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THE LESSER SQUAWK is published
monthly by the Charleston Natural
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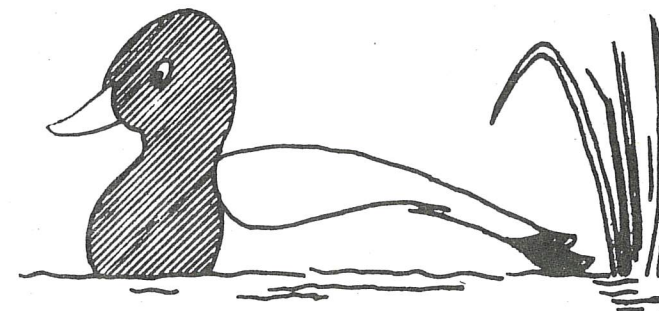
The Charleston Natural History Society
is a chapter of the National Audubon So-
ciety. Members of Audubon that live in
the Charleston area automatically become
members of CNHS. A portion of the annual
dues paid to Audubon are returned to CNHS
to cover operating expenses.

CNHS normally meets on the second Tues-
day of each month(except June, July, and
August) at 8:00 p.m. in the Charleston
Museum. One field trip a month is scheduled
on a Saturday or Sunday to any of a variety
of local natural areas.

THE LESSER SQUAWK welcomes any
written contributions from the member-
ship. The deadline for each issue is the
20th day of the preceeding month.

Bulk Rate
U.S. Postage
Paid
Chas. S.C.
Permit No. 349

the lesser Squawk



Volume XXVII, No. 7

July 1976

Supper, Raffle Net \$1600

The Plantation Supper and raffle
netted \$1600 for the Four Hole Swamp
Boardwalk, according to Susan Roche who
chairs the CNHS's boardwalk committee.

The supper and raffle, held May 19
at Magnolia Gardens, drew more than 250
people who enjoyed barbecued chicken and
the drawing for prizes that included a
Folbot and an original watercolor by John
Henry Dick.

The success of this fund raising
event allowed the CNHS to reach its goal
of raising \$2500 for the Four Hole Swamp
Sanctuary boardwalk. Previous individual
donations by CNHS members and friends to-
taled more than \$900.

The National Audubon Society had
challenged each Southeastern chapter to
set a fund raising goal for the proposed
boardwalk in the Society's new sanctuary
located 35 miles north of Charleston.

The 6,000 foot boardwalk will cost
\$30,000 all of which the National Audubon
hopes to raise by donations.

Norman Brunswig, manager of the San-
ctuary, announced that construction of
the boardwalk and visitor's center will
get underway in October. The swamp is
scheduled to open to the public some-
time in early summer of 1977.

MONTHLY MEETING

The next regular monthly meeting of
the CNHS will be held Tuesday, Sept. 14,
at 8:00 p.m. at the Charleston Museum.
A program will be presented on the red
wolf, an endangered species. Check the
August issue of *The Lesser Squawk* for
more details.

FIELD TRIP

A single summer field trip to Poinsett
State Park near Sumpter will be held on
July 17, according to Field Trip Chair-
man David Huff.

CNHS president Richard Porcher will
lead this trip that will leave the
Charleston Museum at 7:30 a.m.

Forest Service Halts Cutting In Bachman's Warbler Habitat

*(Jay Shuler supplied the Squawk with
the following details on the Forest Ser-
vice agreement. Ed.)*

June 10, 1976

John Orr, Forest Supervisor, Francis Marion National Forest, announced a moratorium lasting from May 16, 1976 through November 15, 1976, in timber cutting and other disturbance in I'on Swamp.

At the same time Jay shuler, Santee Preservation Society, announced a six month suspension of that organization's plans to bring suit against the Forest Service for violation of the Endangered Species Act of 1973.

The Charleston Natural History Society had voted to join the McClellanville group in that suit. Robert Colten, National Wildlife Federation, negotiated the joint announcement.

Part of I'on Swamp, located about twenty miles north east of Charleston is privately owned; part owned and administered by the Forest Service. Thirty-two of the 37 known nests of Bachman's warbler, an endangered species, were found in that swamp. The warbler was never common, and not much information was recorded on its breeding habits or habitat.

The Santee Preservation Society had alleged that current management plans in effect in I'on Swamp are harmful to Bachman's warbler. John Orr stated the Forest Service position that current management practices are not harmful, and may be beneficial to the bird.

Under the terms of the agreement that led to the joint announcement, a panel of three nationally known biologists will be set up to hear both points of view, and to make recommendations for future management. The report will not be binding on either side, but both sides hope that it may be helpful in resolving the controversy.

(from a U.S. Forest Service
news release)

We feel that the agreement that led to a six month moratorium in cutting in I'on Swamp and a six month suspension of our legal action to stop the cutting will produce good results. The panel appointed to study the situation and make recommendations is a fine one. It consists of David Marshall of the Office of Endangered Species, William Zeedyk, endangered species specialist for the Forest Service, and Fred Evenden, a director of the Wildlife Society. The panel has begun its work without delay. They explored I'on Swamp and looked at documents with the Forest Service people on June 7, and went on a field trip of the area with Ted Beckett and me on June 8. Now they are studying the literature, the position papers, and making plans for the meeting which will be held later and at which final arguments will be made.

Ted took us on a ten mile tramp over the area, made more taxing than usual because we had to keep moving because of the mosquitos, and couldn't stop to rest without being eaten up. We did stop to look at a charming prairie warbler nest with young in a salt myrtle bush. One encouraging thing I got from the day was our survey of many acres of what appeared to me to be first rate Bachman warbler territory, enough wild and inaccessible space to make me think it reasonable that the bird could still be surviving there, and indeed, I am convinced of that.

The Santee Preservation Society is grateful for the help it got from the Charleston Natural History Society and from the National Wildlife Federation. We doubt that without your backing we would have obtained the compromise agreement to take six months out to study the best course of action.

Jay Shuler

COASTAL ZONE MANAGEMENT

(The following is the second of a series of columns by CNHS member Ann T. Adkins to help explain the related issues of coastal zone management and tidelands legislation. Ed.)

South Carolina's Computer Mapping Program

The staff of the South Carolina Coastal Zone Planning and Management Council has been engaged in an impressive inventory and mapping program of our coastal zone for the past eighteen monthw. Divided into three basic areas the program includes the greater part of the data which would allow a future Coastal Zone Council to make scientifically based resource allocation decisions.

The first area, that of a natural resources inventory, includes the identification and evaluation of natural areas, shrimp nursery areas, existing land use, prime industrial sites, etc. The second area, manmade features, includes an inventory of all boat ramps, fishing piers, marinas, and so forth along the coast. A land use inventory, the third area of the program, consists of the identification of zones of generalized activity or use such as residential, agricultural and forested areas.

This accumulation of data is graphically displayed on some 131 different overlays which are used in conjunction with base line maps of the eight coastal zone counties. The use of low altitude aerial photography and ground reconnaissance adds to the accuracy of these maps and overlays.

All of this information, as well as the base line maps have been computerized for immediate retrieval. Thus, in a matter of minutes, the computer used by Council staff can draw any base line map and display on it any of the inventory information which is stored in its memory bank. When changes occur along the coast - for instance, changes in the coastline following a hurricane - they can be fed into the computer and por-

trayed in the updated readouts.

An extraordinary feature of the mapping program is the fact that the base line maps as well as the overlays can be reproduced by the computer on any scale desired. Thus, a broad overview of a given area for regional decision making can be reproduced just as easily as can a more detailed picture of terrain characteristics for site specific decisions. This remarkable mapping system of the Coastal Zone Planning and Management Council is the most advanced of its kind in the nation.

The Council hopes that this important program will not be jeopardized by a sustained veto of the "tidelands" legislation. Should the legislation before our General Assembly fail to become law, South Carolina could lose all federal funds for the development of a management program as well as for planning for onshore impacts of OCS development. These funds can be received only when an agency has been specifically designated to receive them.

In order for South Carolina to continue receiving federal coastal zone management funds after August, 1976, when the present Council will cease to exist, one of the following must occur:

1) passage of tidelands legislation which would establish a permanent Coastal Zone Council.

2) the establishment of new Coastal Zone Planning and Management Council by executive order of the governor.

3) the designation by the governor of any existing state agency as being the agency to receive and administer federal coastal zone management funds.

Ann Townsend Adkins
Information Specialist
Coastal Zone Planning

NEW PUBLICATIONS

HAVE YOU PAID YOUR DUES TO NATIONAL AUDUBON?

MORE HELP NEEDED

To those members who were kind enough to clip out and return the informational form in the May issue, *The Squawk* says, "Thank you."

To the other 90% of our mailing list we say, "Please let us hear from you."

So if you did not send us the following form in May, please take the time to do so this month.

Name _____

Address _____

_____ Member, National Audubon

_____ Member, CNHS only

_____ None of the above, but:

_____ wish to continue receiving
The Lesser Squawk

_____ do not wish to receive
The Lesser Squawk

Clip out and mail to Pete Laurie,
1153 Cottage Rd., Charleston, SC 29412.

Two new Sea Grant publications designed to aid the recreational fisherman and crabber now are available:

- 1) "Dipping and Picking, A Guide to Recreational Crabbing"
- 2) "Don't Waste That Fish - Tips on Taking Care of Your Catch"

These brochures may be obtained without charge by writing:

S. C. Sea Grant
Box 12559
Charleston, SC 29412

A new smaller-format edition of "Operation Nature Guide," 50 pages of addresses and phone numbers of volunteers and other sources in virtually every state plus a few in Canada and England to give the travelling birder and nature enthusiast information about where to go and what to see is now off the press. Published by the Tahoma Audubon Society, in Tacoma: \$1.30, postage included, from Nature Guide, 34915 4th Ave. So., Federal Way, WA. 98003.

The Home of Man, the HABITAT keynote book by Audubon Medalist Barbara Ward and The Natural Environment: A Dimension of Development, An Audubon booklet prepared especially for the conference, are two publications of interest to Audubon members. The Audubon booklet explains how "natural systems" -- the stream, the floodplain, the woodland--function; how these systems can be beneficial to communities and basic to sound development if allowed to function in their natural role rather than being channelized, dammed, or destroyed, and explains what environmental problems may result from urbanization and how they can be avoided (\$1.00, which includes postage, from Audubon's International Office in N. Y.).

An economist and environmentalist, Miss Ward examines the massive problems of the world's cities and looks at causes of these ills and, without oversimplification, suggests realistic approaches to "planetary housekeeping." (W. W. Norton; cloth \$8.95, paper, \$3.95).

CNHS Calls For EIS On Kiawah Bridge

CNHS president, Richard D. Porcher presented the following statement at a public hearing held June 23, 1976, at St. Johns High School, Johns Island. The hearing was held by the U. S. Coast Guard to obtain public input concerning the application for a permit by Coastal Shores, Inc., to modify a bridge over Kiawah River, Charleston, S. C. -

"My name is Dr. Richard D. Porcher. By vocation, I am a botanist, presently employed as an Assistant Professor of Biology at The Citadel, in Charleston, S. C. I am also President of the Charleston Natural History Society, the Charleston Chapter of the National Audubon Society. I also serve on the Conservation Committee of the Charleston Natural History Society, and it is this committee that I represent today.

"This Conservation Committee, upon learning in the spring of 1974 of the plans to develop Kiawah Island, waged a campaign to save the island. We presented an alternative to the impending total development of the island, one that we felt would preserve the greater part of the natural beauty and ecology of the island, yet provide needed recreational facilities to the average public.

"Our alternative was to establish Kiawah Island as a National Seashore. Obviously we failed in our campaign, or I would not be here today. However, we still felt that the natural resources of the island should be afforded adequate protection, and we then pursued a second course of action: to request that the Coast Guard prepare an adequate Environmental Impact Statement on the total plan of development of Kiawah Island. In fact, you have in your files a request from the Conservation Committee, dated 23 August 1975 for an EIS.

"We based that request, as we do now, on a statement in your draft EIS on an application to build a bridge to St. Phillips Island in Beaufort County, S.C. (released in October 1974). The Coast Guard stated: 'The proposed bridge and development of the island appear to be causally related and the Coast Guard's agency action must consider the environmental impacts of the total project.' We certainly concur with this position, and see no substantial difference between the bridge application to St. Phillips Island and the application by Coastal Shores, Inc., to modify the present bridge to Kiawah Island.

"When we speak of 'no substantial difference between the two applications,' we are referring to the ultimate intent of both applications - to gain access, or gain greater access in the case of Kiawah, to the islands - and not the actual building of modifying a bridge. It would be rather naive to believe that widening the existing bridge will not lead to increased levels of activity on Kiawah. But even if this is not so at the present, a four-lane bridge will have to ultimately be built, and rather than require an EIS at a later date, it would be more logical to require it now than later.

"We feel that the failure to require an EIS for the total development of the island could seriously jeopardize the integrity of the wetlands around Kiawah. The main control over the development of the uplands of Kiawah is Charleston County Government. Unfortunately, County Government's concern for environmental protection has left much to be desired. More often than not it is influenced by special interest groups whose only concern is short-term monetary profits at the expense of environmental protection.

"The Conservation Committee of the CNHS requests, therefore, that permission to widen the bridge by Coastal Shores, Inc., be withheld until such time that as adequate EIS can be prepared, distributed for review, and commented on by non-partisan agencies or individuals."

BIRD MOVEMENTS IN JULY

ARRIVALS

Date	Species
4	Yellow Warbler
8	Solitary Sandpiper
10	Lesser Yellowlegs
11	Bank Swallow
20	Knot
28	Roseate Tern
?	Upland Sandpiper
	Pectoral Sandpiper

DEPARTURES

19	Bachman's Warbler
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The following have been seen one or more times during July:
Yellow-rumped Warbler, Cory's Shearwater, Common Scoter, Limpkin, Baird's Sandpiper.

Least Terns

CNHS members that have knowledge of least tern nesting colonies(including those on the built-up roofs of large buildings) are asked to contact Dennis Forsythe at 577-6900, or Susan Roche at 766-8026.

DEATH CLAIMS MRS. COLEMAN,
FORMER CNHS PRESIDENT

From the latter part of the 1940's, and until she was claimed by death on April 4, 1976, Wilhelmina Mitchell Coleman was a member of the Charleston Natural History Society. Her keen interest in wildflowers inspired younger members to open their eyes to wonders which they might never have discovered. One of them, Anne Worsham Richardson, testifies that Mrs. Coleman awakened in her a deeper interest in Botany, which is revealed in Anne's paintings. Over the years, Mrs. Coleman seldom missed a field trip, regardless of weather or rough terrain. She served two terms as President of the Society, giving generously of her time and strength. Together with her husband, Robert H. Coleman, she edited the Lesser Squawk, and after his death, she continued the task alone for some time. Upon her request for a brief article on the stars that were visible over Charleston, the "Sky-watchers' Guide" came into being. Many friends will miss her for years to come.

Elizabeth D. Simons

OBSERVATIONS

Date	Observation	Location	Observer
April 24,25	Swainson's Warbler	I'on Swamp Rd.	Edmund Farrar
May 22	Mississippi Kite	Magnolia Gardens	Edmund Farrar
	20 Least Terns	Northwoods Mall Roof	Perry&Cris Nugent
May 25	Redstart	2260 Dallerton Cr.	Perry&Cris Nugent
June 8	Mississippi Kite	U. S. Veg. Lab.	Perry Nugent
10	2 Bald Eagles	U. S. Veg. Lab.	Perry Nugent
24	Burrowing Owl	Huntington Beach S.P.	Pat Probst
?	Gannet*	Myrtle Beach	Pat Probst

*The gannet was brought to Pat at Brookgreen Gardens in poor condition with oil soaked feathers and was not expected to live.

As you collect your shells I recommend that you get into the habit of writing down some basic facts. This is called data. This information can include what type of shell was found, where it was found, how many were found at that locality, and who collected it. I prefer to expand my own data a little further by adding weather conditions, tide, time, whether a specimen was collected live or dead, and the general condition of the shell. Not only can the keeping of data be of great help to the experts in the event of a rare shell, but years from now you can look at a shell and the information that you have on it and for a short time relive the wonderful memories it will bring.

The cleaning of beach shells is a simple process. A little bit of squirting them out should be done first. I then place the shells into a bleach solution of 1 cup of bleach to 1 gallon of water. The shell should not be left for over an hour as the bleach will fade the colors of the shells. For the more delicate shells I only leave them in the bleach for a few minutes at a time, rinse them off in clear water, and do it again if they are in need of it. As you gain experience in cleaning your shells you might want to try a muratic acid solution. I do not recommend this for beginners or around children an muraticacid can be very dangerous.

The cleaning of live specimens is not difficult if it is done properly. The first step is to remove the mollusk from its shell. I have found the best way to do this is to put them in the freezer. I like to leave the shell in only long enough for the animal to freeze thoroughly. Too much time in the freezer will tend to damage the shell. This is where I use a probe to test the animal to see how hard the meat is. When completely frozen, remove the animal and allow it to thaw. As it is thawing, start working it back and forth. Don't try to force it out as it will probably tear in half with the other half remaining in the shell which is nearly impossible to get our. If it doesn't come easily

allow it to thaw a while longer and try again. Patience is most important here.

If you have any questions or ideas on shell collecting let me know. Next month I will discuss some of the more common shells of South Carolina.

Maggi Yergin
2706 Cameron Blvd.
Isle of Palms

THE FALSE INDIGO

If, in early summer, one ventures near sunny tangles along river banks, there is a good chance of finding a false indigo, Amorpha fruticosa, which readily can be recognized by its terminal racemes of deep purple flowers. These spreading, thinly branched shrubs reach a height of about 12 feet and with their airy, pinnate leaves present a floating, graceful appearance against the thick palustrine growth. Their well supplied nectaries draw a fascinating host of glistening bees and wasps and agile butterflies. This species and A. canescens are sometimes used as ornamental garden subjects in this country and Europe. In some areas they are known as lead plants and plume locusts.

About 20 species of Amorpha are known, all being native to North America. The Vascular Flora of the Carolinas lists four species in addition to A. fruticosa as having been found in South Carolina. Two of these four have been reported from the Lowcountry, but neither seems to be commonly found near our area. The word amorpha stems from Greek - a = not, and morphe = form. One reference book claims that this alludes to the wavy, irregular contour of the leaflets, but as their flowers are formed by only one petal rather than the usual five in the Pea family one might suspect that this uncharacteristic flower was the inspiration of the name. They belong to the family Fabaceae (Leguminosae).

Edmund R. Cuthbert

NOTES FROM ALL AROUND

A total of 216 species of birds have been recorded during the last five Charleston Spring Bird Counts, according to compiler Julian Harrison.

The highest single tally was 167 species in 1973. This past spring CNHS bird counters identified 161 species.

On April 24 and 25, 1976, I observed a Swainson's Warbler singing near I'on Swamp Road in the Francis Marion National Forest. I was driving down the road when I heard the bird singing loudly, obviously close to the road. It was in a tall cane thicket with scattered mixed hardwoods. I got just a glimpse of it twice as it flew away, not enough to be certain of the identification. Next day I went back with a portable tape recorder, and recorded the song before leaving the road. When I went into the thicket the bird again flew away, but returned as soon as I played its song back. It stayed close by for 20 or 30 minutes, flitting about and singing from different perches, sometimes as close as five feet from where I was standing.

W. Edmund Farrar, Jr.

On June 2, Cris and I observed a fledgling cowbird begging for and receiving food from a male cardinal. The cardinal actively flew up to the feeder and carried seed back to the cowbird who continuously fluttered along the ground. There were more cardinals and cowbirds at the feeder, but none that were interested in this pair. The young cowbird made no attempt to learn how to feed, being content to hold its mouth open and let its adopted daddy fill the hopper. Finally after 10 frustrating days the cardinal put the run on his free-loading youngster, who was last seen clumsily pecking and scraping the ground under our feeder.

Perry Nugent

On the 7th of May I cut my four-year old son's hair on our back patio. As I sheared several of his golden curls I threw them on the ground telling him that we would wait and see if any birds came to take his hair for their nests.

The following day while Stephen played in our backyard, I heard from the other room a bird call which was a familiar sound in the woods but not in my yard. Approaching the back door I noticed a female crested flycatcher pecking at Stephen's curls which were thrown down the previous day. As she sorted through them she would call, and if a single hair appeared to please the male on a low pine branch, he would return the call and she would set it aside. She sorted through the hair finally choosing about seven strands whereby she flew up to her mate, he displayed, and then they flew off together.

Since I have heard them twice and they visited our birdbath three days ago. Stephen enjoyed the story and I enjoyed adding a new species to my "backyard list".

Susan Roche

Today, on Shem Creek behind my house, I saw a male hybrid between a mallard and (I think) a shovler. This bird was with two mallards males, and I'm sure was half mallard. The posture was low in the water, with the head low, like a shovler, and the eye was light (white or yellow). The breast was a clean white, and the sides were rich red-brown, like the shovler. The upper 2/3 of the head and neck were iridescent green, but the throat and chin were white like the chest. The bill was bright yellow and typically mallard-like.

W. Edmund Farrar, Jr.



Shell Shocked

by

Maggi Yergin

Anyone who has ever strolled the beaches at low tide will understand my unusual title. This is the first of what I hope will be many articles on some of the beautiful seashells to be found in Charleston and our surrounding areas.

Most beginning shellers might feel it is necessary to travel to some far exotic place in Florida or the Virgin Islands to find Beautiful seashells. However, this is not true. Our Charleston beaches, outer islands (Capers, Dewees, and Edisto to name a few), tidal flats and piers have an abundance of "treasures" can be found almost anytime; others at only certain times of the year and still others that qualify for that "rare" category.

To my way of thinking, shell collecting is one of the most enjoyable and rewarding hobbies around. It takes a minimum amount of equipment (a bag or a large pocket to put shells into, a bucket to rinse and clean shell in, a probe to remove the harder grit, and bleach to rid the shells of odors), and provides a maximum of enjoyment. Close your eyes and picture a brilliant blue sky over a sandy beach. As you walk along you feel the warm sun on your face and the cool ocean water on your feet. Sea birds cry as they fly above you and a small breeze scurries past you on its way down the beach. Up ahead you see something rolling in the surf. As you draw nearer and it begins to take on shape and color you reach down and pick up a _____. I didn't say what it is as who knows what you may find.

As you can see, even on rare days that you don't find any shells, you get an opportunity to converse with nature on her terms. It is the type of hobby that can provide a time of solitary reflection of a family search for treasure.

There are many fine publications available for both the beginning and serious collectors. These books tell you how to identify your shells, how to clean them, where to look for various types of shells, and a host of other valuable information on shell collecting. The book that I used when I began collecting and which I still use today is one by R. Tucker Abbott titled A Field Guide Identification - Seashells of North America. There are many others and perhaps you have your favorite, but the important thing is to select one that is well written with good descriptions and a good drawing or photographs.

At this point I would like to give you a few of the basic terms used by shellers and that I will be using from time to time. The first is Mollusk. This is the animal that has built the shell. It is the natural inhabitant of seashells that should not be confused with hermit crabs. Specimen shells is a term that I use occasionally to distinguish the difference between a near perfect shell and a beach specimen. Specimen shells are usually found alive and are nearly flawless.

The hard foot of a mollusk is called an operculum. Some refer to it as the "trapdoor". Not all mollusks have an operculum such as limpets or cowries. When dealing with specimen shells the operculum should be kept and placed naturally back into the shell by putting cotton into the aperture and gluing the operculum to it. The aperture is the opening of the shell that the foot extends out of. Another term that I will use is periostracum. This is the outer coating to a shell. It can be rough or smooth, thick or thin, or hairy. The periostracum on a shell can sometimes make a difference of what type of shell it is or just make proper identification difficult.