the energy of conventional housing. 30% of cool air is lost in duct work in 140-degree attics. Grid connection is allowed in Florida, and selling energy back to the grid can be done in Jacksonville and New Smyrna Beach.

But it's California, Texas and New Jersey that are the top US customers for solar, not the Sunshine State. We are number one in solar hotwater, but 90% of that heats pools. Oil, gas, coal and nuclear subsidies outdo solar subsidies 50 to 1. 70-80% of the Department of Energy's budget goes to nuclear plants and energy storage.

The photovoltaic (PV) industry grew 72% in 2005 but it's all leaving the country: 72% to Europe, 52% to Germany, which installs eight times the solar power we do. Germany uses huge solar subsidies to restore the Black Forest, phase out nuclear plants and comply with the Kyoto Treaty. In 2005 solar sales rose 40% to \$700 million, but the price of solar cells is rising due to a shortage of silicon - competition from computers. Silicon wafers have doubled in price in the last two years, and oil companies have bought out silicon producers, but demand should lower barriers. Most solar energy is used in the Southwest. Commercial solar energy has a forty year history Payback for solar cell investment is on average four years. A new wrinkle is nanosolar, which recoups in two months. Solar warranties are for 25 years but often can last 40. Solar roof collectors are rated for 150 mph winds. The silicon shortage and backlog is driving alternatives. Single crystalline is being replaced by multicrystalline: thin film production has doubled in a year. New string ribbon technology is replacing the slicing of silicon ingots, which wastes half the resource.

Government spending on solar increased 890% in 2004-5, but it's only 13% of the market. Commercial is at 39%, residential 33%. Google signed a contract to produce 30% solar power at a California campus, and both Google and Ebay Venture Capital have invested in nanosolar.

There are federal tax credits; see also [dsireusa.org](http://dsireusa.org), the Database of State Incentives for Renewables and Efficiency.

Konarka of Massachusetts manufactures thin plastic film attachments that can power up cellphones and computers.

The California Energy Commission aims for a million solar rooftops by 2018, and the Western Governors Association plans to diversify energy production with 30,000 MW of clean energy

by 2014. Florida has made a lame start this year, but as they say, you can't stop progress!

The awful truth is, no matter how we power ourselves, demand for electricity is ever-increasing and unsustainable. Unplug that computer, coffee-maker, TV, VCR, DVD now! Off isn't off! Conserve, conserve, conserve...

**GLOBAL WARMING** - St. Pete Sierra staffer Frank Jackalone is feeling the heat (he didn't sleep in a tent like I did) - an urgent call to action. As you know, the ten hottest years on record were recent. Temperature and greenhouse gases rise together, and carbon dioxide will double in our atmosphere in 45 years. Thousands died in Europe during the heat wave of 2005. The snow is gone from Kilimanjaro. A record 1700 tornadoes blew in the US in 2004. Hurricane Katrina went from a Category 1 hurricane to Category 5 in two days. In 2004, there was the first known hurricane in the South Atlantic. The Polar Ice Cap has melted 20% since 1979. Will the North Pole be an open sea by 2050? Should Greenland and the Antarctic continue to melt, sea level will rise several feet. The EPA estimates summer temperatures will increase 3-4 degrees by 2100, with spread of insect-borne diseases in new areas, more algal blooms and cholera outbreaks. In the last century, sea level around Florida rose ten inches. Coral reefs are bleaching, trees are dying, humidity and droughts increasing. Saltwater enters the aquifer.

Each gallon of gas we burn creates 28 pounds of carbon dioxide. But Honda Insight gets 61-70 mpg and Marion County has bought hybrids for its police fleet.

We are 4% of the world's population but produce 23% of global warming gases, followed by China, Russia, Japan, India; 34% is produced by power plants, 27% by transportation. We have 3% of the world's oil, and consume 25%. So our wilderness areas are threatened by drilling.

But raising fuel efficiency for cars and trucks to 40 mpg would save 345 million tons of carbon dioxide. We haven't increased these standards since 1975!

Lacking national leadership, 248 US cities have signed onto Kyoto. 326 mayors have signed onto the Mayors' Climate Protection Agreement to achieve emissions 7% below 1990 levels by 2012. But how? Eleven states have pledged to decrease emissions by 30% by 2016. Nineteen Florida cities have signed onto Kyoto. Sierra's Cool Cities campaign offers ten things we can do...walk, switch to fluorescent lighting, buy cleaner cars, support CAFE standards, insulate our homes, use low flow showers and toilets...

Bug your local legislator! Tell them to take nuclear and coal out of the energy bills, push conservation and renewables.

Link this issue with the insurance crisis. Work with them. This is the only planet we've got.

**FISH FOR THE FUTURE** Fisherman Tom Wheatley of the Marine Fish Conservation Network, a coalition of 190 member organizations, a Washington DC based grass roots organization fears the end of commercial fishing by 2048. See [www.conservefish.com](http://www.conservefish.com)

The keystone of marine conservation, the Magnussen Act, was a 1976 response to the presence of foreign vessels harvesting a domestic resource. The Exclusive Economic Zone, the EEZ, from 3-200 miles offshore was created to reserve marine resources for ourselves. In 1996, Ted Stevens, notorious for his

appetite for ANWAR, helped reauthorize the act to protect habitat by creating 8 quasi-government fishery management councils to reduce bycatch and protect fish habitat.

The Stevens Magnussen Act is up for renewal - soon-to-be-ex-Congressman Pombo and Congress were holding it up. There are 9 million saltwater fishermen and women in this country, a \$30 billion dollar industry, but only 10% of the big ocean predators remain. The nation's largest public resource is being managed for short-term profit. Scientifically determined sustainable harvests are exceeded by 500%. The law has allowed those who profit to overfish. Congress must base management on science and the public interest and prohibit input from financial interests. Fishermen and scientists must collaborate to preserve the resource for the future. The government report, An Ocean Blueprint, tells a story similar to the Pew's gloomy assessment of a few years ago. Indiscriminate killers, gill nets are still allowed in international waters. The Bush administration may be addressing destructive bottom trawling; longlines are another terrible problem. Tom recommends the book, Cod.

**FLORIDA GREENBUILDING.ORG** Rob Andrys of the Florida Green Building Coalition, Inc. tells us Sarasota is already doing it! Green projects go to the top of the permitting pile, meaning big savings for developers. Permits take 3 days, not 6 weeks.

By 2025, 60% of US building will have been built since 2000. Present development patterns are inefficient, expensive, redundant and wasteful. Since World War II the demand for housing and roads has produced a sprawl nightmare, abandoning established urban areas, eroding the sense of community and destroying the landscape. Government policies have subsidized this disaster, especially in transportation. Every day 450 acres of agriculture are destroyed for development.

Green building uses 40% less electricity and water than conventional. Green planning means a development in uplands must have 10% of the property retained as a nature preserve. Small affordable homes need bigger outdoor spaces. Front porches are ten feet from the sidewalk, making a congenial human-scale community. Avoid parasitic loads - appliances that are still on when they're off waste a billion dollars worth of energy or 12 power plants running 24/7...microwaves too! And Americans lose as much energy through inefficient windows as flows through the Alaskan pipeline.

People are happier in green office buildings and schools with natural lighting. We could reduce electricity use 30-40% now - with timers, energy STAR appliances: Refrigerators, our biggest energy hogs, built before 1994 use 60% more energy than those available today; fridges made before 2001 use 40% more energy than current models. Lighting accounts for up to 30% of our electric bill and can be cut in half with compact fluorescents. Changing 30 incandescent lightbulbs saves a half a million pounds of greenhouse gases.

A home can be built in 3 three days with polystyrene structurally insulated panels (sips). Habitat for Humanity used them in the first certified green building in Pinellas County, and 40 others are planned. There will be a GreenBuilding Conference in June in Orlando. The group won the Sustainable Florida award in 2004. See [www.Andrys.org](http://www.Andrys.org) and [ecosmartinc.com](http://ecosmartinc.com)

**AWARDS** Every year at the Conservation conference, awards are given to outstanding Sierra volunteers. Dr. Jack Davis, UF associate professor of history and author of Paradise Lost, an Environmental History of Florida, was the speaker, but after rising at 6am and barreling down highways for 2 hours and noting all of the above and overeating, I could not keep my eyes open. I lingered a moment at the campfire and staggered back to my damp tent...Sunday morning was a mini-FLEXCOM (Fla. Exec.Committee) and election of state officers. Our MIami activist urged us to comment in support of the National Park System building a global warming/sea level rise study station at Flamingo, at the Southern tip of the Everglades, mosquito central. This wilderness area is too buggy for year-round tourism, but the perfect place to study flora, fauna, hydrology, saltwater intrusion...buildings will have to be raised nine feet, since an 8-foot storm surge deposited nine inches of marl. It will be green built with solar power!

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
<h1>February-March 2007</h1> <h2>Volusia-Flagler Environmental Events</h2>					2	<b>Please note:</b> The Volusia-Flagler Environmental Action Committee meets every <b>TUESDAY</b> (except holidays) at <b>4:00 P.M.</b>
4	5	6	7 <b>VOLUSIA-FLAGLER SIERRA</b> <b>7:00 P.M.</b> City Island Library	8 <b>7:00 p.m.</b> Evening at Whitney Lab - <i>Incredible Eyes</i> 9505 Ocean Shore Blvd. Marineland	9	10 <b>Marine Debris Survey</b> <b>N. PENINSULA STATE RECREATION AREA</b> <b>9:00 A.M.</b> <b>(386) 409-3742</b>
11	12	13	14	15	16	17
18	19 <b>Halifax River Audubon</b> <b>7:00 p.m. Seabreeze United Church,</b> <b>501 N. Wild Olive Ave. Daytona Beach</b>	20 Native Plant Society Sica Hall 1065 Daytona Ave. Holly Hill 7:00 p.m.	21 SE Volusia Audubon Edgewater Public Library, 7:30 p.m.	22	23	24
25	26	27 <b>Volusia-Flagler Environmental Council - 1381 Educators Road, Daytona Beach</b> <b>7:00 p.m.</b>	28	<b>MARCH 1</b> Flagler County Audubon 7:30 p.m. Flagler Hospital S.R. 100 Bunnell	2	3
4	5	6	7 <b>VOLUSIA-FLAGLER SIERRA</b> <b>7:00 P.M.</b> City Island Library	8 <b>7:00 p.m.</b> Evening at Whitney Lab - <i>Life in the Dark</i> 9505 Ocean Shore Blvd. Marineland	9	10 <b>Marine Debris Survey</b> <b>N. PENINSULA STATE RECREATION AREA</b> <b>9:00 A.M.</b> <b>(386) 409-3742</b>

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
11	12	13	14	15	16	17
18	19 Halifax River Audubon 7:00 p.m. Seabreeze United Church, 501 N. Wild Olive Ave. Daytona Beach	20 Native Plant Society Sica Hall 1065 Daytona Ave. Holly Hill 7:00 p.m.	21 SE Volusia Audubon Edgewater Public Library, 7:30 p.m.	22	23 & 24 Suncoast Sierra Outing Overnight Backpack Ocala Natl. Forest 727.726.8375 or rudy@adventuresworl dwide.com	24 1989: Exxon Valdez Oil Spill
25	26	27 Volusia-Flagler Environmental Council - 1381 Educators Road, Daytona Beach 7:00 p.m.	28	29	30	31
4	5 Halifax River Audubon Society 7 p.m. 501 N. Wild Olive Ave., Daytona Beach	6	7	8	9	10