

THE LESSER SQUAWK

Newsletter of the Charleston Audubon & Natural History Society

DON'TMISS EVENTS!

EVENT (Dec 8th): Holiday Party and Oyster Roast fundraiser

Come join us at Bowen's Island as we continue our tradition of fun holiday parties, good food, and great music. We'll have multiple pots of chili and pans of cornbread, plus desserts to go along with all of the best Lowcountry oysters you care to eat. Bring your checkbook or credit card too, because we'll have lots of good items to bid on in a silent auction. For more information or to purchase advanced tickets, see the flyer on page 8. See you there!



FIELD TRIP (Dec 14th): Huntington Beach State

Our annual trip to Huntington Beach State Park, one of the best birding spots on the South Carolina coast, will take place on Saturday, December 14, from 7am-5pm. There are a variety of habitats on the property, including over 3,000 acres of freshwater impoundments, salt marsh and ocean beach. We can usually count on seeing 60+ species of birds there, including various ducks and other waterfowl (in recent years Redheads, Pintails and Canvasbacks have put in appearances on or near the Mullet Pond), wading birds, shorebirds, gulls, terns, eagles and other raptors, and sparrows. Occasionally we have gotten lucky and seen Red-breasted Nuthatches or Common Ground Doves near the feeders at the Education Center. Along the beach we could see Piping Plovers, and at the jetty we might encounter Purple Sandpipers or Great Cormorants. We should see Common and Red-throated Loons and possibly Bonaparte's Gulls there too.

Wear comfortable walking shoes, as the walk to the south jetty at Murrells Inlet is about



1.25 miles. Bring food and water, your birding gear (especially a scope if you have one), and dress for the weather. There is a covered picnic area as well as restrooms on the site. Note: there is a \$5 fee to enter the park (\$3.25 for seniors). We'll meet at 7 AM in our usual location, the Lowe's parking lot directly behind the IHOP on Hwy 17 North in Mt Pleasant (map). From there we'll carpool for the roughly one hour drive to HBSP. If you plan to attend, please register with Andy Harrison prior to December 14 at parula23@aol.com.

Calendar of Events

Sunday, Dec 8th, 2-5pm

EVENT: Holiday party and oyster roast fundraiser

For more information, see article to the left and the flyer on page 8.

Saturday, Dec 14th, 7am-4pm

FIELD TRIP: Huntington Beach State Park

For more information, see article to the left.

Sunday, Jan 5th, 7am-3pm

EVENT: Christmas Bird Count

Stay tuned for details, but you can contact our CBC compiler, Jen Tyrrell at jennybluejay@gmail.com for details. We routinely have high numbers of both species and individual birds in our count circle, so please come join us for this fun event. Even better, this year it's free to participate in the count! No more \$5 fee to be collected. See you there:-)

Wednesday, Jan 8th, 6-8pm

LECTURE: A Day In The Hive - Urban Beekeeping

For more information, see article on page 3.

President's Notes

Given that I'm the last one to submit their column for this latest issue of The Lesser Squawk, and that my primary goal as we head toward the holiday is to offer thanks to those who have supported our group, I've decided to adapt President FD Roosevelt's advice for speeches: "be sincere, be brief, be seated". I'm here at my computer, writing, and seated; check. One part down.

I'm also sincere in recognizing that our group has accomplished a lot in the way of outreach in its traditional sense, and am thankful for the efforts of Andy Harrison in organizing field trips that expose people to the natural world and help new birders learn the hobby. Mary Kennerty has once again put together an outstanding series of monthly talks, and Ann Tiller has continued her inspiring "Seniors and Songbirds" programs at local senior centers. Sarah Latshaw, Jenny McCarthey Tyrrell, and Cathy Miller reach and educate broad audiences through their roles as our Newsletter Editor, Citizen Science Coordinator, and blogger, respectively, while Steve Bleezarde keeps our web page running smoothly. Somewhat more behind the scenes, Brian Rogers and Virginia Flatau have taken our facebook page and twitter feeds from simply a means for notifying people of upcoming events, to strong educational outreach tools in their own right. I hope you'll 'like' or follow those media if you haven't already.

In addition to outreach in the familiar form, we've also been reaching out to other groups, as exemplified by Joe Cockrell's careful stewardship of our relationships with neighboring property owners adjacent to the McAlhany Nature Preserve, and to our colleagues at SC Audubon and the Francis Beidler Sanctuary. That work allowed Brian Reid to reach out to and host 50 biologists and naturalists in our first—and highly successful—Bioblitz inventory in May.



With strong support from our partners Danielle Motley at WBU-Mt. Pleasant and Christina Fifer at WBU-Charleston, along with tremendous organizing efforts by Teri Lynn Herbert and careful management of our money by Treasurer Steve Moore, we raised \$1000 from the sale of donated art prints. We recently sent that money north to areas devastated by Hurricane Sandy last year. In the same spirit of giving back, our Board authorized a donation of \$1,000 to the boardwalk replacement fund at Francis Beidler Sanctuary. I hope you'll consider adding your own individual contribution to the one we made as a group, and thereby leverage the support of CNHS for this valuable regional resource.

Of course, any attempt to recognize individual achievement in a group as active as ours runs the risk of failing to mention everyone who deserves it. I hope you'll join us at our meeting next week, field trip later this month, or the Holiday Party and Oyster Roast Fundraiser on Sunday, December 8th (2 pm at Bowen's Island) and express your thanks to the rest of the wide group of volunteers and Board members that keep the group running. I know I'll be doing that, and hope you'll join me. Happy Thanksgiving, everyone!

Paul Nolan, Ph.D.
President, Charleston Audubon &
Natural History Society
paulnolancnhs@gmail.com

Calendar of Events

Saturday, Jan 18th, 7am-3pm

FIELD TRIP: Santee NWR

For more information, see article on page 3.

Wednesday, Feb 12th, 6-8pm

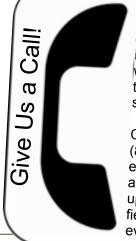
LECTURE: Sparrow Wars: territories, personalities, alternative tactics, and song in song sparrows

For more information, see article on page 3.

More Information

For more information check out our calendar online:

www.charlestonaudubon.org/calendar.html or join our gmail calendar by searching for CNHS. To attend field trips, please register with Andy Harrison prior to the scheduled dates: parula23@aol.com or 843.795.6934.



Stay on top of upcoming events, even without internet access; we're trying out a telephone call-in system.

Call 843-720-9736 (843-720-WREN) each month to hear a listing of upcoming lectures, field trips, and other events.

LECTURE (Jan 8th): A Day In The Hive - Urban Beekeeping



We welcome Debbie Fisher, **Wednesday**, **January 8th from 6-8 pm, in the Duckett Hall Biology Auditorium (room 101) on the campus of the Citadel (map)**. Ms. Fisher will give a general overview of amazing bee facts and description of a day in the life of bees and beekeepers in the urban beekeeping environment.

Although in her 'day job' Debbie works indoors for the computing department at The Citadel, she is also a life-long nature-lover who never tires of learning more about nature and its creatures. Debbie, her husband, Larry, and their amazing Black Lab, Tracks, manage a few bee hive colonies on Wadmalaw Island and a couple of hives in the backyard of their urban Mount Pleasant home. Debbie and Larry worked together with a half-dozen fellow local beekeepers

to successfully form the Charleston Area Beekeepers Association (CABA) in 2010. Debbie is the organizer of Charleston Honey & Bee Expo, an annual free event hosted by CABA on the day after the Bridge Run to promote public awareness and education about honeybees in our community. Join us to find out more about bees and urban beekeeping. We will begin at 6 PM as usual, with snacks and socializing before the presentation begins at 6:30; feel free to bring a snack to share.

FIELD TRIP (Jan 18th): Santee National Wildlife Refuge

On Saturday, January 18 Don Jones will lead us on a birding trip to Santee National Wildlife Refuge. This refuge is a great spot to do some winter birding! We'll start with a walk along the Wright's Bluff Nature Trail in the Bluff Unit. There is an overlook on Cantey Bay from which we may see a variety of wintering waterfowl, including American Wigeon, Gadwall and Northern Pintail.

During our walk through the woods we could see species such as Blue-headed Vireo, Black and White Warbler, Orange-crowned Warbler, Brown Creeper and Red-breasted Nuthatch. Atop a viewing platform beside a large open field we might observe Sandhill Cranes, migratory Canada Geese and Snow Geese, as well as raptors such as Bald Eagles, American Kestrels and Northern Harriers. On last year's trip we got great looks at Snow Geese, Sandhill Cranes and a flock of Wild Turkeys in this field.

Restrooms are available at the visitor center, and we often take a break there for lunch before heading to our next birding destination – either the Pine Island or Cuddo Unit. Both areas are excellent places to observe a variety of winter sparrows, as well as more raptors, waterfowl and woodland birds. Last year we finished with a combined total of about 80 species from the Bluff and Pine Island Units. Bring food and water, your birding gear (including a scope if you have one) and dress for the weather – it can be very cold on the viewing platform early in the morning!

We'll meet at 7:00 AM in the small parking lot next to the First Citizens Bank in front of the Summerville Walmart, just off Hwy 17-A and not far from its intersection with I-26. If you plan to attend, please register with Don Jones prior to January 18 at Birdfrogdjlj@aol.com or 843 572-8232.

LECTURE (Feb 12th): Sparrow Wars: territories, personalities, alternative tactics, and song in song sparrows

We often make generalizations about the behavior of birds or other animals - generalizations such as "these birds defend territories". But what variation is hiding in those generalizations? Do all individuals defend a territory the same way? How does personality affect territory defense? Dr. Melissa Hughes has been studying these questions, along with the use of song in territory defense, in song sparrows for years. Join us in welcoming Dr. Hughes, as she shares some of tales from these sparrow wars on **Wednesday, Feb 12th from 6-8pm.**

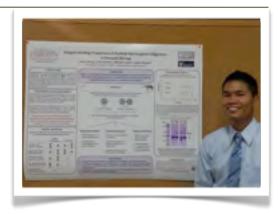
Dr. Hughes did her graduate work at Duke, where she studied honesty and deception in the communication of snapping shrimp (something she still works on, when not studying birds). After brief stints at the Free University, Berlin and Princeton, she came to the College of



Charleston in 2001. Melissa maintained a long-term population study (by which she means she followed their lives like a soap opera: who lives where for how long, who is mating with whom, etc.) on song sparrows in northwestern PA from 1998-2010, and still returns there for experimental work. We will begin at 6 pm as usual, with snacks and socializing before the presentation begins at 6:30; feel free to bring a snack to share.

Marine Biology Colloquium

Part of the mission of the Charleston Natural History Society is 'support of original research'. To that end, we recently helped to sponsor the graduate student Research Colloquium put on by the Graduate Program in Marine Biology at Grice Marine Lab on Ft. Johnson. In addition to financial support of the programming, CNHS provided prize money for the best student research posters. In the program at Grice, students generally develop posters outlining plans for the research they are beginning, allowing them to get valuable feedback from the community of marine biologists that gathers for the Colloquium. We are very pleased to be a sponsor of this event and of these awards, and congratulate graduate students Liz Duermit, Dominique Maldonado, and Jason Wang for being awarded Best Poster and Runners-up, respectively. Here are summaries of the projects they are beginning:



Stone crab (*Menippe spp.*) demographics in the Atlantic coast hybrid zone and the effect of claw removal on mortality and feeding ability - Duermit, L. (GPMB, College of Charleston), Wilber, D. (Bowhead Science and Technology), Hughes, M. (College of Charleston), Kingsley-Smith, P. (SCDNR), and Whitaker, D. (SCDNR)

Stone crabs (Menippe mercenaria, M. adina, and hybrids) are commercially and ecologically important, supporting a fishery that is considered renewable because crabs are returned to the water after their claws are harvested under the assumption that new claws will be generated and perhaps reach a marketable size. Little is known, however, about the effects of claw removal on stone crab mortality and feeding ability. The proposed work has three main objectives: 1) determine mortality and feeding ability following the fishery practice of forced claw removal, 2) assess and compare crab demographics including size, sex ratio, claw regeneration status, hybrid forms and ovigery in two adjoining river systems in South Carolina, and 3) use recapture rates of tagged crabs to estimate seasonal variations in population size and movement patterns in a small section of the Stono River. Laboratory results indicate mortality for crabs up to 14 days following claw removal was higher for crabs with one (50.0%) and two (58.8%) claws removed compared to intact control crabs (14.3%). In addition, control crabs consumed more mussels and oysters than crabs with one or two claws removed. From March to August 2013, over 1000 crabs have been measured in the Kiawah River and 356 crabs have been measured and tagged in the Stono River, with an initial recapture rate of 18.9%. As this study proceeds, recapture frequencies will be related to claw loss status to provide valuable information on survival during this year-round study of stone crabs in South Carolina.

The influence of nitrogen and phosphorus on SC phytoplankton assemblages within the Charleston Harbor and Winyah Bay Estuaries - Maldonado, D. (College of Charleston), Greenfield, D.I. (University of South Carolina/SC Department of Natural Resources)

The form and elemental ratios of nitrogen (N) and phosphorus (P) are known to influence coastal phytoplankton assemblages. For example, loading often fuels harmful algal bloom (HAB) proliferation. Land use surrounding the Charleston Harbor (CH) and Winyah Bay (WB) estuaries includes industrialization, urbanization, and agriculture, and associated nutrient inputs could promote blooms. However, data characterizing N, P, and phytoplankton within these systems are scarce. Here we evaluate seasonal N and P forms and concentrations within select regions of the CH (Ashley and Wando Rivers), and WB (Sampit and Waccamaw Rivers) systems. At each station, standard water quality parameters (light, temperature, salinity, pH, dissolved oxygen) are measured using hand-held meters. Surface whole water samples are collected in triplicate for analyses of chlorophyll a, N, P, and phytoplankton. Since P levels are affected by sediment sorption and desorption processes, benthic samples are collected using a box corer. Since N and P drive phytoplankton community dynamics, the physiological responses of four HAB species (representing Bacillariophyceae, Raphidophyceae, Dinophyceae, and/or Haptophyceae) common to SC estuaries, including CH and WB, to varying N and P ratios will be evaluated. Cultures will be grown in semi-continuous cultures with nitrate or urea as the primary N-source under non-limiting, N-limiting, and P-limiting conditions. Relevant physiological parameters will be analyzed (the efficiency of photosystem II as Fv/Fm, C: N ratios, growth rates, and others). Results from this study will enhance our understanding of phytoplankton physiology, and assist managers in establishing nutrient thresholds in SC coastal waters.

Oxygen-binding properties of purified hemocyanin oligomers in Penaeid shrimp - Wang, J. (GPMB, College of Charleston), Janech, M.G. (MUSC), Burnett, L.E. (College of Charleston), and Burnett, K.G. (College of Charleston)

This research focuses on the oxygen-carrying protein hemocyanin in commercially important shrimp species grown in aquaculture and harvested along the U.S east coast. Whether in the wild or in aquaculture, shrimp face wide fluctuations in environmental variables such as temperature, salinity, pH, oxygen, and carbon dioxide. Recent studies have shown that the oxygen limitations of these environments are becoming more severe and widespread as the input of organic matter from human development and waste increases. One way that shrimp and other crustaceans deal with low oxygen is by changing the structure of their hemocyanin. Different species are better adapted for ranges of oxygen limitation, and this project examines how these species utilize different hemocyanin structures to bind oxygen effectively. A globally farmed shrimp species that is well-adapted to low oxygen conditions and a local, wild species are compared in this study. Different hemocyanin structures from these species will be characterized and isolated in order to quantify different oxygen binding properties. As environments change and the global demand for food increases, understanding how commercially important species are adapting or are limited by their physiology becomes increasingly important.

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Species Highlight: Loons & Grebes

The waterways around Charleston County are great places to see loons and grebes in the winter. They'll arrive any day, and spend the winter fishing in our waters. Both families of birds have legs positioned far back on their bodies to facilitate swimming and diving for fish, and are so ungainly walking that they seldom walk at all. Both require long take-off space like a runway and use their feet to run along the surface of the water until they get enough lift to take off.

Common Loons nest on freshwater lakes in the far north (Quebec, Newfoundland, and Greenland,) and adults and chicks migrate independently and separately. They migrate at high altitudes during the day, landing on water for foraging and resting. They find their prey (small fish) by peering into the water, and capture and eat their food under water. During the winter, they can be flightless for several weeks after molting and losing all of the flight feathers simutaneously. Loons have large webbed feet to help with swimming propulsion.

Red Throated loons are smaller than common loons, with daintier bills. They have a more distinct line separating the gray from white on their head.

Two species of grebes are also regularly seen here: Pied Billed Grebes and Horned Grebes. Smaller than loons, they have lobed toes rather than webbed feet, which provides extra paddling surface. They respond to danger by diving rather than flying.

Horned Grebes share some of the loon's coloring, but are much smaller birds with slender bills. They begin to pair off toward the end of winter, and they will also migrate to the far northern reaches of Canada.

Pied Billed grebes can be found on interior ponds and impoundments more often than open waterways, and they have an incredible habit of swimming forward while sinking in the water, so they vanish effortlessly. They eat fish, crustaceans, and aquatic insects.

Catesby (1682 - 1749) called this bird a Pied-Billed Dopchick, which hints at the cuteness of this tiny bird more than the modern name. In breeding season, there is a black ring around the white bill. Lawson (1709) had more immediate interests in these diving birds, stating "of divers there are two sorts; the one pied, the other gray; both good meat."

• Judy Drew Fairchild





Smart Phone Apps for Nature Lovers



For those of you working on an iPad, this edition's App recommendation comes in the form of a magazine that is accessible (for free) from the Newsstand App Store. To access and subscribe, simply search for The Nature Conservancy within your iTunes or Newsstand applications. Within minutes, you can start downloading and gazing through this magazine's stunning images and videos, embedded within the classic text that you would get through the print version of the magazine.

Having mentioned that this magazine is free, it's important to note that the print version is associated with a membership commitment to The Conservancy; something that may still be worthwhile, given their mission to "protect nature and preserve life".

• Emma Paz

Naturalist



Olympics

This month's naturalist Olympics photo is a two-fer. Both are of the same family and subfamily but different genus, and are found in South Carolina. First, we have to look at their features. What shape is the pupil? What is the general shape of the head? With the features in mind, are these venomous? Take a look at the patterns and on the first snake, there is a hint of a line down the dorsal. What do their patterns suggest? Be careful though; there are lots of snakes that are similar.

Do you know the answer? Send your best guess to naturalistolympics@gmail.com. A third event--and the ID of the snakes--will be announced in the next Lesser Squawk. Thanks to everyone who competed in our Naturalist Olympics, as described in the Fall issue of The Lesser Squawk. The answer to the second clue in the last edition of Naturalist Olympics, was White-tailed deer (Odocoileus virginianus).



Photo Courtesy of Pamela Corwin



Photo Courtesy of Pamela Corwin

Citizen Science, Get Involved!

This Issue's citizen science project is for the smart phone savvy. Project Noah is an iPhone app that connects nature observers from all over! This app allows you to track migrating animals, endangered species, and invasive species in your area. There are many global and local projects using Project Noah, one of which is the photo collection of North American Flowers, as well as tracking backyard birds in the Southeast.

You can even start your own mission and promote it to further your own campaign. You'll also have access to information from users all over the world, it's like going on a global wildlife trek without increasing your carbon footprint to get there! To get started go to http://www.projectnoah.org/ You can join using



any of these accounts: google, facebook, twitter, Yahoo, Windows Live ID, or AOL. Sign up and start contributing to this global exploration!

Jennifer McCarthy Tyrrell



Energy & Recycling Tips: JUNK DRAWER RECYCLABLES (Excerpts from "The Green Life")

Everybody has a junk drawer. When we move, the junk drawer becomes a surprisingly large junk box of items that don't really belong anywhere — the contents don't go in the kitchen, but not necessarily in the living room, and definitely not in the bathroom. What do you do with the accumulated knick-knacks and not-quite-trash of years past? Avoid adding to our ever-growing landfills and recycle your leftover junk.

ReCORK America collects wine corks at grocery and liquor stores throughout the U.S. Deposit your collection during your weekly shopping trip, or look up the location of the nearest collection bin. These souvenirs of happy nights with friends can be recycled into soles for shoes, and fund the effort to plant trees.

Broken crayons see new life with the National Crayon Recycle Program, whose representatives estimate they've diverted more than 92,000 pounds of unwanted crayons from landfills. With crayon production in the U.S. around 12 million per a day, they can use all of the help they can get. Parents can box up the stragglers and send them off to be given a second chance at coloring within the lines.

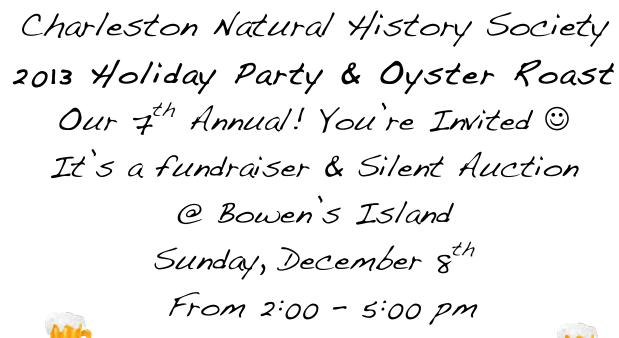
Keys are the ultimate junk drawer menace. It's like they multiply in there, and you don't know what any of them actually unlock. So into the junk drawer they go, where they produce mysterious key friends and gather dust. Instead, try boxing them up and putting them to good use raising money for the Multiple Sclerosis Society. Keys for Kindness is a family-run organization that recycles keys in hopes of finding a cure, and that old key to the back door of the basement of your old apartment building can help.

Yes, your 4th grade spelling bee trophies are an important part of your history, but it is time to let go. Every child outgrows her trophy collection at some point, but the mementos of hard-earned recognition can be difficult to part with. The little gold soccer players can go on to do good, however, as programs throughout the country collect and recycle old trophies. Total Rewards and Promotions, Inc uses discarded trophies for parts, re-engraves them to sell online, and donates them to charities that can't afford to buy them new.

And for everything else, TerraCycle collects junk of all kinds, from empty Scotch tape dispensers to used highlighters. The company offers free shipping for most items it collects, and awards you a monetary credit for each item received, which it will donate to the cause of your choice. Check out its website to see what it's collecting now.

When in doubt about what to recycle where, check out Earth911's quick-search tool to find recycling locations near you.

· Ann Shahid, rashahid@att.net



Beer available - donations appreciated PLUS: Live music from King City Records recording artists

Wrenwood

Silent Auction, too - Bid on great items; bring your checkbook or major credit card.

Advance Admission: \$25 At the Door: \$30

Tickets will not be mailed; pre-paid names listed at the door.

CUT OFF BOTTOM PORTION AND MAIL WITH PAYMENT OR USE THE "DONATE" BUTTON ON OUR WEBPAGE IF YOU PREFER TO PAY WITH A CREDIT CARD; NO NEED TO REGISTER AS A PAYPAL MEMBER.

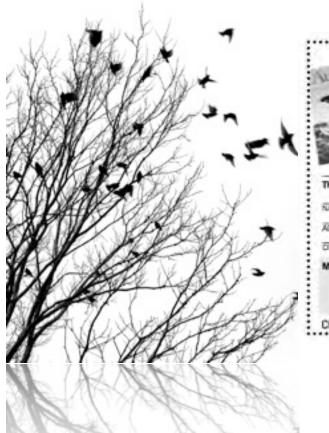
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NAME(S)	
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Other Interesting Events in the Lowcountry:

- Nightwalks at Beidler Forest
- Bird of Prey Raptor Center
- •Sewee Visitor & Environmental Education Center
- •Charleston County Parks & Recreation Commission





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