



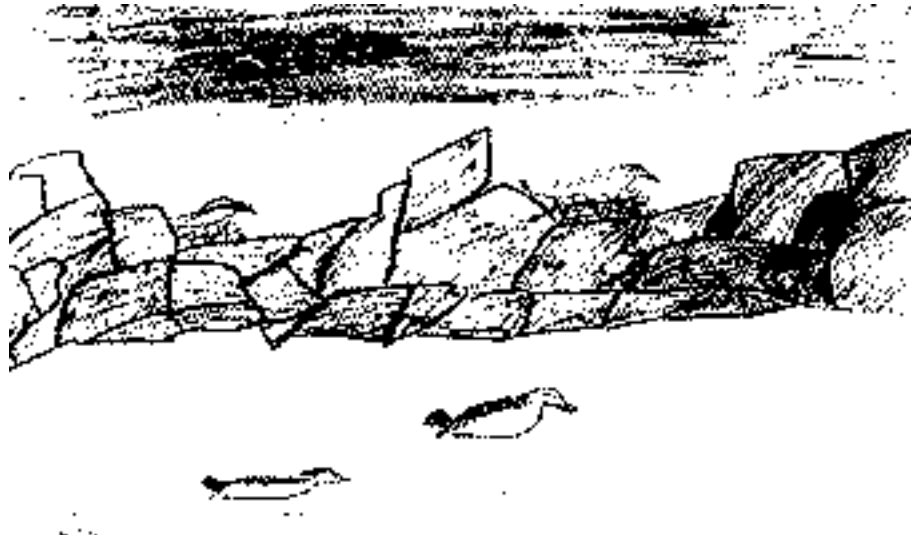
The Wild Times

Volume I-6, Number 1

The Newsletter of The Wild Ones
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Palisades, NY

Wetlands are among the most complex ecosystems in the world; many different species of plants and animals thrive in wetlands. In this edition of *The Wild Times*, we are exploring wetlands: the habitat and the animal species that live there, and why we protect these special areas. Many endangered species spend at least part of their life cycle in wetlands. In addition, wetlands help people by absorbing floodwaters during storms and cleansing pollutants from water that may become part of the drinking water supply.



"Penguin Colony Goes Swimming"

by Tsehay
6th grade, Bank Street School for Children, New York, New York

Birds of a Feather - Plus a Few More!

by Susan B. Elbin
elbin@wpti.org

Colonial waterbirds are birds of wetland and marine habitat that build their nests very close together, in colonies. Very often these colonies are on islands. Some birds, like the white ibis, build their nests in trees. Some colonial birds, like the flamingo, nest close together on the ground. They usually leave the colony to find food somewhere else. The white ibis need to feed their young food that is not as salty as the food they find for themselves in the colony.

Birds in a breeding colony tend to live on the same "calendar". They start building their nests at the same time,

they lay their eggs at the same time, they raise their young at the same time, and they roost (sleep) at the same time.

Most colonies can be found in the same place from one year to the next. Colonies tend to be very sensitive to changes in the environment, however. If a lagoon becomes polluted, if a predator finds the colony, or if the wetland starts to dry up, the colony will probably move.

Why would they nest and raise their young in such large groups and so close together? Perhaps that is the only available habitat around. Living in large groups provides the individual birds with many advantages. With so many birds in the same place, it is difficult for a predator

In this issue. . .

Colonial Waterbirds

Birds of a Feather page 1

Wetlands

About Wetlands pages 3-4

The Birmas Swamp

of Cuba pages 4-5

Animals

Whistling-duck page 6-7

White ibis and flamingos

www.thewildones.org

Profile

Lourdes Mugica page 9

Activities

Ask the Scientists page 10

Wordsearch page 10

CONTINUED FROM PAGE 1



*Birds leaving a colony.
How many can you count?*

or other intruder to “sneak” into the colony. Imagine how confused that predator would be, with thousands of squawking ibis taking to the air and flying in the air all around him? And what about finding food? When there are many birds looking, chances are some will find the food that is out there, and the rest will follow! Another advantage to living in a large group is that there are many possible future mates from which to choose.

There are also disadvantages to living in a colony. Think about what it is like to live in a large family. There are so many birds in one small space!!! Two birds can easily ‘get in each other’s way’ and get into fights – they compete with each other for space, food, and mates. Also, if one bird gets sick, the disease can quickly spread to many birds!

Threats to Colonial Waterbird Populations

In the past, waterbirds have faced many problems. Around the turn of the century, people collected feathers for the fashion industry. Whole birds were collected for their long filamentous plumes, called “aigrettes,” as well as their wings or their entire skins to be worn on hats and other accessories. A breeding colony was a quick and sure source of birds, since tens of thousands of birds could be ‘collected’ at one time. One hunter really understood the birds’ breeding behavior when he noted: “They don’t much like to leave their young. I have often shot at these ‘strickers’ [terns] so fast that I had to put my gun overboard to cool the barrels.” Can you imagine, a handful of egret plumes was more than twice the price of an ounce of gold!

Hunting reduced colonial waterbird populations noticeably along the East coast of the United States. In 1886, George Bird Grinnell organized a group to protest and stop the slaughter.

Perhaps you have heard of this group? It is called the “National Audubon Society.”

Hunting for feathers is no longer the major threat to the continued existence of colonial waterbirds. Today they face other equally devastating problems. Wetland habitats for nesting and feeding are disappearing or becoming polluted or disturbed.

Human activity, like off-road vehicles and jet skis, disturb breeding birds. When disturbed, adults leave their nests, leaving their eggs or young exposed to extreme temperatures. It only takes minutes for unattended eggs or young to die from the change in temperature or to be taken by a predator.

*Gull with 6-pack rings around its neck.
photo by Tony Amos*



Garbage is a real threat to waterbirds. Birds can become entangled in discarded fishing line, struggling until they die. Because of their very social lifestyle, many colonial birds can get tangled in the same fishing line at the same time. Garbage can attract birds. A bird that is out getting food to bring



*Seabird entangled in balloon string.
photo from Center for Marine Conservation*

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CONTINUED FROM PAGE 2

back to its chicks may mistake a sparkling coin or a partially-inflated balloon for a shiny fish.

These problems can be solved. Preserve and protect wetlands. Don't litter! Stay away from nesting areas when you are out for a day of fun on the beach.

The next time you see a colony of birds, use your binoculars to see them. Are they all the same species? What are they doing? What can you do to make sure the birds can return next year?

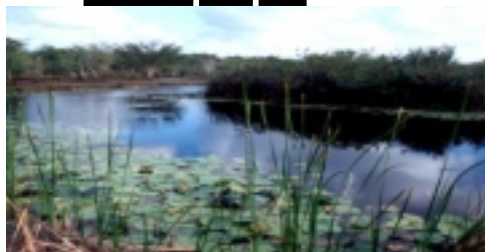
Wetlands

by Ellen Kracauer Hartig
hartig@wpti.org

What are wetlands?

Wetlands are areas where water covers the soil and plants during all or part of the year. The wet conditions allow certain plants and soil types to develop. When you see certain plants and soils, you know you are in a wetland, even if the ground seems to be dry!

Wetlands are classified according to the kind of water that covers them. Wetlands vary greatly depending on how much and how long the water is there, how the water flows, the type of soil, and the kinds of plants present. All wetlands are of size and water level that are important



Isla de los Lobos
Fred W. Koontz

wildlife habitat.

Where can we find wetlands?

Wetlands can be found all over the world from the high latitudes such as in Siberia to near the equator such as in Indonesia. They occur in the areas where water (aquatic) meets land (terrestrial) habitats. Only about 6% of the earth's surface is covered by wetlands, but they provide habitat for about 20% of all species.

Pantanal region
of Brazil.

Photo from
[www.pantanal.org/
Mainpant.htm](http://www.pantanal.org/Mainpant.htm)



How big are wetlands?

A puddle would not be called a 'wetland', but they can be as small as four cars put together or as big as the Pantanal region in Brazil. (The Pantanal is in the lowland region of SW Brazil. The world's largest wetland, covering 140,000 Km², the Pantanal is part of the floodplain of the Paraguay River and its tributaries. Swampy during the rainy season, it has lush grasslands during the six months it is dry.)

Editor's Note: Check out *The Wild Times* volume 4 number 3, in which we feature a special type of wetland: the salt marsh.

How did people value wetlands in the past?

Historically, wetlands were thought of as waste-filled swamps that should be filled for development or deepened for navigation. They were perfect

places for farms, airports, homes, and shopping centers to be built because wetlands tended to be large and flat. Landfills for garbage were placed in wetlands. By 1970 more than half of the wetlands of the United States that existed in colonial times had been drained for other uses. When the importance of wetlands was better understood, new laws were enacted to protect wetlands.

What local, national (USA) and international policies include wetlands?

Many state and local governments have their own rules that regulate activities in wetlands. In the United States, wetlands are also covered under the Clean Water Act of 1977.

The first international agreement to protect wetlands was signed in Ramsar, Iran, in 1971 and is called "The Convention on Wetlands of International Importance Especially as Waterfowl Habitat". More often this treaty is called the "Ramsar Convention". The agreement was needed because migratory waterfowl travel across national boundaries. Protection of these birds is needed in all the countries they visit in order to ensure their survival.

The Biramas Swamp of Cuba: A Paradise Wetland

by Lourdes Múgica
poey@comuh.uh.cu

Lourdes Múgica is an Assistant Biology Professor and Associate Director of the Felipe Poey Museum of Natural History of the University of Havana, Cuba. Lourdes is strongly committed to conservation work. In her words, "Because we live on an island we realize that conservation is crucial for our development and to preserve our biodiversity for future generations. That is why we are expending so much time on environmental education and trying to get university students involved."

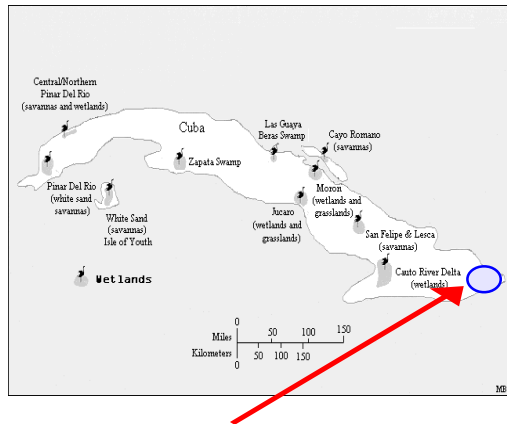
Cuba is the largest island in the Caribbean Sea. It is 110,992 Km² in area, or about the size of the US state of Tennessee. The long and narrow shape of Cuba makes it look like a great lizard.



Map of Cuba in the Caribbean Sea

Two very large wetlands are found in Cuba: the Zapata Swamp and the Biramas Swamp. Until now, the Biramas Swamp has not been studied and is poorly understood. Dr. Martin Acosta and I are heading a conservation research team from the University of Havana to focus on the Biramas Swamp habitat.

Biramas Swamp is in the eastern part of the country, in the delta of the Cauto River. The Cauto is 342 Km long and is the longest river in Cuba. This river has an extensive tributary system that covers an area called the Cauto Valley, in the extreme south, near the coast. This is where you will find the Biramas Swamp.



Map of Cuba. Biramas is in the blue circle.

This wetland is considered to be a "pristine" area. That means, it has not been developed or changed by people. Have you ever walked in a swamp? It is very hard work, to walk in the Biramas or even to be there for too long a time. Imagine walking in very deep, very soft mud. The climate is very hot and steamy, and the habitat is lush. The swamp supports a tremendous variety of insects as well as other animals... many biting and stinging insects! When you walk in the swamp you sink into the mud – sometimes up to your waist. Thousands of mosquitoes fly around you all the time. There is no electricity, no TV, and no running water. (A heavy rain is

always very welcome, as it is the only chance to take a good shower!) You have to watch out for the crocodiles! Why do I call this a "paradise"? Animals and plants flourish here because it is a refuge from human disturbance.

Large flocks of colorful birds are the most conspicuous creatures living in the swamp. More than 130 bird species have been reported in this wetland and many of them have huge populations. There are several thousand birds that find their food in the channels and shallow waters of the swamp near their roost site. The flamingo is one of the species that remains in the swamp to feed. There are about 20,000 individuals living there.

Some birds leave the swamp to find food. Every morning during sunrise we see thousands of birds flying off to their feeding areas. Usually they go to feed in the rice fields and the shrimp farms nearby, where food is easily available. In the afternoon, these birds return to their wetland sanctuary, full of food and ready to rest for the night, where they can perch in mangrove forests and rest up for the next day.

Many birds use the swamp only to roost at night. Many birds use the swamp to roost and feed. And many birds use the swamp to roost, feed, and to raise their families. They build their nests close together in a breeding colony.

CONTINUED FROM PAGE 4

Colonial birds in the Biramas swamp include herons, ibis and egrets. Although these birds are typically large, colorful, and noisy, they are safe from predators when they are in their colony. Just imagine trying to 'sneak up' on 20,000 pair of ibis who are all looking out for the young in their nest! Also, colonies are located in areas that are difficult for even field biologists to get to! This is why so little is known about the birds of Biramas, and this is why we are doing our research there.



Aerial view of Cayo Norte

One of the most important wading bird colonies in Biramas Swamp is situated here. In the left side there is a view of the little house (blind) used to work during the breeding period.



Dennis measures a snowy egret chick with a special ruler.

Every morning the researchers go to the colony. They survey and label the nests, measure the eggs and later measure the nestlings: bill length, chick weight and leg length to determine growth of the different parts of the body. In the colony, when the young are scared they throw up! Dennis and his team collect the regurgitated food to figure out what the parents are feeding them. It takes a hundreds of hours of patient observation to collect information about the birds' behavior, growth, and ecology.

Who eats the eggs or the young? What are the major diseases and parasites they have? How many survive to become adults? At what age are they able to fly and to be independent from their parents? These are the questions we are answering with our research.

To do this research you really need to love birds and want to be a part of preserving this beautiful and important area. We are an enthusiastic group of researchers, always ready to overcome the daily difficulties we face in the field.

How do we even know the birds are there? If you can get close to a colony, you can hear them, see them, and smell them!! A good way to find colonies is to look for them out of the window of a low-flying airplane. We have identified three colonies this way, while we were carrying out aerial surveys.

The birds look like thousands of white dots on the trees of the swamp. One colony uses an area of mangrove forest with a shallow lake in the center, called Cayo Norte. Just imagine how exciting it is to be there during the breeding season, when we have seen counted more than 7,000 nests of 6 different species at the same time!!!!



Dennis and his colleague at the blind.

Learning About The Birds Of Cayo Norte
by Lourdes Múgica

Dennis Denis is a PhD student of the University of



Havana. He has been working with me for the past three summer months. His research focuses on the ecology and behavior of colonial wading birds in the Biramas Swamp. During the breeding season, the research team moves to a small and rustic blind to observe the colony. A blind is a small researcher built structure from the view of the colony. Dennis can study the birds without disturbing them.

Other Waterbirds of Biramas Swamp

by Lourdes Múgica

Colonially nesting birds are not the only focus of our research. We are studying a rare species of duck as well: the West Indian Whistling Duck. This duck is “Rare” because its population numbers are declining in the Caribbean. The ducks fly and feed at night, and during the day they rest in the mangrove forest.

In Biramas we have seen flocks of 200 whistling-ducks. We can recognize them at night because they whistle while they are flying. To protect this species we need to know how many of them are living in the area, where they live, and what they are eating. To collect all this information is a big challenge because the birds are not colonial, but they are scattered over a huge area.

The duck research will focus on the waterfowl populations that migrate every year from North America and spend the winter in our island. Thousands of these ducks stay in the different lakes in the Biramas swamp, and we need to know the role they are playing in this important ecosystem.



Lourdes and colleagues look for ducks!



Whistling-duck
7th grade student Santiago, Cuba

Q: What type of birds live in wetlands?

A: Ducks!

What comes to mind when you picture a duck? People in the USA may picture a white farm duck or maybe a mallard, the most common duck in the world! There are nearly 10 million mallards in North America, and millions more in Europe and Asia. Do you know who the ancestors are for that white farm duck we just mentioned? That’s right: the Mallard, *Anas platyrhynchos*!

The social life of Mallards is very similar to many other species of duck. It involves courtship in the fall, pair formation by mid-winter, migration during the early spring, and egg laying in the spring. The nest is built on the ground. The male will stay with his female only until incubation is has started. Then he leaves it to his mate to incubate the 8-12 eggs in her nest, and he joins a flock of other males.

The West Indian Whistling-Duck, *Dendrocygna arborea*

Today we introduce you to another type of duck – a whistling-duck. Whistling-ducks are very social. Biologists call them ‘gregarious’. They form large flocks during most of the year. They are not like mallards during the breeding season, because they form a very strong bond to their mate. They often gather in large numbers, but they are not colonial nesters like ibis or flamingos.

The West Indian Whistling-duck is a vulnerable species, and it is a resident of the Biramas Swamp of Cuba. (The Biramas Swamp is featured in *The Wild Times*, Volume 6 number 1.) Since there is not much known about the natural history or the range of this species, Lourdes Mugica and Martin Acosta, conservation partners of Wildlife Trust, are studying this bird in Cuba. The Whistling-duck can also be found throughout most of the Caribbean, from the islands of the Bahamas, Turks and Caicos, Caymans, Jamaica, Hatit, Dominican Republic, Puerto Rico, St. Croix, to Antigua. They are found in a very small geographic range and in regions where the habitat is severely fragmented or degraded. (A small population may exist in Florida! These birds would be captive birds who have escaped into the wild.)

These whistling-ducks are found in fresh and saltwater marshes, lagoons, mangroves,

and ricefields. They are active during the night (nocturnal), when they feed on the fruit of royal palm trees, seeds and grasses. They are very difficult to see during the day. As soon as the sun goes down, the birds fly in flocks to their favorite feeding places.

In Cuba, the birds usually breed from June to October. They nest in tree holes, on branches, or even in reeds near the ground. They always nest near water. They lay 10-16 eggs per clutch.

The West Indian Whistling-duck population is declining. Hunting and loss of habitat are the major threats to its continued existence. Other threats include egg-collecting and catching the birds to have as pets. Birds are hunted for food. Wetlands have been drained or developed, and this has decreased the amount of available habitat. Pollution from pesticides that farmers use to grow crops also damages wetlands. Destruction of wetlands has reduced the whistling-duck habitat in most of its wide range, mainly because of human activities.

Yaguaza, the Cuban Whistling-duck

by Students from the Tania la Guemillera School, Cuba

Cuban Whistling-ducks belong to the duck group, as they have characteristics of water birds, such as webbed feet and laminated beaks. They are classified as Whistling-ducks for their bright coloring, feeding habits, shape, and the whistling sound they make.

These species have bright coloring and beautify the Cuban landscape, so they are considered ornamental, although in the past they were hunted for their delicious meat.

This group is widely distributed throughout the world, but in Cuba there are only 4 registered species. The White-faced whistling-duck that measures from 38 to 43 cms and weighs 0.7-0.8 kg is the rarest. It has a white patch on its face that makes it different from the other species. The Creole whistling duck measures 55 cm, is heavier, and is the largest of our Whistling-ducks; it is nocturnal and strictly Antillean. Yaguasin measures 46 to 53 cms, weighs 0.7 to 0.8 kg, and is characterized for its brown or reddish-brown color. The Black-bellied whistling-duck measures from 44 to 55 cm, and weighs up to 1.6 kg. It is a rare species similar to White-faced, but has a black belly.

Cuban whistling-ducks can be found in rice fields, near ponds, lagoons and other wetlands. In our country these species have suffered changes in their population since last century. They have declined. Creole whistling-duck used to be very abundant, and now it is endangered in some of the Caribbean islands and its population has declined rapidly due to overhunting.

For these reasons, it is important to conserve our whistling-ducks. If we fail to do it, we will be hurting the environment and ourselves. Protect Cuban Whistling-ducks and you will protect the environment and yourself, because "to protect the environment is to preserve life."



Whistling-duck and duckling.

7th grade student
Mella, Santiago, Cuba

Why Protect Wetlands?

Today, many natural water bodies are under threat due to pollution, land filling, dams and drainage and irrigation schemes. Habitat is lost when the wetland is destroyed or changed. Wetlands need to be protected because they are very important for many reasons, and the animal communities they support are very vulnerable to pollution and habitat degradation.

Wetlands provide habitat for migratory waterfowl as well as resident animal populations. Thousands of species of fish, insects, amphibians, reptiles, birds, and mammals find their home in the wetlands. Nearly 35 percent of the nation's rare wildlife species are located in wetlands or are dependent on them. Mammals (muskrats, mink, and beavers), waterfowl (ducks and geese), shorebirds (plovers and sandpipers) wading birds (herons and rails), amphibians (salamanders, frogs, and toads), and insects (dragonflies and mayflies) are examples of the many wild creatures raised in and around wetlands.

Others serve to control flooding and filter out sediment (sand, and minerals washed from land into water) from our waterways. Some even act as filters – they remove contaminants from the water before we wind up drinking them! Too many pollutants can damage them.

Wetlands capture and slow runoff water as it flows through a thick tangle of plants. When water is slowed, pollutants and sediments drop out of suspension. The soil is like a very big sponge that helps prevent flooding. It holds and stores water until it has a chance to soak into the ground. A one-acre wetland holding water to a depth of one foot, will store 330,000 gallons of water!

Wetlands are not wastelands! They can even be economically important. Wild rice, blueberries, cranberries, and fish are all agricultural products that are produced in wetlands. About two-thirds of commercially valuable fish and most shellfish use tidal wetlands as spawning and/or nursery areas.

Still other types of wetlands provide us with recreational opportunities such as fishing, boating, birdwatching, hiking, photographing, and canoeing. Wetlands are truly some of our most valuable natural resources!



*Whistling-duck embroidery
Kirenia, 7th Grade
Tania la Guerrillera School, Cuba*

Wetland Detectives

Where can you find out more about wetlands?

Here are some agencies and organizations to visit on the web:

**EPA
Environmental Protection
Agency**

<http://www.epa.gov/OWOW/wetlands/vital/toc.html>

**NYSDEC
New York State Department
of Environmental
Conservation**

<http://www.dec.state.ny.us/website/dfwmr/marine/twhome.htm>

RAMSAR
<http://ramsar.org/>

**National Wetlands
Inventory Center**
<http://www.nwi.fws.gov/>

**US Fish and Wildlife Service
– Wetlands habitat**
<http://www.fws.gov/>
<http://www.fws.gov/r5cbfo/wetlands.htm>
<http://www.im.nbs.gov/cwb/cwb.html>

Ducks Unlimited
<http://www.ducks.org/>

*Photo Credit:
Photographs from the
Biramás Swamp were taken by
Lourdes Múgica*



Lourdes holds a young snowy egret in Cayo Norte, Biramas Swamp, Cuba

Three Days In My Life

by Lourdes Múgica

Day 1. I really feel like I have two different lives: one is spent in the city at the University with my computer and classrooms full of students; the other life is spent in the field with the wildlife of Biramas Swamp. The thing that keeps both my lives connected is my family!

Today is a city day. It is 6:00, time to wake up. A new day is waiting for me! I start my day with 20 minutes of exercise (Tibetan Rites) to energize my body. Then I have a light breakfast. While I eat breakfast, I plan what I need to prepare for dinner. I set out the black beans to soak and put some meat in the fridge to defrost. Then I pack myself some lunch and head off to my office.

I live in the suburbs of Havana City. I do not have a car, and my journey to the University is a daily adventure! I can feel the economic crisis in Cuba when I try to get to work! Sometimes I take the bus. In my country it can be expensive to ride the bus, and it is not very

dependable. Sometimes I hitchhike. I am lucky that it is safe and many people hitchhike in Cuba. I can usually find a friendly person who will get to the city. Any way I go, it takes me an hour and a half to get there. I start the day weary from the journey!

I have many things to do today: teach Ornithology class at 9:35, attend a meeting at 11:30, and meet with students at the Museum in the afternoon to talk about the local animals of Cuba. I will need to spend a few hours before I go home, organizing tomorrow's trip to Biramas Swamp.

Once I am there I will feel like I am in a paradise. I must take EVERYTHING I need with me because there are no stores or houses in the swamp. If I forget anything, I am out of luck! I have to prepare now, because tomorrow will I leave before the sun comes up.

It is 5:00 p.m. and I head for home. Today it takes me nearly 2 hours to get there. The first thing I do is to pick up my grandson from the primary school. His happy face

makes me forget about work and the fact that I missed lunch today! I take him home and make dinner. After dinner I have some time to relax on the porch with my family. By 9:00 I need to get back to work. I have to finish writing a report before I leave for the field tomorrow. It must be done tonight! I take a break to read a story to my grandson. It is now midnight and time for bed.

Day 2. It is very early in the morning. I will take the train today because I was not able to find a rental car! I loaded my back-pack yesterday, and this morning I fill my arms with everything I will need for the next 15 days. To get from the train station to the swamp I will find myself riding on a tractor, a horse and cart, and a boat! It takes me almost a day to get to the Biramas Swamp!

Day 3. It is still dark when I get up. I need to have my little boat loaded by 5 a.m. so Dennis and I can row out to count the birds before they leave their roosts. Dawn breaks as we row out to the lagoon: thousands of herons, ibis, ducks, and rails are starting their day, too, and fly above us. We pause to watch this breath-taking display of wildlife! We feel honored to see this sight. We are happy to know that our work will help this area survive the pressure of development.

We spend hours in the boat, counting and identifying different types of birds in the lagoon. By the end of the observation time we will count over 50 species of birds, and we will feel very happy.

Once we finish counting, we go deeper into the colony. It is very

CONTINUED FROM PAGE 9

exciting to be surrounded by nearly 16,000 nesting herons in a small patch! The noise they make is incredible and the smell is... unique! We are collecting regurgitated food from the nestlings. It is easy to collect – from our heads and shoulders! When we analyze the samples we will be able to know what the parents are feeding their young.

It has been a long time since sunrise, and we are ready for lunch! We cook a one-pot meal over a campfire. The rest of the day we measure chicks and observe birds.

Sunset is here, and it is time to go to the edge of the wetland and the rice field to search for West Indian Whistling-ducks. We use our binoculars and scan the horizon. The place is so full of mosquitoes! They land on our hands while we are writing our notes. They buzz in our ears. They are so thick in the air that we swallow some when we open our mouths to speak! We are tired and wet, and the mosquitoes are annoying. Wait a minute! I see a large group of birds in the distance. They are whistling-ducks!! I count 300 of them. I realize that I have forgotten about the mud and the

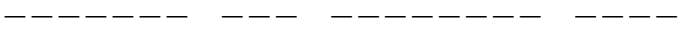
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WETLANDS
word search

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- BOG
- COLONY
- DUCK
- EGRET
- HERON
- IBIS
- LAGOON
- LAKE
- MANGROVE
- MARSH
- RAMSAR
- RIVER
- SALTMARSH
- STREAM
- SWAMP
- WATERBIRD

After all of the words are found, the unused letters will reveal an important message about wetlands.



visit Puzzlemaker at www.discoveryschool.com

In the Next Issue:
Human /wildlife conflict

Wildlife habitats are getting smaller and more polluted as human populations continue to grow. Sometimes wild animals will wander out of protected parks and reserves and look for food in towns and villages.

How can people and wildlife live together in harmony? In the next newsletter you will learn about Wildlife Trust researchers working with human/wildlife conflict.

Please mail your submissions for the next issue by March 1, 2000
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