

Jordan Lake Voice

Jordan Lake State Recreation Area

Dr. Philip McKnelly

Director, DPR

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Volume 3 Number 1

Mike Seigh

Park Superintendent

It Floats, It's Alive,... It's a Blob in the Lake!

It looks like something out of a science fiction movie, and you begin to wonder. Is it a mutant life form, ... or a jellyfish,... or even the Lock Ness monster? What is it really?

by Ranger D. Stamm

You're out swimming or boating in Jordan Lake, then you see it! It looks like something out of a science fiction movie, and you begin to wonder. Is it a mutant life form, ... or a jellyfish,... or even the Lock Ness monster?

Relax... It is only a colony of single celled organisms called a **bryzoan colony**. Many bryzoan colonies are marine in nature and look like coral. However, the species found in Jordan Lake is called *Pectinatella magnifica* (don't ask how to pronounce it) and is a gelatinous "blob" or colony of **zooids** which may measure up to 20 inches in diameter. *Pectinatella magnifica* is native only to North America.

Bryzoan colonies thrive in shallow warm water about three feet deep. They grow well in water temperatures between 68 and 83 degrees Fahrenheit. This is why you can find them in abundance in the late summer months. They die off in the fall when the water temperature cools to 50 degrees. Bryzoans like to attach themselves to the underside or shaded sides of rocks, logs, docks, buoys or boards. They do not like bright sunlight and prefer stagnant or slow moving water.

Are they safe, you may ask? Bryzoan colonies are harmless, and unlike the jellyfish they resemble

(in looks only) they cannot sting people. The zooids which make up the colony are filter feeders and feed only on phytoplankton and other suspended matter in the water. The zooids do have a ring of tentacles around their mouth called the **lophophore**, which protrudes to capture small food particles.

As for the mutant life form issue, bryzoans are actually an indicator of good water quality. Although they are common in stagnant water, they are never found under polluted conditions and only sparingly where the quantity of oxygen falls below 30 percent saturation. Silting also discourages growth, and strongly acidic waters and bogs do

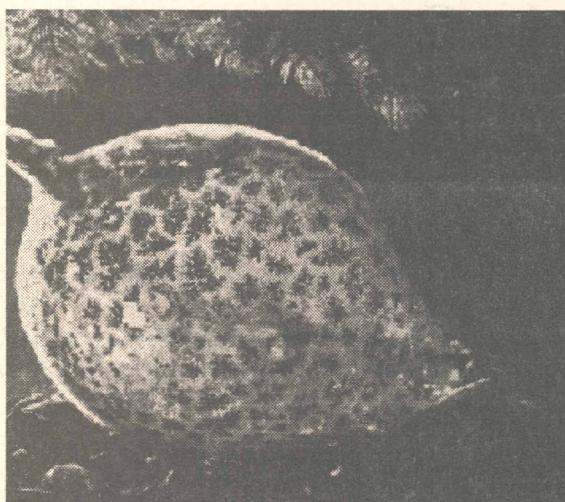
not contain any bryzoans. If a piece of a bryzoan colony breaks off, it can continue to grow into a new colony. Bryzoans can also reproduce by producing a cell mass called a **statoblast**. The statoblasts are distributed by random currents or winds, and they can float or remain at the bottom of the water. The statoblasts may remain dormant for some time and can withstand drying, freezing, and adverse environmental conditions. When conditions are favor-

a b l e again, like in spring, the statoblasts germinate

and form a new zooid. The statoblasts are also a food source for small fish.

So the next time you are swimming or boating and you see a bryzoan colony, rest assured that they will not attack. (Unless you are a phytoplankton!) They are a harmless indicator of good water quality.

For more information on bryzoan colonies, visit the **Bryzoan home page** on the internet at: <<http://www.civgeo.rmit.edu.au/bryzoa/index.html>>.



North Carolina Division of Parks & Recreation

Mission Statement

The North Carolina state parks system exists for the enjoyment, education, health and inspiration of all our citizens and visitors. The mission of the state parks system is to conserve and protect representative examples of the natural beauty, ecological features and recreational resources of statewide significance; to provide outdoor recreational opportunities in a safe and healthy environment; and to provide environmental education opportunities that promote stewardship of the state's natural heritage.

The "Jordan Lake Voice" is a newsletter produced by the Jordan Lake park staff. We hope that it will educate, entertain, and inform you. Inside, you will find general park information, articles about the natural and cultural history of the area, introductions to some of our staff and volunteers, and program announcements. This issue was underwritten by the Environmental Media Corporation. This is our longest issue ever - I hope you will enjoy it!

-Editor

From the Superintendent's Desk

Dear visitor: I want to take this opportunity to thank all of the staff at Jordan Lake for their efforts to again overcome more adversity as we prepared for the upcoming visitor season. The time, dedication, and team efforts necessary to recover from the effects of four floods this past winter and spring are greatly appreciated.

As we begin the new season, I ask our visitors to pause and reflect on how much hard work was needed to prepare our facilities and recreation areas for their enjoyment.

Everyone also needs to think and act safely as we work at or visit the Jordan Lake State Recreation Areas. Let's do all that we can to make this a fun but safe summer for all of us.

*Sincerely,
James M. Seigh*

Positions Available

*Experience working
outdoors and meeting
new people*

Seasonal applications are still being accepted at Jordan Lake State Recreation Area. A variety of seasonal job opportunities are available in both 40 and 16 hour positions. Assistant park rangers, general utility workers, and park attendants are all needed. For a detailed job description, application, or additional information, contact the park office at (919)362-0586.

Hours of Operation

May, June, July, and August

8:00 A.M. - 9:00 P.M.

September, October, and April

8:00 A.M. - 8:00 P.M.

March

8:00 A.M. - 7:00 P.M.

November through February

8:00 A.M. - 6:00 P.M.

Park Office: Monday - Friday

8:00 A.M. - 5:00 P.M.

Park Policies

Parking

Parking is permitted only in designated parking spaces throughout the park. Vehicles parked on road shoulders, in traffic lanes, or in "no parking" areas are subject to ticketing.

Alcohol Policy

Alcoholic beverages of any kind are prohibited in all areas of the park.

Pets

Pets are welcome in the park, but must be kept on leashes at all times. Pets are not allowed in park buildings or on swimming beaches.

Fireworks

Fireworks of all kinds, including toy cap pistols, are prohibited in the park.

Firearms

All firearms are prohibited in all park areas

A complete list of park regulations is available at the park office.



The Jordan Lake staff is sad to say goodbye to a dear friend. Harry Livingston passed away January 29, 1998. Harry was a general utility worker and supervisor of the mowing crew for eight years at Jordan Lake. We miss him dearly, but his memories bring smiles to those whose lives he touched.

Journey Into Jordan's Past

This is the second in a series of articles highlighting the history of the Jordan Lake Region.

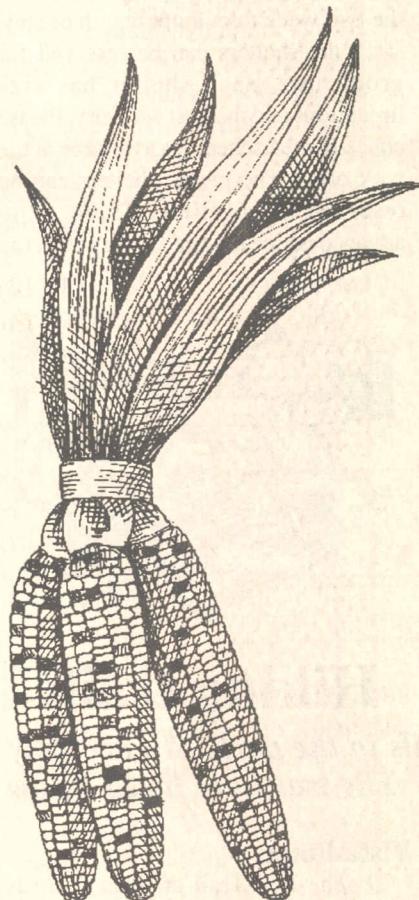
by Ranger A. D'Amico

Long before European settlers had arrived on this continent, there was a group of people enjoying the abundant, life giving resources the Haw River had to offer. These native Americans were known as the Sissipahaw (or Saxapahaw). They, along with other tribes which lived along the Haw River, were part of the eastern Siouan speaking groups of people who survived by fishing, hunting, and farming.

Through archeological investigations conducted in 1987 by the Research Laboratories of Anthropology at UNC Chapel Hill, researchers have learned much about the way the Sissipahaw lived before, during, and after European contact. Sifting through the alluvial sands of the Haw River has revealed vast bits of history for researchers.

Before contact with the first Europeans (A.D. 1000 - 1600) the Sissipahaw's diet consisted of acorns and other nuts, fruits, and a variety of cultivated plants including beans, squash, maize kernels, and sunflowers. Acorns and hickory nuts were eaten with a wide variety of faunal resources such as opossum, turkey, deer, fish, and shellfish which indicated that the Sissipahaw were a hunting and gathering society.

The Sissipahaw lived in small settlements or villages located on knolls and ridges bordering the tributaries of the Haw River, and along the lower half of the Haw River, itself. Settlements were comprised of widely dispersed households, or wigwams. These dwellings consisted of bent saplings tied together at the top. This framework was covered by bark, thatch, and sometimes mud.



Settlements also had storage pits, hearths, and burials. The storage pits used were large shallow basins filled with food and other items. Earthen ovens were used in the preparation of large amounts of food for community wide ceremonies. Their dead were buried in shafts and chamber pits at a depth of five feet, oriented toward the east with a large stone placed at the foot.

Trade routes brought non-native smoking tobacco, glass beads, brass

ornaments, and small quantities of firearms to the Sissipahaw in the early 1650's. This was before actual contact was made between them and the Europeans. At this time, stone tools and weapons were still being used by these native peoples. There is no recorded evidence that the Sissipahaw people ever made direct contact with Europeans at the Haw River location.

The Shakori and Occaneechi people were northern neighbors of the Sissipahaw, living in the Eno River drainage. The first recorded European to make physical contact with these people was John Lederer in 1670. John Lawson followed in 1701. With these contacts came greater access to traded guns, knives, hoes, kettles, and other tools. Unfortunately, diseases for which native Americans had no resistance were also introduced. The Sissipahaw population was nearly destroyed by European introduced diseases and warfare during this thirty year period. By 1701, the few remaining Sissipahaw survivors moved north to join the neighboring Shakori and Occaneechi tribes. Although today there is no longer a separate tribe called the Sissipahaw; the remaining members of this tribe assimilated into the Occaneechi tribe and share the same spirit.

The Occaneechi tribe is currently trying to obtain tribal recognition with the state of North Carolina. If you would like to know more about this struggle, or to receive information about their newsletter (which includes language lessons) write to Occaneechi Newsletter P.O. Box 356, 201 E. Center street, Mebane, NC 27302.

RESERVATIONS

 One of the most frequently asked questions at Jordan Lake (besides Where is the bathroom?) is "Can I make a reservation? Yes you can reserve some of the facilities at Jordan Lake. This review of our reservation policy should help you when planning your visit to the park.

All reservations must be made at the park office in person or by mail. The park office is located on highway 64 on the east side of the lake and is open 8:00A.M. to 5:00P.M. Monday through Friday. No reservations are accepted by phone. When making a reservation you will need the total amount due (cash or personal check only) and a completed reservation form. Reservations are accepted starting on January first of each year for that year.

The individual family campsites can be reserved for a minimum of seven

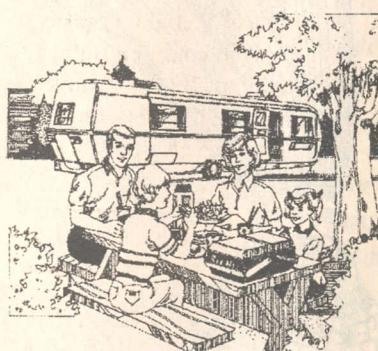
nights. Division policy states that the maximum length of stay is fourteen nights in a thirty day period. **The reservation must be made at least two weeks in advance.** This policy allows anyone presently camping on the site the two week maximum length of stay.

Picnic shelters can be reserved for group use. Each shelter has size limitations and the cost will vary. Please check the fee schedules available at the park office. The picnic shelters can be reserved at any time. There is no advance notice required, except that the

reservation cannot be made on the date of the activity. However, due to the popularity of these shelters, reservations should be made as soon as you know a date. As one would expect, Saturdays and Sundays, May through July are reserved quickly.

Special activity permits may be issued to approve activities not normally conducted in the park. Some requests approved in the past have been for amplified music, group sizes over the limit, weddings and baptisms. A \$25.00 filing fee is added to the normal rental and admission charges.

Group campsites are available for groups of six or more. There are eleven group sites located in two areas at Jordan Lake. These sites can be reserved. There is no minimum length of stay and a two week notice is not required. Each site costs \$35.00 a night, with check-in time after 3:00P.M. Please call the park office at (919) 362-0586 if you have any questions.



Hiking trails

There are several hiking trails in the park. All are easy walking and are suitable for all ages. The trails are listed below by area.

Seaforth

Seaforth's 1.25 mile Pond Trail passes by several ponds and should take about an hour. The trail begins and ends at the beach parking lot.

Crosswinds Campground

The trails in Crosswinds connect the camping loops with the beach and boat ramp, but are for the use of registered campers only.

Vista Point

The Red Trail at Vista Point is about three miles long, and takes about two hours to walk. The trail winds through some beautiful pine and mixed hardwood forests. Picnic facilities are nearby.

Parker's Creek

The .5 mile children's nature trail at Parker's Creek begins and ends at picnic shelter #3. This self-guided walk should take about 25 minutes to complete. There is a trail connecting each campground loop to the beach area for the use of registered campers. Trail length ranges from .5 mile to 1.5 miles.

Poplar Point Campground

Here again, the trails are for campers only.

Ebenezer Church Beach area

Ebenezer has two loop trails, each about one mile in length. The Ebenezer Church trail begins in the southeastern corner of the beach parking lot. The trail passes the site of the old Ebenezer church for which the area was named. The Old Oak Trail begins in the parking lot of picnic area A.



The Mis-Adventures of the Dumb Family!

by Ranger M. Flaugher

It started as a weekend get away. The Dumb family would go camping and get back to nature, a few nights with the stars and the cool night breeze and all the fuzzy little creatures of the forest. A warm campfire with rocks close around it just like in all the western movies

ought to just about hit the spot.

Packing the car was no problem: beer, marshmallows, chocolate bars, beer, pretzels, chips, beer, soft drinks (for the kids of course), a hatchet,



matches, a rental tent (minus the instructions), cocoa butter (for sunning). The van was a must, and don't forget the fan or the gas for the boat (and to start the fire). Then it's off to the lake for fun and sun.

It was awful nice of the rangers to provide the Dumbs with a map and park regulations to use as a fire starter. Did the Dumbs listen to anything the park attendant said? Probably not, since they were too busy trying to hide all the beer.

An hour after arriving at the campground the Dumbs got tired of circling through the maintenance area and stopped to ask one of those annoying people in ugly green and gray uniforms where the campsites were. Finally, a campsite! The Dumbs started to set up.

"How did that guy at the rental place say to set the tent up?" "Hey, where is the flashlight? Oh well we'll just sleep under the stars, just like the cowboys do." "Okay honey you get the sleeping bags out and I'll gas the fire up." This was just the beginning of a long night for the Dumbs. "A few rocks in the fire ring to hold that heat once

the fire burns down, this six foot log is a little long but that's okay it'll burn in two." "Now about a quart of gas ought to do it." "Where did I put those matches?" Just in time, a park ranger approaches. "Oh here they are, and the gas ought to be set in just about right." "Oh, hi there Smokey. What's that? Gas is a bad idea? I could blow myself up? WOW! You could be right, I remember old 'Uncle Baldy', I think they said he lost his hair by starting a fire with gas. Lit the match and BOOM, no eyebrows, eyelashes or hair. That's 'Baldy' for you." "How's that Smokey? That six foot long log is

dangerous? Well I didn't know you could buy firewood the right length right here in the park. You could just be right. That log might have fallen off the fire ring and caught the campsite on fire." "Anything else I should know about this fire? I shouldn't put rocks in the fire? Now come on, I've seen that on TV!" "You say rocks have water inside and might explode when heated? Well you learn something every day." "Okay honey that silly ranger's gone now. Let's put the kids to bed and pop a top on a cool beer. I sure hope we have enough. You sure a case is going to last all night?"...

"Welllll, halloo Smokey, what brings you out tonight?" "You say quiet hours are at 10:00 p.m., what's that, other campers are complaining because we're too noisy?" "But Smokey, it's only 2:00 a.m. I hardly got started." "How could this be, Smokey? I never saw any alcohol prohibited signs. But

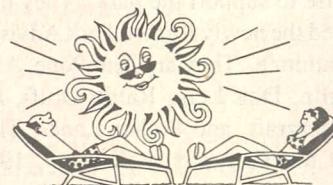
I's was only drinkin cuz, uh, I forgot to bring the 'quito pellant, or somethin like that.' okay smokey thas all the beer, iss all gone. okay we'll go to bed now." "That Smokey sure iss a nice person! Sooo thoughtful thinkin of us all the time..."

"Honey I don't feel so good. Say, do you remember a ranger coming by and taking our beer last night? Or was I just dreaming?" "Oh well, let's head to the beach and sleep this off after we have our breakfast of marshmallows..." "What a relaxing beach. Put some of that tanning oil on my back then we can take a nap while the kids swim..." "What's all the fuss ranger? You say my children almost drowned while I was sleeping? But I only closed my eyes for a few minutes. Okay ranger

I'll have them looked at, I don't feel so good anyway..."

"Okay Doc. I'm glad the kids are fine, now would you mind looking at my back, I think I

got a little burn from the sun and I don't feel so good. What's that Doc? I should have used sun block instead of tanning oil? You say oils just let the sun fry your skin? I've got sun blisters and may



have sun poisoning?" "Well I've had enough camping for one lifetime anyway..." "Honey, you know that doctor said that having alcohol in your system can cause you a lot of problems if you are out in the sun too long? He said that could have contributed to my problems." "What's that honey? You say maybe that's just one reason the parks don't allow alcoholic beverages?" "Well

continued on page 22

VOLUNTEERS

Those Who Accept the Challenge

by Ranger E. Kellon

Anyone who has ever visited Jordan Lake State Recreation Area has probably been the beneficiary of a volunteer's hard work. It may have been in the form of a new trail cleared by a scout troop or a foot bridge built as an Eagle Scout project. Maybe it was the helpful advice of a campground host. It could have been something that wasn't even seen at all, like garbage along the shoreline which had been cleaned up by a local school group.

The volunteer program at Jordan Lake is an integral part of the overall operation of the park. Volunteers are able to do many jobs that rangers are simply unable to do because of time constraints. This past year our volunteers contributed 10,171 hours of their time to Jordan Lake State Recreation Area. This means that together the vol-

unteers did the work of five full time employees working year round.

There are many different types of volunteers who work at the park. The camp hosts, for example, assist visitors who are staying at one of the park's 1,050 campsites. It would be impossible for rangers to effectively help every visitor who has a question and still complete the rest of their responsibilities. Some of these hosts take on additional duties as well. Rita Cunningham who has been a host for several years, volunteers her artistic talents. Most of the interpretive displays that can be seen throughout the park were painted by her.

Boy and girl scout troops routinely donate time at the park. This is often in the form of trail improvements or trash collection. These projects benefit the park and usually satisfy troop requirements for merit badges or com-

munity service. Many boy scouts complete their eagle scout projects here. Because these projects must be planned and carried out completely by the boy scout, they require minimal supervision by rangers. College interns will sometimes volunteer at the park. They will typically spend about three months working on a wide range of projects while gaining experience and earning college credit.

Although Jordan Lake has an active volunteer program it doesn't mean that we don't need more help. Several camping loops went without hosts last summer and our trails always need work. **Whether you have a few hours on weekends or a few months in the summer, if you would like to help preserve NC State Parks contact the Jordan Lake park office at (919) 362-0586.**

Hats off to these hard working volunteers - we couldn't do it without them!

Park Advisory Committee

The staff at Jordan Lake State Recreation Area is proud to announce a few very special volunteers. These people have volunteered to donate their time, effort, skills, and professional expertise to support the park. They have joined the newly formed Park Advisory Committee. They are Ann Pope, Andy Miglin, Don Lein, Ralph Dolfi, Bill Pendergraft, and Walter Lane. Their first meeting was in January, 1998. They have met several times since and have already reviewed the park's General Management Plan, volunteered to assist with Heritage Day on October 3, nominated three additional committee members, donated interpretive videos to the park library, and donated funds for the publishing of this newsletter. The park staff is excited to have this support behind our efforts, and we hope that the park visitors will also share in our appreciation.

Hikers on the Old Oak Trail at Ebenezer have remained higher and drier this year thanks to a hard working and highly motivated young man named Bryan McDowell. Bryan constructed a 40' boardwalk across a low lying area of the trail as his Eagle Scout project.

Girl scout troop # 243 spent a day cleaning up flood debris in Poplar Point campground.

The girl scouts of troop #235 spent two days - a whopping **20 hours** cleaning up trash and planting trees. They hauled literally tons of the stuff off site, filling a dump truck and a trailer to the limit!

The cub scouts of Den 5, Pack 495 have been building bluebird boxes - 60 of them in fact! They have installed 15 of them in Crosswinds campground. Rangers will put up the rest in their areas.

**Thank all of you for
your efforts!**

Rabies - An Epidemic

by Ranger A. Edwards

Rabies in North Carolina is at an all time high. It seems like every day we read, hear, or see something about the disease called rabies. Unfortunately our parks are not immune to this epidemic. Even here at Jordan Lake we have had our run-ins with rabies. With a large population of wild animals and a large visitor base this problem has been more prevalent.

What is this disease called rabies? Rabies is a viral infection that affects an animal's central nervous system. The virus infects the brain of the animal causing a change in behavior. Since rabies is a viral infection, antibiotics are useless against it. Once an animal (including humans) is exposed and contracts the disease it is almost always fatal. The incubation period, the time from exposure until visible symptoms appear, ranges from a few weeks to several months. Symptoms of the disease may include behavioral changes such as tameness or aggressiveness. Animals may lose their fear of people and may become easily agitated, biting with little or no provocation. Paralysis may develop.

During the 1950's, rabies became a major problem in North Carolina as well as much of the United States. The

last person to die from rabies in North Carolina was a woman from Cherokee County. She died in 1953 after being bitten by her dog. During the 1960's, only a handful of cases were reported

as Caswell County. The third epidemic of rabies has moved from the mid-western states into Tennessee, southwestern Virginia and northwestern North Carolina. There is now one continuous epidemic of rabies from the New England states to Florida.

What can we do to prevent rabies? The best method of prevention is to keep our pets away from any wild animal. This, on the other hand is almost impossible. Vaccinations can be given to your pet to prevent this disease: see your veterinarian for the vaccine that is best for your animals. Vaccinations have been made mandatory by the General Assembly in order to protect human health by protecting animal health. Pre-exposure shots are available for humans that are more likely to come into contact with a

each year in North Carolina. During the 50's and 60's the dog and cat population seemed to be most affected. Currently, the predominate carrier of rabies in our state is wild animals, especially raccoons. Cows, horses, foxes, beavers, bats, skunks, and bobcats can also carry the disease. Any mammal can contract this disease although opossums and small rodents are rarely found rabid anywhere in the United States.

Since 1990 North Carolina has been experiencing another rabid epidemic. There have been three epidemics which have invaded North Carolina's wildlife. The first came from the Southeast beginning in Florida in the 1950's and has slowly spread northward during the intervening decades. As of July 1996, its movement has infected wildlife of southeastern North Carolina and the south central piedmont. The second epidemic has come from the mid-atlantic states originating in the West Virginia area. This movement has infected wildlife in the northeastern part of our state as far west

that is rabid they need to get prompt medical attention. The old days of 21 shots in the stomach are over. Now, you receive five shots in the arm over a 28 day period. In addition to these shots you will receive a one time dose of rabies immune globulin.

Rabies is a dangerous disease, but with the proper education and information it is nothing to fear. If you are visiting the park and notice a wild or domestic animal that is acting suspicious, you should gain as much distance as possible between you and that animal and contact a park ranger. For more information on this disease contact your local cooperative extension agent, your physician, your local or state health department, or your local animal control office. Remember North Carolina's wildlife is here for us to observe and enjoy, not to be afraid of.



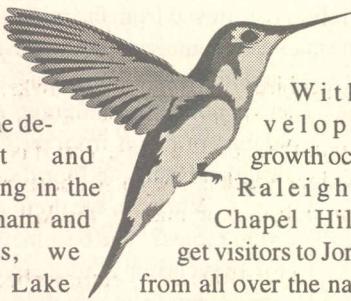
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r a b i d
animal.
If a hu-
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animal

Hummers

by Ranger J. Striker



all the development and occurring in the Durham and areas, we get visitors to Jordan Lake from all over the nation and even the world. This past Christmas a tiny and unusual visitor was discovered at Jordan Lake!

This little feathered jewel came to us from its breeding grounds thousands of miles away in the northwestern United States, Canada, and Alaska. As warm-blooded creatures go it is among the smallest. Its length is only 3.5 inches long with a wing span of three inches. It weighs only 3.1 grams which is about the weight of a single penny! These little critters are expert fliers, able to hover over flowers and fly up to 50 mph!

Our visitor (if you have not guessed yet) was a hummingbird. Unusual not only because it was winter, a time hummingbirds spend in Mexico and Central America, but also because it was a non-resident species known as the "rufous hummingbird." The only resident hummer in the eastern U.S. is the ruby-throated.

The rufous is similar in size to the ruby-throated, but differs in color. Our visitor was a female rufous which has an emerald back, wings, and head. She also has a white breast with rufous colored sides. Rufous is a color similar to rusty-red, and is also found on the bird's outer tail feathers. The male rufous is much more impressive with the rufous color covering most of its body and tail. His wings are bright emerald green, and his throat is fiery-red with a bit of white below.

Perhaps you are asking, "If the rufous belongs out west why was it at Jordan Lake?" It is not known for

sure. Although researchers such as Bob Sargent of Hummer/Bird Study Group, have several theories. One theory is that due to storms occurring during migration these birds get blown off course. Once the storm is over they find themselves lost in unknown territories. An-

shows that these birds are successfully breeding in the southeast! In fact if the trend continues we may have two common hummingbird species in the future.

Hummingbirds are not only beautiful and energetic, they are also fascinating in their life histories. Hummers are the smallest of birds and about as small as warm blooded animals can get. If they were any smaller they could not eat enough food to stay alive.

This is because of resting metabolic rates. The resting metabolic rate is a measure of the energy (calories) an animal uses to maintain life while at rest. For example, humans burn roughly 2,000 calories a day for maintaining body temperature, breathing, and other basic bodily functions.

This little feathered jewel came to us from its breeding grounds thousands of miles away.

other theory is that due to some genetic modification the birds do not have the correct migration information, and thus end up east instead of in Mexico or Central America.

Mr. Sargent has also documented that not only is the rufous hummingbird migrating east, but is also living here year round. This is proven by capture and banding of the birds. Research

Greedy Woodpecker

by Maintenance Mechanic M. Pendergraph

*This fine figure of sculptured wood
was once upon a time a live young bird.
From tree to tree fast in flight,
in search of food from morning till night.*

*Just so happened in this very limb
lived a nest of termites.
It was a large hole at the bottom of that limb;
a magnificent bird so young and slim.*

*With greedy thoughts the woodpecker entered that nest.
Standing so straight and tall anticipating his exit, becoming the largest,
so becoming king of them all.*

*As he ate his way up the inside of that inhabited hollow,
He didn't allow not one pair of insects to escape
to carry on tomorrow.*

*From the narrow hole in the top of the limb
his head did erupt,
And as he took down that last greedy gulp,
high up in that mighty pine tree,
the woodpecker got stuck and could not get free.
With pen and chisel in hand, I carved him out for the world to see.*

Hummers are of course very different from humans. A book called, The Birder's Handbook, puts it this way, "Hummingbirds with their tiny bodies and high levels of activity, have the highest metabolic rates of any animal—roughly a dozen times that of a pigeon and a hundred times that of an elephant." To maintain such high levels of energy consumption hummers have to eat close to their weight in nectar each day. Nectar is a sugar rich fluid produced by plants. (Could you drink your weight in sugar water?) To complete the cycle of food to energy and then waste, hummers pass (urinate) 75-85% of their body weight everyday. For the average person that would be the equivalent of voiding 20 gallons each day!

Most people know that hummingbirds can hover in flight. Hovering allows the birds to reach nectar found in even the smallest of flowers. Hummers

have several body adaptations that allow them to not only hover, but also to fly as fast as 50 mph! They have very flexible shoulder joints which enable their wings to move in a figure eight pattern. This pattern provides lift in both the forward and backward stroke of the wings thus creating efficient and powerful flying. Another adaptation is the ability to beat their wings very fast.

So fast in fact, that their wings are not visible except as a faint, fuzzy blur. Wing speed ranges from 20 to 80 beats per second. This comes to 1,200 to 4,800 beats per minute! Of course, this is the origin of their name, the wings beat so fast they hum as the bird flies. It takes a lot of muscle to power such speeds. Hummers have about 30% of their body weight dedicated to their breast muscles which power the wings.

Despite their tiny size hummers are not only very tough, they are fierce hunters. They get quick energy from

nectar, but need lots of protein, vitamins, and minerals as well. They obtain these elements by eating insects and spiders. Hummingbirds hunt like much larger birds of prey, such as hawks, hunt rodents and birds. They swoop down upon their prey in tiny, very fast, and violent attacks. They also chase insects through the air making the kill while flying.

Our little rufous hummer became scarce in early February after some late blooming shrubs in the park office parking lot lost their flowers. We put up a hummingbird feeder which she used for some time. If you feed hummers in the summer try leaving your feeder up past November. If you do not feed hummers, consider doing so. They are beautiful and exciting bundles of energy, fun to watch! The next time you see a hummingbird, look close, it may be a new visitor from out west.

Feeding Hummingbirds

- Buy a hummingbird feeder.
- Mix a nectar made of 1 part sugar & 4 parts water. Keep unused portion in the refrigerator.
- In summer change nectar every three days as water, sugar, and heat create mold and bacteria which spoils the nectar.
- Do not use food coloring, honey, or saccharin as it may harm the birds.
- Wash the feeder at least once a month with a mix of bleach to water. (1/4 c. Bleach/1 gal. Water)
Rinse completely!!

Follow-up Activities

- Read more about hummers such as how they migrate, breed, & survive cold nights.
- Plant native flowers humming birds love such as coral honeysuckle, trumpet vine, and cardinal flower.
- Go outside wearing red a shirt near a feeder hummers are using & see if one comes to investigate you!

Facility legend

FACILITIES AVAILABLE	(1) A New Hope Overlook	(2) A Ebenezer	(3) A Poplar Point	(4) A Crosswinds Campground	(5) A Robeson Creek	(6) A Seaforth	(7) A Parkers Creek	(8) A Vista Point	(9) A Crosswinds Cr.	(10) C Crosswinds Boat Ramp
Boat Ramp	●	● 2	● 1	● 1	● 2	●	● 1	●	●	●
Boat Rentals										●
Camping - Group							●	●		
Camping - Tent	●		●	●	●		●	●		
Camping - RV			●	●	●		●	●		
Dump Station			●	●	●		●	●		
Fishing	●	●	●	●	●	●	●	●	●	●
Hot Water Showers			●	●	●		●	●		
Parking	●	●	● 1	● 1	●	●	●	●	●	●
Picnic		●					●	●		
Public Telephone	●	●	●	●	●	●	●	●	●	●
Restrooms	●	●	● 1	● 1	●	●	●	●	●	●
Swimming		●	● 1	● 1			●	● 1		
Trails		●	● 1	● 1		●	●	●		

1 FOR CAMPERS ONLY
2 24 HOUR ACCESS

A PARKS AND RECREATION
B CONCESSIONAIRE

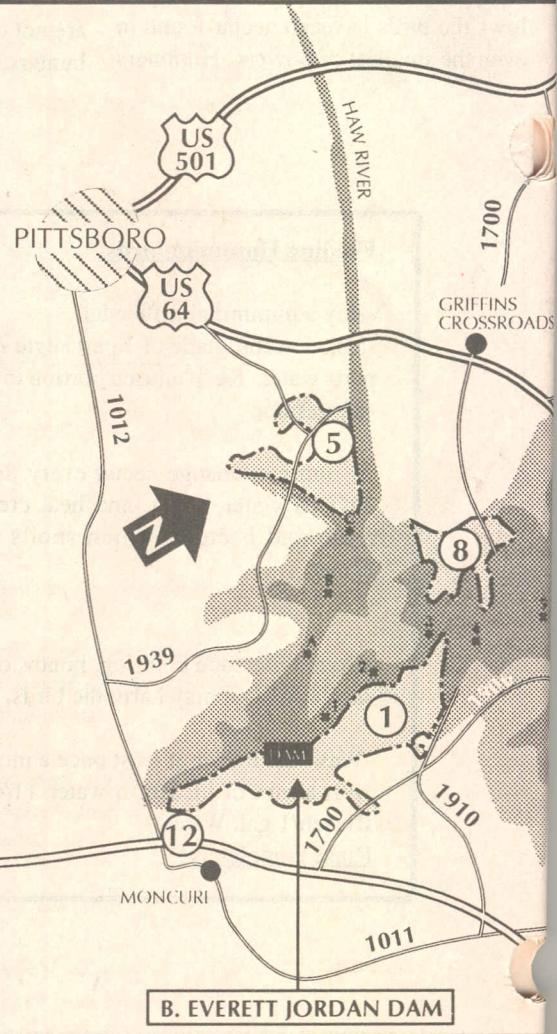
C NC WILDLIFE RESOURCE
D U.S. ARMY CORPS OF ENGR



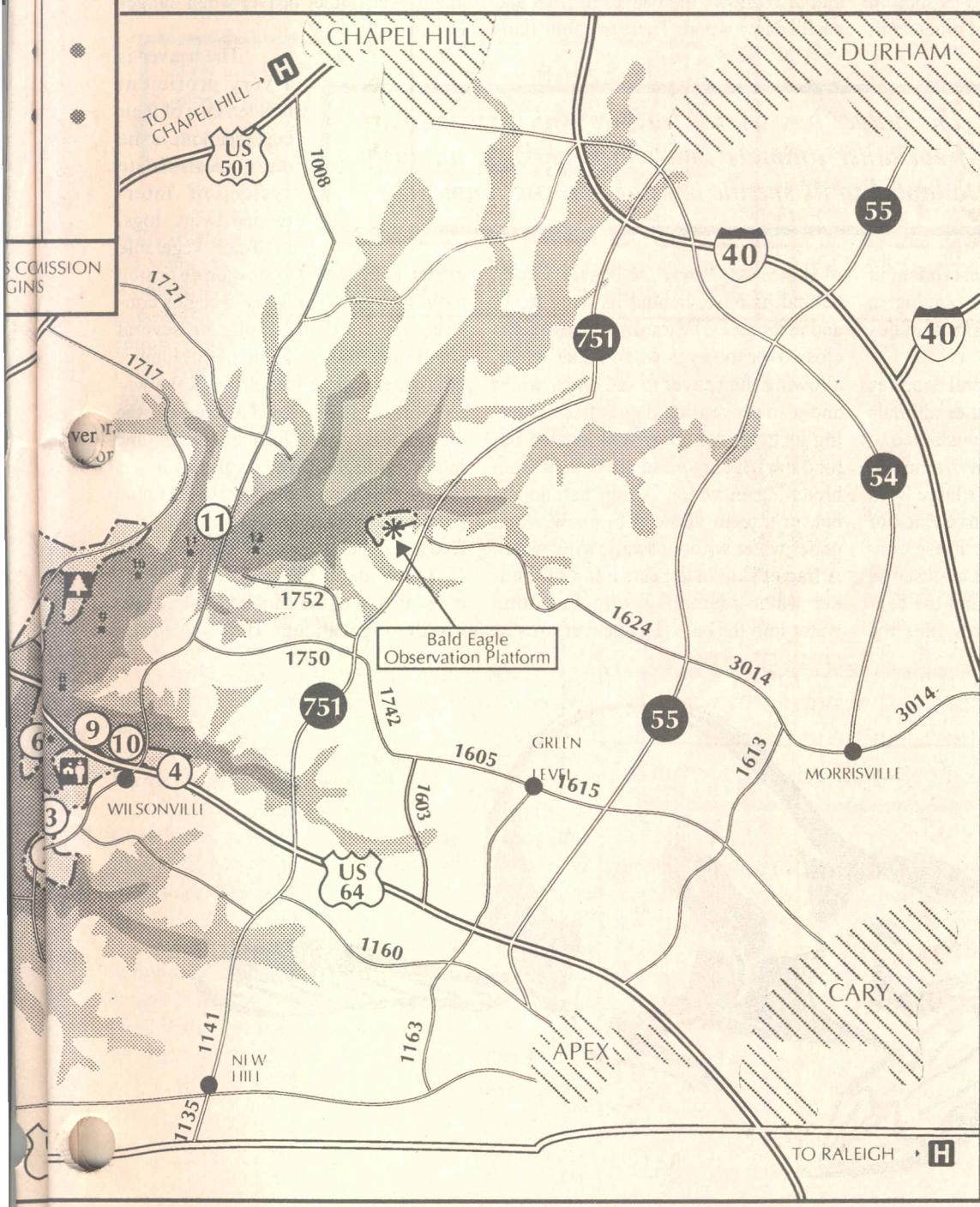
0 1"
2.3 MILES

Map legend

- H Hospital
- EMERGENCY Dial 911
- Navigational Buoy
- ▲ N.C. Forest Resources
- Park Office
- Paved Roads
- Reservoir
- New Hope Gamelands
- Non-Gamelands



Jordan Lake State Recreation Area



The Creative Nature of Beavers

by Ranger M. Smith

Areas such as Jordan Lake provide a bountiful aquatic habitat for many species of animals. One such animal is the beaver. This animal was trapped to extinction in North Carolina in the late nineteenth century. Beavers were given a second chance in the middle of this century through reintroduction by the agency now called the North Carolina Wildlife Resource Commission. The beaver is the largest rodent in North America with males ranging in size from 30-80 pounds and females weighing 30-70 pounds.

The beaver has several features which set it apart from other animals and which make it uniquely adapted to its specific habitat and environment. These "adaptations" include large front teeth, webbed feet, protective flaps of skin, and a broad, flat tail. These constantly growing front teeth are used to cut down trees in and around the beaver pond. Chewing on trees files the

teeth down at an angle so they retain their sharp edge. Beavers have webbed rear feet which allow them to efficiently swim in water. Water provides protection from predators and other threats, and also allows the beaver to float and easily carry wood. There are four flaps

The beaver has several features which set it apart from other animals and which make it uniquely adapted to its specific habitat and environment.

of skin located over the beaver's eyes, behind its nose, behind its front teeth, and in its ears. The transparent eye flaps close over the eyes when under water, allowing the beaver to see under water and also preventing debris from entering its eyes. A flap of skin located behind the beaver's nose prevents it from breathing in water. A flap behind the beaver's teeth allow it to chew wood under water without swallowing water. A flap of skin in the ears allows for under water swimming without letting water into the ears. The beaver uses its

flat tail as a rudder when it swims, to store fat during the winter season, and to slap the water surface. The tail slap sounds like a bowling bowl striking pins when it hits the water. The beaver does this to warn other beaver when danger is near.

The beaver is a very proficient builder. One of their best creations is the dam: an intricate system of intertwined twigs, logs, mud and vegetable

matter, constructed to slow down or stop moving water. The beaver begins constructing the dam by placing several small to medium size pieces of lumber in a water source to hold back the water. As the water level increases, the beaver adds more lumber, twigs, and mud to stop the flow. As the dam gets bigger, the amount of water held behind the dam increases. The average dam is five feet in height and usually more than 10 feet wide at the base. Most of the construction of the dam takes place during the night though they sometimes



work during the day. When satisfied with the dam, the beaver will soon begin constructing another structure important for safety and a future family: the lodge.

There are three types of lodges. The first type of lodge, the island lodge, is constructed in the middle of the newly formed pond. The beaver builds this

The creation of beaver ponds can have both benefits and drawbacks, depending on the situation.

lodge from the floor of the pond up, as the water level rises. The island lodge is unique in that it has two entrances, a large room, and a vent hole. The first entrance into the lodge is used to drag twigs, plants, and other woody matter into the lodge. This entrance is usually a gradual incline into the floor of the main room of the lodge. The second entrance, an abrupt drop into the water from the main room of the lodge enables the beaver to leave the lodge quickly in case of an emergency. Beavers congregate together in the main room of the lodge to keep warm and to sleep. The floor is lined with wood chips, bark, and grass to provide insulation. A vent hole on top allows air in and out.

The second type of dwelling is a burrow lodge in a steep bank of a stream or lake. At the end of the tunnel, is a room similar to the one in an island lodge. This type of lodge has two or three underwater entrances.

The third and final type of lodge is called a bank lodge. This lodge is a combination of the island lodge and the steep bank lodge. This lodge utilizes a bank with a gradual slope into the water. The beaver builds a mound of sticks

and logs over the slope which is similar to the island lodge. The beaver does burrow some part of the bank to allow an underwater access to the lodge. The bank lodge also has a couple of underwater entrances. The problem with both types of lodges in banks is that they are subject to flooding. Heavy rains and flooding increase the amount of water

in the lakes and streams w h i c h eventually flood the lodge. Island lodges constructed

in a beaver pond are not as subject to flooding because excess water flows over the beaver dam and does not result in a significant rise in the water level in the pond.

The creation of beaver ponds can have both benefits and drawbacks, depending on the situation. Some natural benefits include: The beaver dam slows down storm waters after a heavy rain. The slow water allows sediments to settle to the bottom of the pond, preventing silt from entering lakes and streams which can ultimately kill some aquatic animals. The water that is collected in the beaver pond

can provide accessible drinking water for animals that live in and around the area. The pond can provide habitat for ducks and other migratory birds. The trees that will eventually die from water stress will be used by birds such as flickers and red-headed woodpeckers. Beavers can be seen as problems when they begin to destroy timber around the dam and the lodge. Beavers are not se-

lective in what type of trees they will use to build their dams and lodges. They can kill valuable timber stock and ornamental trees which are important to industry and private land owners. The pond also brings up the water table which kills trees, such as pine trees, not adapted to water. Beavers also causes problems when they construct their dams in structures such as road culverts which play an important role in the proper drainage of storm water.

The beaver is a uniquely adapted animal capable of creating structures which can hold large amounts of water. It is a highly proficient worker and can build structures in a very short period of time. Since their near extinction in this state, beavers have made a strong comeback in North Carolina. With the recent increase of human activity in Chatham county, the beaver has become, in some instances, a nuisance. There are compromises that humans can use to maintain a point where the beaver and people can live in harmony. Beaver management can teach people how beavers can help the environment and what needs to be done to reach a middle ground. Chatham county is a member of the beaver management program which gives assistance to land-

There are compromises that humans can use to maintain a point where the beaver and people can live in harmony.

owners who are interested in finding out how they can correctly manage for beavers. For more information about beaver management in Chatham county contact the North Carolina Cooperative Extension Service at 1-919-542-8202.

JOIN IN THE FUN!!

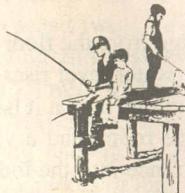
It's not just an Adventure, it's a Learning Experience!

CATCH A SURE THING! (C.A.S.T.)

Jordan Lake's "C.A.S.T." programs are back by popular demand! These programs run Saturdays in April, May, June, and July. Participants meet with a ranger at the park office (on HWY 64) at 9:30am. Each program lasts 1 1/2 to 2 hours.

"C.A.S.T." **is a fishing program for kids ages 6 - 12**

These programs are free:
bait and tackle are provided.



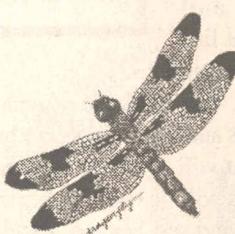
Registration is required for these popular programs. Call the park office for registration and for more information (919)362-0586.

Beach-goers are invited to visit with a park ranger at **Ebenezer Beach each Saturday from Memorial Day to Labor Day**. Rangers will set up a display table from 3pm to 4pm and be on hand to answer questions and share information on the natural history of the Jordan Lake area.

Mid summer will bring another series of "Aquatic Adventures". These programs give kids a chance to explore some of the small ponds throughout the park. Highlights include catching frogs, tadpoles, or even whirligig beetles! It's also a great chance to cool down. Call the park office for times and locations.

Early Risers & Late Nighters... Have We Got a Program For You!

Join the Morehead Planetarium staff and a park ranger for a planet viewing at 4am (yes, AM) at Ebenezer Beach on Saturday, July 18.

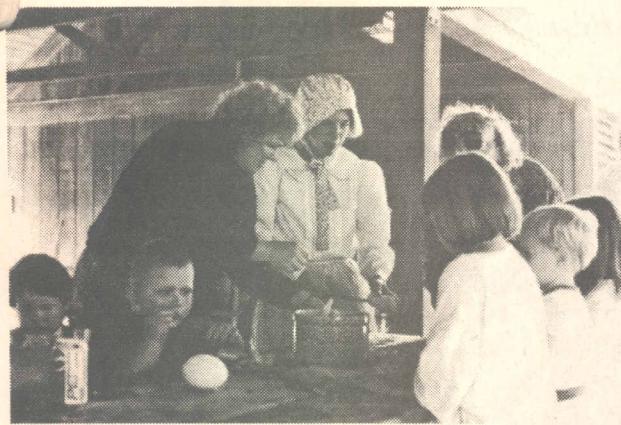


Late summer will bring a new program for kids! We will offer "Advanced C.A.S.T." sessions. Participants will practice some new casting techniques and other skills only touched upon in the initial C.A.S.T. program.

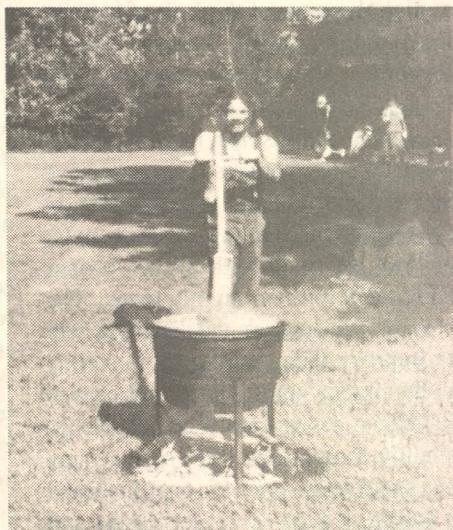
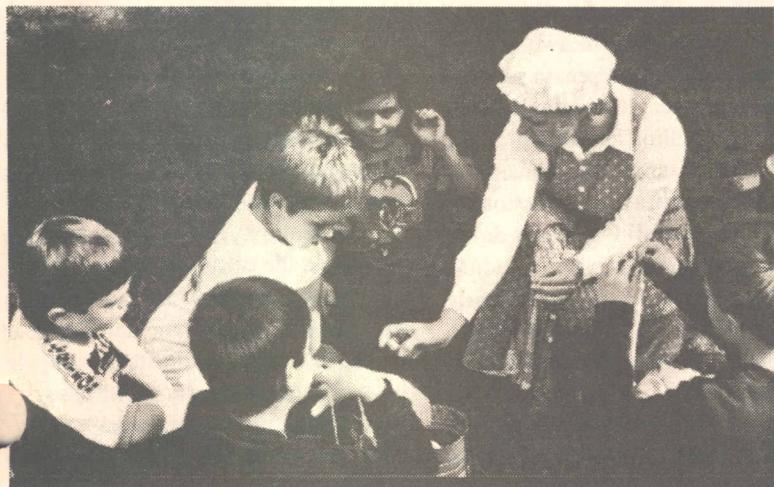
Campers can check with the park attendant at the entrance booth to see if there will be an **evening program** in their campground during their stay.

BE A JUNIOR RANGER

Attention Kids! To become a Junior Ranger contact the park office or a ranger and get a copy of the Junior Ranger pamphlet. You and your parents can begin an adventure by locating many of the plants and animals found in the park. You may be able to assist a ranger with a nature program or a park project. Once you complete the requirements in the activity book and have it signed by your parents and a ranger, you will receive a patch and certificate. Join in the fun and become a Junior Ranger!



Did you miss last year's **Heritage Day** celebration? Well, mark your calendar now for this year's 'shindig' at Seaforth Recreation Area on October 3, 1998. Last year we made apple butter and corn husk dolls. We played old-time games with the kids (big and small!). Historic farm equipment was on display, and the Chatham County Historical Society set up a booth. This is just to name a few things! Bring the family, bring your friends - there's enough fun for everyone! Would you like to become involved? Call the park office and ask for Ranger Edwards. It's never too early to volunteer!



Who goes There?

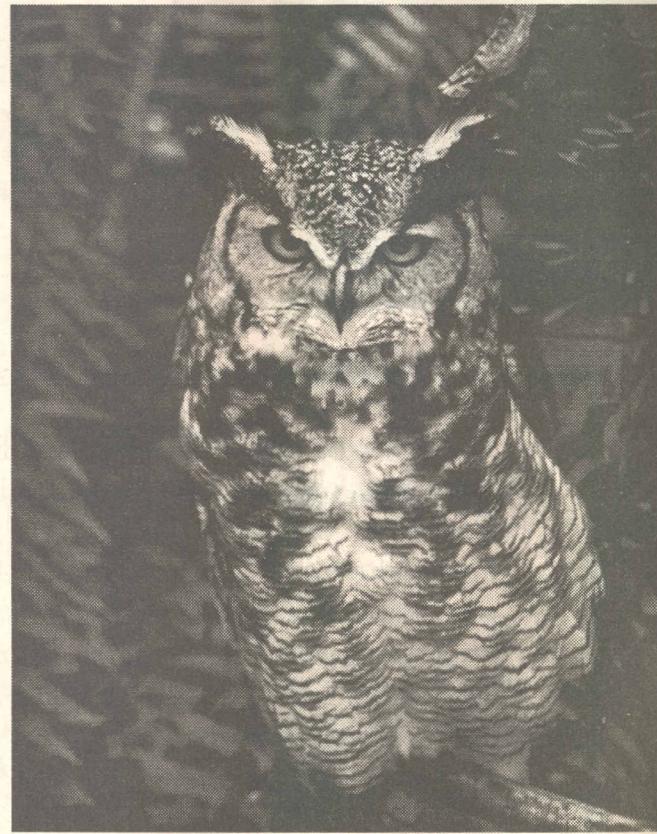
by Ranger R. Cashion

Imagine yourself all bedded down in your tent for the night, when you hear the screech of an owl. Suddenly, the hair stands up on the back of your neck and you snug down into you sleeping bag just a little further. Although a common reaction, we often miss a grand show because of fear. The grand show features a cast of various creatures of the night. Animals that come out at night are known as nocturnal.

Although we, creatures of the day, may find it peculiar, there is good reason for certain wildlife to stir during the night time hours. For many, this a prime time to find their food sources. For example, most bats feed on insects. Thousands of insects can be seen swarming on summer nights; this in-turn provides an adequate meal for the bats. The night time air also provides a moist climate for animals such as amphibians whose skin could easily dry during the heat of the day. For their well being, frogs burrow in the cool damp mud during the heat of the day and come out in the cooler evening hours. Avoidance of predators and human contact is easier at night because of the lack of activity for day shift animals. Lack of light allows for more safe movement without being spotted.

In fact, for some, night time is so advantageous that these creatures have adapted special tools to assist them in navigation and hunting. For example: an owl is armed with all the proper equipment for their nightly hunts. The round facial discs around their eyes help to improve their hearing by funneling in the night sounds. Their soft coat of feathers is designed to allow them to fly silently through the trees so that they can sneak up on prey. Strong claws and a hooked bill are useful for tearing and grasping prey quickly.

It is obvious that people don't have special feathers and facial discs; however, we too can blend in with the wonderful world at night. Although we



great horned owl

often hear the creatures of the night, we rarely see them. With a little patience and practice you too can view wildlife at night. The following are some tips to help you to observe animals after dark: **Cover your flashlight with red plastic:** The red beam of the light cannot be seen by most night dwellers because they lack color sensitive cone cells that we have. **Rub your clothes with strong smelling leaf litter:** If you are a serious observer, the dousing of leaf litter helps to avoid detection by smell. **Practice walking in the dark:** by walking in darkness, you can adjust your eyes to allow you to see in nearly complete darkness. It normally takes 45 minutes to allow your eyes to adjust to the night.

There is something about the snort of a deer or the "scream" of a bobcat that sends shivers down our spines.

Although these noises sound like frightening chatter to us, wildlife use their sounds to communicate. As a matter of fact, this form of communication is essential to survival. Certain signals such as mating calls, predator warnings, and the marking of territories are exchanged. For example, a skunk's "chattering" warns other skunks away from his territory, while deer let out loud snorts to warn each other of potential danger. In the wet nights of spring, toads make their noises to announce the annual ritual of mating. Just as we communicate, so do the creatures of the night.

Now that we understand that there is a reason for night time activity, fear not the natural world. Instead, snuggle down in your sleeping bag with ease and listen to the night shift work eagerly while the creatures of the day sleep soundly.

COMMON NIGHT SOUNDS AT JORDAN LAKE

splashes in the lake
loud snort
who cooks for you, who cooks for you all?"
a loud "slapping" noise on the water
hoarse croak
a quick swooshing pattern above your head
"preep-preep, preep"
a rapid swishing of tree limbs
a rattling noise

WHAT IS IT?

fish jumping for insects
white tailed deer
barred owl
beaver
great blue heron
bat catching insects
spring peeper
thunder storm approaching
american toad

Night Lights

by Superintendent M. Lynch

Finally, here you are relaxing at your Jordan Lake campsite. After watching a beautiful sunset you notice flickering lights in the surrounding woodlands. What are these magical lights?

Most folks around here call them lightning bugs, however, they are also known as fireflies or glowworms. But they are not flies, bugs or worms at all. Lightning bugs are actually small flying beetles of the family *Lampyridae*, (lam-peer-ih-dee), from the Greek word

Segments near the end of a lightning bug's abdomen produce the light. When they are not glowing, these segments can be recognized by their yellowish-green color. The light is produced when a protein called luciferin combines with oxygen in the abdomen cells. To control the length and timing of its flashes, the lightning bug simply regulates the amount of oxygen reaching those cells.

Most beetles are unable to detect sound. So, for a nocturnal flying beetle that needs to locate others of its species, bioluminescence was a logical way to go. Male lightning bugs signal to females with their light flashes while the females remain hidden. The female, when ready to mate responds with her own unique light signal. Adult lightning bugs recognize each other only by their flashes, with pattern and rate and length of flash varying among species. These specific light codes allow many species to display simultaneously and still get the message to members of the right species. At least 41 species of *Lampyridae* are found in North Carolina.

Lightning bug eggs are laid in moist soil. Even before hatching, the

embryos begin to glow, and upon hatching, the larvae have two tiny light spots on their abdomens which give rise to their common name, glowworm. The larvae are efficient predators. They have hook-like jaws which they use to grab their prey and then inject paralyzing fluid. On warm moist nights the

It is possible to attract a lightning bug with a penlight if you imitate the signals.

carnivorous glowworms can be found searching for snails, slugs, earthworms and small insects.

Glowworms spend about two years on or under the ground. After their second winter they build a chamber lined with soil in which to metamorphose, 15 - 20 days from a larva to adult lightning bug. Most adult lightning bugs don't feed at all, and those that do mostly forage on pollen and nectar. The adult lightning bugs have one goal, to meet and mate.

I hope this information on the biology of lightning bugs has not robbed you of the simple wonder and magic of their silent light choruses. Sit back in your camp chairs and enjoy the light show before you. Take the time to notice patterns. It is possible to attract a lightning bug with a penlight if you imitate the signals. What better way is there to truly commune with nature!

...they are not flies, bugs or worms at all.

"to shine". The lightning bugs we see flashing on a summer evening are communicating their readiness to mate.

Lightning bugs are probably the best known organisms exhibiting bioluminescence, light given off by chemical reaction within a living organism. The light emitted by lightning bugs is produced without fire, heat or electricity! This light is a cold light and represents almost 100% of the energy expended. By contrast, an electric light transfers only 10% of its energy into light; 90% is lost as heat! When it comes to energy efficiency, the lightning bugs surpass us.

KIDS PAGE

by Ranger J. Coburn

These animals need help finding their lunch. Can you match each animal to the type of food each one eats? Keep in mind that several animals eat the same types of food so there may be more than one answer for an animal.



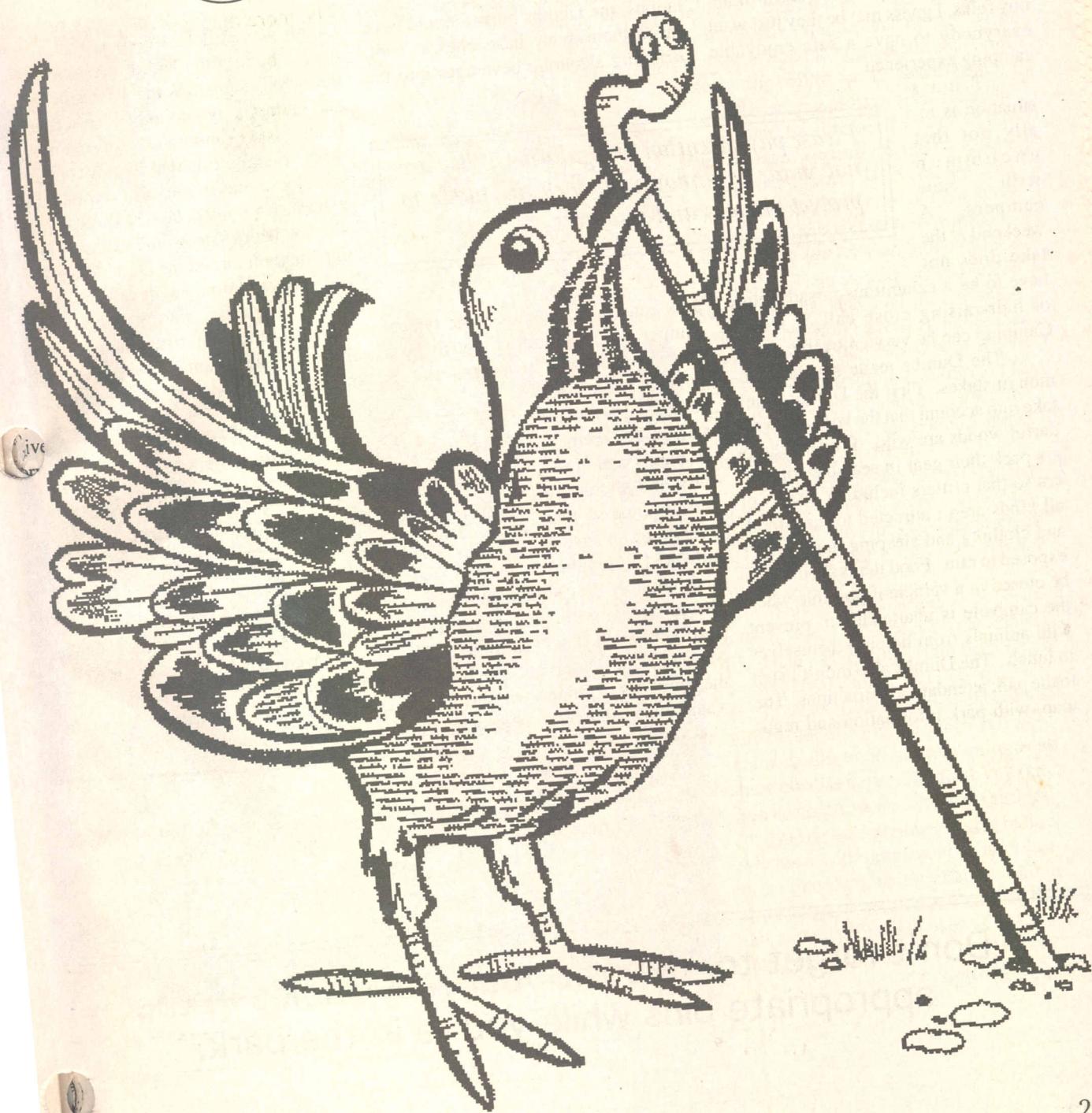
Rascal Raccoon is back and now he's trying to learn how to spell. Can you help him come up with words using the letters from JORDAN LAKE? Let's see how many words you can help Rascal create!

JORDAN LAKE

ran

ran	an	an	an

Kids: Color Me!



Continued from page 7

as much as those rangers seem to annoy folks, I guess maybe they just want everybody to have a safe enjoyable camping experience."

This situation is really not that uncommon with new campers. A weekend at the lake does not have to be a calamitous misadventure or hair-raising close call or worse. Camping can be very enjoyable.

The Dumbs made several common mistakes. First the Dumbs didn't take into account that the wild and wonderful woods are wild. Prudent campers pack their gear in sealable containers so that critters including insects of all kinds aren't attracted to their food, and clothing and sleeping items aren't exposed to rain. Food items should also be closed in a vehicle if possible when the campsite is unattended to prevent wild animals from helping themselves to lunch. The Dumbs also didn't listen to the park attendant's instructions. The map, with park information and regu-

lations, the Dumbs burned could have saved them many headaches as well. Bringing alcoholic beverages into the

Please pay attention to regulations, they are not made to annoy you, they are made to protect visitors and resources.

park caused the Dumbs some typical camper woes, including a visit by a ranger. Alcoholic beverages are involved in a high number of accidents and law enforcement problems within the park and should be left at home so that everyone can have a safe and enjoyable visit. Finally the Dumbs made one of the most common and potentially deadly mistakes that occur in the park. Mr. and Mrs. Dumb got caught up in the quest for a golden tan and didn't watch their children at the beach. Mr.

Dumb was still recovering from the nights' bout with alcohol. Alcohol in the blood intensifies the effects of the sun on the body and may pose serious health risks. Tanning oil is also a mistake. Tanning oils that do not contain sun blocks and simply allow your skin to burn. Combined, lack of knowledge, alcohol, lack of sleep, and just not paying attention turned the Dumbs' weekend getaway into a hassle at best. The Dumbs got lucky, not everyone does. Please pay attention to regulations, they are not made to annoy you, they are made to protect visitors and resources.

Above all else use common sense and think before you act. The time you take could save you more than lost time.

Above all else use common sense and think before you act. The time you take could save you more than lost time. We hope you have an enjoyable stay at Jordan Lake State Recreation Area, and watch for the Dumbs as they go boating in future issues.

Don't forget to deposit your recyclables in the appropriate bins while you're in the park.

Those 'Bugs'

Those noisey, noisey 'bugs'!



As we prepare to print this newsletter, the question of the day is "What is that shrill, omnipresent noise?" The answer is that the noise is the sound of the mating call of the 13 year cicada.

These insects have been buried in the ground for the past 13 years in the larval state, feeding on the sap from underground roots. They emerge from the ground and crawl out of their skins (similar to a moth emerging from a cocoon). They rest for a while and let their wings dry. Then they fly off and search for mates: and that's all they're interested in, they don't even eat during this stage of their life. This is also where the noise comes into the picture. The male produces the sound that attracts the female(s) using specialized abdominal structures.

After mating, the female lays her eggs in the twigs of trees. When the eggs hatch, the nymphs bury themselves underground, where they will remain for the next 13 years!

This really is a unique opportunity to watch an aspect of the natural life cycle as it unfolds right before our eyes! They're loud - but only once every 13 years. Common elements of nature do not often impose themselves so dramatically upon our human lives as these cicadas have. The noise will only last a month or so. As we routinely (daily) impose ourselves upon nature, we do so with permanent or long lasting, often devastating effects. This is something for us to think about. And this natural phenomenon gives us something to learn from.

by Ranger S. McBean



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Jordan Lake State Recreation Area
280 State Park Road
Apex, NC 27312

Sue McBean
Editor, *Jordan Lake Voice*
<http://ils.unc.edu/parkproject/ncmap.html>
(919) 362-0586
(919) 362-1621 (fax)
jordanlake@mindspring.com

