



Stewardship

A PUBLICATION OF AUDUBON INTERNATIONAL

News

Volume 11, Issue 4 • October–December 2008



From Steps to Strides: Practicing What We Teach

Throughout the year, Audubon International has used *Stewardship News* to help announce each of our four core initiatives—areas where we will be spending time and resources in the coming years to help make a difference. Our fourth area for action—the *Environmental Stewardship & Management Initiative*—is focused on fostering an ethic of environmental stewardship and helping people improve the way they manage resources so that they make a positive difference in contributing to a more sustainable world. The following interview with Executive Director, Kevin A. Fletcher, reflects on what this initiative means to Audubon International, members, and the environment.

Q: What does the Environmental Stewardship & Management Initiative mean to Audubon International?

The mission of our organization is simple, yet ambitious—to foster more sustainable communities. We use an environmental education focus to help make this happen in a set of critical areas. We have ways of working with communities and new developments, and we place special emphasis on programs that help people in the golf industry become a

better stewards of the environment. The Environmental Stewardship & Management Initiative is, in many ways related to the historical Audubon movement itself. It's geared toward recognizing the best ways to help people in all walks of life to appreciate, learn, and take action in ways to better protect our natural resources. We want to find fun and educational ways to engage a whole new audience in the environmental movement. We want to help businesses, hotels, schools, and even homeowners do a better job reducing their environmental impacts. We want to help discover a whole new set of environmental partners—from Freemasons to Park Managers, and everything in between.

Q: Are there specific groups of people and specific educational programs that Audubon International offers in connection with the goals and purposes of this Initiative?

Businesses and other organizations can get involved in simple projects through our Audubon Partners for the Environment Program. However, if a site or facility is looking to implement an environmental management system and make and measure environmental improvements in areas such as resource efficiency, water

use, energy, etc., then they can work to earn certification through the Audubon Cooperative Sanctuary Program (ACSP). Organizations of all types, especially small businesses, have enormous opportunities to make a collective, positive environmental impact through these programs. We also have a program tailored to hotel, motel, inns and B&B operators, called the Audubon Eco-Rating Program for Hotels. Again, with over 40,000 hotels and motels in the United States alone, the collective power to reduce energy, water, and resource use while educating the millions of travelers to take action at home and in their own community, is substantial. Finally, our future depends upon our ability to educate youth and create a new generation of environmentalists. School and youth groups can also work with our staff through both the Audubon Partners for the Environment, implementing projects, or enrolling the school or educational facility in the ACSP.

Q: Why should businesses or hotels consider going green?

For years the environmental community advocated for certain practices and policies based on the proposition that they were “the right thing to do.” Environmental stewardship is still a matter of ethical, principled

continued on page 8

Dear Members and Supporters,

Over the years I have worked with many different environmental groups, each with its own financial woes, personnel issues, and prescriptions to save the world. While I have worked hard to remedy at least one of these woes for each organization, I am often left asking myself how green each organization actually is. It seems a clear connection that if you teach environmental stewardship, you should also practice stewardship. And, although this concept seems quite clear, I find that this is not always the case. Most environmental organizations are so busy trying to keep themselves afloat that they often forget that a great way to fulfill their missions is to live their missions. In the last issue, I asked all of you to rate your greenness. *Don't worry; I don't want to know your score, but I would like to ask each of you to follow Audubon International's example and take some time to make yourself a little greener.*

Best,



Joshua Conway
Education and Communications Manager

In this issue...

COVER STORY

From Steps to Strides: Practicing What We Teach: Interview with Executive Director, Kevin Fletcher, about the greening efforts of Audubon International and the Environmental Management and Stewardship Initiative.



- 4 Greening Audubon International from the Inside Out:** Steps taken by Audubon International around the office. Member Message on page five.
- 6 Green Profiles:** A closer look at two staff members and their green lifestyles.
- 7 Golden Arrow Resort Owner Inspired by Picturesque Lake Placid:** Guest feature from Glenn Hasek, Green Lodging News.
- 9 Tear-Out Fact Sheet:** Getting Through the Winter—Helping Frogs and Salamanders Survive



46 Rarick Road
Selkirk, New York 12158
(518) 767-9051
www.auduboninternational.org

You can reach our staff via e-mail by typing the person's *first initial, full last name @ auduboninternational.org*.

ADMINISTRATION

Ronald Dodson, President
Kevin Fletcher, PhD, Executive Director
Mary Jack, Executive Assistant to the President
Paula Realbuto, Executive Assistant for Operations
Jessica DesLauriers, Development Manager

AUDUBON COOPERATIVE

SANCTUARY PROGRAMS

Jennifer Batza, Membership Coordinator
Jim Sluiter, Staff Ecologist
Joellen Lampman, Program Manager

AUDUBON SIGNATURE PROGRAM

Russel Retherford, Senior Ecologist
Nancy Richardson, Director
Linda Snow, Administrative Assistant

EDUCATION DEPARTMENT

Joshua Conway, Manager of Education and Communications

NEW YORK OPERATIONS

Fred Realbuto, Director

SUSTAINABLE COMMUNITIES PROGRAM

Suzanne Zakowski, Manager

GREEN LEAF ENVIRONMENTAL

1280 Old Innes Road, Suite 801
Ottawa, ON K2B5W7
(613) 244-1900
Kevin Gallagher, President
Kevin@greenleafenvironmental.org



We are pleased to be attending the Golf Industry Show in New Orleans, LA, February 5–7, 2009. If you are attending, please stop by our booth and say hello. Our booth number is 4154. We will be conducting a seminar for the Golf Course Superintendents Association of America titled: **Business Value of Environmental Stewardship on Golf Courses** on Wednesday, February 4, at 1:00 PM led by Audubon International's Executive Director, Dr. Kevin Fletcher.

Audubon International Staff News

New Board Member Welcomed:

Jay Jaxon, Jr., Mayor of Eufaula, Alabama, recently joined Audubon International's Board of Directors. Mayor Jaxon worked with Board President, Ron Dodson, and members of Auburn University in developing a more sustainable vision and plan for the City of Eufaula. This work in Eufaula led to the development of what is now known as the Sustainable Communities Program.

From Zeh to Lampman:

We're pleased to announce that Joellen Zeh is now Joellen Lampman, married this past October. Joellen serves as the Program Manager for the Audubon Cooperative Sanctuary Programs.

AUDUBON INTERNATIONAL: Out & About

Reaching Out to Developers:

Audubon International recently participated in the 2008 Urban Land Institute Fall Meeting & Urban Land Expo in Miami, FL. Audubon Signature Program staff was on hand to discuss how to plan, construct, and manage projects with a focus on environmental quality and sustainability—implementing improvements that can lead to greater economic stability in the long run.



watersmart⁰⁸
INNOVATIONS

Water Education in the Desert:

Nearly 1,200 participants from 42 states and the District of Columbia as well as 17 countries attended the inaugural WaterSmart Innovations Conference and Exposition, October 8-10 in Las Vegas. Audubon International joined the U.S. Environmental Protection Agency's WaterSense program and other leading national and international organizations to support the Southern Nevada Water Authority efforts to promote water conservation. Audubon International staff delivered water conservation and protection seminars to a host of professionals.



The Greening of the Good Housekeeping Seal:

What is a green product? How do consumers find environmentally-preferable products? Do green product alternatives work the way they should? How might something like the Good Housekeeping Seal incorporate green-ness into this 100-year old product designation? These are the types of questions that the staff at *Good Housekeeping* magazine are asking, and Audubon International is a part of the team to help answer those questions.

On September 10th, Audubon International Executive Director, Kevin A. Fletcher, joined two dozen experts from the environmental community, industry, and academia as a part of the Green Good Housekeeping Seal Expert Advisory Committee. Overlooking Central Park in New York City at the magazine's headquarters, this group of experts, along with a dozen staffers of the Good Housekeeping Research Institute, spent the day providing ideas and advice for the creation of a "Green Seal" attached to the Good Housekeeping name. Why is this significant? The Good Housekeeping Seal is the nation's most recognized and respected emblem for product performance. Plus, the magazine reaches millions of women readers—the real decision-makers on purchasing decisions in most households. This type of mainstream effort to identify and reward an environmentally-preferable product, that also work well (the current Good Housekeeping Seal centers on the quality and effectiveness of the product), is another sign that the drive for more sustainable lifestyles is real.

This effort and Audubon International's roll in it, is key to finding innovative ways to help spur and mainstream greener lifestyles. Helping an influential and pervasive brand like the Good Housekeeping Seal to begin identifying and rewarding greener product choices goes a long way to meet this goal.

Greening Audubon International from the

BY JENNIFER BATZA

The staff of Audubon International is making a concerted effort to reduce our organizational footprint. We began with a staff dialogue focusing on three key areas: purchasing, operational policies, and member information management. Continuous examination of our decisions, behaviors, and the financial ramifications of those decisions and behaviors will allow Audubon International to be more efficient, financially responsible, and better able to serve you, our members. It is our hope that the initial steps that we have taken to green our office will serve as examples you can implement at your office or facility.

Purchasing

On average, Audubon International purchases just over 2,200 lbs of paper a year for copies, newsletters, brochures, and paper goods. According to the *Environmental Defense Fund*, consuming that much paper results in the use of 3 tons of wood; 38 million BTUs (enough to power the average home for a year); 5,690 lbs of carbon dioxide-equivalent to

the yearly emissions of an average car; almost 20,000 gallons of wastewater; and finally just over 2,200

pounds of solid waste per year. By switching our copy paper to 100% post consumer recycled content and making other similar paper choices, we have been able to eliminate our use of virgin wood; reduce our total energy by 17 million BTUs; and cut carbon dioxide, wastewater, and solid waste by 50%.

We have also decided that our purchasing decisions do not have to end with paper. We are now using recycled content pens, scissors, and even office furniture. *And guess what? Everything works just like it did before!*

Our efforts are also apparent in the kitchen! We have reusable hand towels, and we use glasses, coffee mugs, plates, and silverware instead of plastic, paper, or Styrofoam. A few months ago, we needed to buy a new coffee maker which provided us with another opportunity—we have replaced filters with a mesh basket that holds the grounds. Then we take the grounds out to our compost bin to create fertilizer for our gardens.

Operational Policies

Audubon International is also working toward making our operations more efficient. Our heating system has programmable thermostats so we can set different temperatures for the day, night, and weekend. Our printers, copy machines, and fax machines have sleep modes where they use less energy when they are not in use. Whenever possible we are purchasing Energy Star rated appliances and office equipment. We have also changed our light bulbs to compact florescent bulbs and we make an effort to turn them off when we leave the room. Most of this is common sense but it is just too easy to forget the little things.

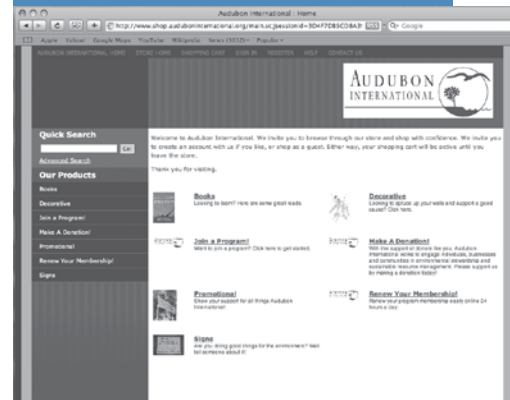
Member Information Management

Our office has also undergone some database and website changes to make it easier for all of us to get information.

Employees have committed to communicate with members via email and phone whenever possible. Our new database system allows us to access up-to-date member information any place with an internet connection so we save the paper that we would normally use to print enormous spreadsheets to bring to conferences. And soon, you will be able to view the information we have on file and submit your program documentation without mailing it. ●

So What Can You Do?

Renew Your Membership the Green Way! You can now renew your membership online at shop.auduboninternational.org



Get Your Stewardship News Online! Save some paper and choose to get your Stewardship News via email. Send an email to jconway@auduboninternational.org with your name, member name, and state.

Go Online!

You can help us and yourself by downloading the certification handbooks off of the web, filling them out, and emailing them back to us. We will accept faxed handbooks but we prefer email.



Several major office supply stores carry recycled content products ranging from paper to scissors.

he Inside Out

ATTENTION ALL MEMBERS!

If you would like to send additional materials (like photos) please do not print them out on paper—send them in an email or put them on a disc and mail them to us. **We can not use printed (including originals) or faxed photos.**

If you are going to mail documents to us please consider the amount of waste that is being created in your packaging to us. Many times we receive one document in three envelopes, or we receive each document in individual envelopes in another envelope, or mailed separately. By mailing several documents together you save envelopes and postage. All flat size envelopes start at \$1 to mail. If you add a few more pages, the price will go up a little but if you separate the documents out you pay the base price for each package plus any additional weight. You will be spending at least \$2 or more when you might have only spent between \$1 and a \$1.50 on a combined package.

Another way to save money is to choose your shipping method wisely. Our staff is swamped with certification requests year round. Once a request is received, it usually takes at least two to three weeks before the documents can be reviewed. Rather than using overnight document service if you want to track your documents, use the two business day or super-saver options.

Easy Ways to Green

If you are looking to shrink your carbon footprint and save yourself a little green, here are some ways to get started:

- **When old light bulbs burn out, replace them with energy-efficient compact fluorescent bulbs.** You will spend a little more upfront but you will recoup that amount in energy savings multiple times over the life of the bulb.
- **When visiting the grocery store, use cloth bags instead of plastic or paper bags.** Most cloth bags hold as much as three plastic bags and won't pinch your fingers when you carry them to your car.
- **Use reusable mugs and water bottles instead of plastic or paper cups.** Everything tastes better from your favorite kitchenware. Go one step further and use kitchen towels instead of paper products. 27 million trees a year are cut down for paper towels.
- **Wash your clothes in cold water.** Using cold water and specially formulated cold water detergent cuts energy use in half.
- **Share rides and promote car-pooling.** Do you really like to drive alone? Let's all save a little fuel and curb the current trend of one person per car. Better yet, don't drive...**WALK!** Choose to walk you will save gas money and get exercise.
- **Buy organic or local food and buy in bulk.** Locally grown food uses less fuel to be delivered to your door. Choose products with less packaging to reduce your waste production.
- **Recycle!** Locate your local recycling center and use it. Recycling does not have to be hard but it does take effort. Another way to reduce your waste is to reduce the junk mail you receive by visiting www.donotmail.org.
- **Turn off lights when you are not in a room.** During the day, avoid turning lights on. Save more by unplugging appliances that are not regularly used. Turning off appliances is not enough—some use just as much electricity as if they were on.
- **Do not let the water run when doing the dishes, washing your hands, or brushing your teeth.** Be green and turn it off!



PROFILES OF GREEN

Audubon International strives to show people how easy it is to be green. Meet some of Audubon International's greenest. They might undertake green renovations, save a little cash, bike to the local library—each of them is trying to make a difference in and out of the office.

JESSICA DESLAURIERS,

Development Manager

I have a confession to make. For years, my husband and I owned a gas guzzling SUV and I loved it. It was our first joint purchase as a couple in college. We drove it to our hotel the night we got married and then across the country and back as we hiked and camped for months during our honeymoon. We drove our new baby home from the hospital in it and loaded it to the brim with our belongings when we moved into our first home.

But then, soon after our family grew, our commutes grew too. My husband, a New York State Forest Ranger, accepted a new position and the move to a community within his region meant our trips to work and to our son's daycare would be longer. By that time, we'd become a two-car family out of necessity and we knew it was time to say goodbye to the SUV. I still miss it sometimes—especially in the winter—but since we have to do a lot of driving, I feel a lot better knowing that our new car has lower emissions, better fuel economy, and it still works for us...and our baby...and our dogs...and all of our stuff.

Of course, we do other things to

try to offset all of the driving that we do. When we are home for the weekend, we try to use the car as little as possible. We walk to the local market for groceries; we buy local produce at the weekly farmer's market in our community; and we try to buy local and support the regional economy whenever possible. It's important to us that our son grows up with a sense of stewardship for the world around him, just as it's important that he start learning now about all of the little things that each individual can do to have a positive impact. At two, he's already learned that bottles and cans go in the recycle bin instead of the trash, and that the water shouldn't be left running while he's brushing his teeth. Big or small, we can all do our part and once little things become second nature, it's easier to start seeing how you can make an even bigger difference.

The neighbors on our historic street are thrilled that we bought and are now rehabilitating the 100-year old Victorian that sat on its prominent corner lot in disrepair for decades. What most of them don't know, however, is that we've been trying to green our home and property as we make improvements. We did all the obvious stuff, like using low-VOC interior paints and replacing old appliances, windows, doors and light bulbs with energy efficient ones; but then we discovered there were a lot of ways to go green with some of the bigger projects too. We used blow-in insulation made with recycled material in the attic and we used 100% recycled paint for the exterior of our home.

It has taken us a bit longer to do things this way; because the cost is

usually higher upfront, but we know that in the end it will save us money and save resources and we feel really good about being environmental stewards on the half acre of the world that we occupy as a family. And I think we may have finally made up for the SUV.

JOELLEN LAMPMAN,

Audubon Cooperative Sanctuary Program Manager

"Do you consider yourself to be green?" I had just gotten back from being out of the office for a week and a half and was trying to reestablish sanity to my desktop. A list of priority items was running through my head. The question caught me off guard. My first knee-jerk response was, "Well, I should hope so!" I should have known that the question was leading somewhere. It was leading here, in fact, to a piece on my own state of greenness.

And so I considered the question again, more carefully. Am I green, and if I am, what am I doing that allows me to make this claim? My Civic gets great gas mileage. I have opted into the renewable energy option through my electric supplier, which basically means that I pay more per kilowatt to subsidize renewable energy in my region. My family and I live in a really small house. We buy organic and local when the budget allows. I enforce recycling. My older son's outgrown clothes are packed away until my younger son can fit into them. I wash and reuse sandwich bags. Only a portion of the yard is mowed; the rest is left for the bluebirds, milkweed, and dragonflies.

But do these things make me green? I decided to ask my family



Jessica and her husband Jake and their beloved SUV.

continued on page 11



The green roof at the Golden Arrow Lakeside Resort adds to the picturesque views of Lake Placid, NY.

This article first appeared at www.greenlodgingnews.com.

Copyright © 2008, Green Lodging News.

Name: Jenn Holderied

Title: Owner

Property: The Golden Arrow Lakeside Resort, Lake Placid, N.Y.

My primary responsibilities:

"In addition to being owner, I am director of marketing and public relations."

What keeps me motivated each day:

"I really enjoy meeting new people. Lake Placid is an international town and I get to meet people from all over the world. I also get to work with my family every day. Our staff is like a giant extended family."

Property's most significant environmental accomplishment so far:

"Obtaining a Four Green Leaves Rating from Audubon International. The rating encompasses all the efforts we have put into our environmental program. Our guestroom recycling program has also been a success. We started it in June 2007. We have had 85 percent guest participation. Our recycling volume has doubled."

Our biggest environmental challenge:

"One of the biggest environmental challenges is finding suppliers that sell green products that are price competitive."

What advice I would give to a hotel operator considering going green:

"It is worth it. It has increased the morale of our staff. It makes them proud to work here. Our guests are behind it. It is an opportunity to influence guests to be more conscious of the environment."

Golden Arrow Resort Owner Inspired by Picturesque Lake Placid

BY GLENN HASEK, GREEN LODGING NEWS

LAKE PLACID, N.Y.—Growing up in Lake Placid, in the midst of a scenic 6-million-acre park, Jenn Holderied learned the importance of protecting the area's natural resources. "Up here [in New York], it becomes part of who you are," she says. It should come as no surprise then, that the Golden Arrow Lakeside Resort that she owns would reflect her concern for the environment.

Throughout the 152-room (soon to be 165 rooms) resort, efforts have been made to reduce waste, cut energy and water consumption, and create a work culture that encourages staff to participate in green programs. A green team that includes management, housekeeping and a representative of the property's adjacent restaurant has been in place since 2006.

In addition to recycling, low-flow toilets and showerheads help to reduce waste. In the 13 rooms currently being added to the resort, a guestroom energy management system has been installed. Holderied says that initiative eventually will be expanded to all resort guestrooms.

First Resort in New York to Install Green Roof

On June 10 this year, a green roof was installed between the main lobby and the restaurant. Similar to a garden, the roof includes a bed of soil and plants that will have both aesthetic and environmental benefits. The Golden Arrow Lakeside worked with West Chester, Pa.-based Weston Solutions Inc. to install a GreenGrid system. The plants were grown in Connecticut. When installed, the green roof will cover a 3,000-square-foot area. Holderied says the green roof will also improve air quality by releasing oxygen into the air, reduce dust and storm runoff, provide insula-

tion during the winter and help cool air during the summer.

The Golden Arrow Lakeside Resort has taken numerous other steps to run an efficient green operation. Here are just a few examples:

- The property has been 100 percent nonsmoking since 2002.
- One floor of the resort is for guests who have allergies. The Allergen Free Floor features bamboo flooring—hallway included. Guestrooms feature leather furniture, air filters and a showerhead with a chlorine filter.
- Lighting sensors turn off lighting in several areas when guests or staff are not present (public restrooms, for example).
- Double-paned windows save energy. In one guestroom, a modular mattress system is being tested that allows one to replace interchangeable parts such as zippered mattress covers, foam overlays and other components instead of replacing the entire bed.
- All conferences and meetings held at the resort are automatically green.
- Compact fluorescent light bulbs have been installed and were purchased from a local Boy Scouts troop.
- Suppliers are selected based on their commitment to environmental and social responsibility.

Audubon International Honor

Earlier this year, Golden Arrow Lakeside Resort announced that it had achieved a Four Green Leaves Rating as part of Audubon International's Green Leaf Hotels program. The resort is the only property in New York State to have a certified Audubon Green Leaf Rating and the only property in North America to have achieved the Four Green Leaves status.

"The Audubon rating is the culmination of all of our efforts," says Holderied, who adds that the resort intends to work toward achieving Five Leaf status—the highest Audubon rating level. ●

For more information about the Golden Arrow Lakeside Resort, visit: www.golden-arrow.com

Glenn Hasek can be reached at editor@greenlodgingnews.com

Practicing What We Teach *Continued from page 1*

decisions and action, but a more salient argument is that there is a business benefit to these actions. Actions can be taken that provide financial and marketing benefits. We cannot continue to foster both a worldwide financial debt and a worldwide natural resource debt without consequence. There will be a change in the way our economy moves, specifically, rewarding more sustainable practices by individuals, organizations, and communities.

For example, it's been over twenty years since the last energy efficiency revolution. Studies have revealed the vast waste and opportunity to reduce our overall energy consumption—for lighting, heating, cooling, transportation, etc.—in the short-term and by significant proportions. Policy is catching up to this fact as more local, state, and sometimes federal regulations and tax structures are rewarding energy efficiency. Businesses that start aggressively addressing environmental issues now will realize “early-mover” net revenue advantages and be in a position

to take advantage of the emerging policy changes, such as tax incentives and rebate programs.

Q: What is Audubon International doing to become a better steward of the environment?

Simply put, we need to “walk the walk” ourselves if we are going to ask others to do the same. At a recent staff retreat we started asking some basic questions about what we do, how we make decisions, where our biggest environmental impacts are, and what we can do about them. As a result of this process, we've launched the development of our own “Sustainable Resource Management Plan” for our buildings, grounds, and operations. This includes taking a hard look at specific things such as commuting impacts, purchasing decisions, energy efficiency in our buildings, and business travel. All of these aspects of running a business, nonprofit, community, or a home, have environmental impacts. At the same time, any decision to change can lead to unexpected challenges.

For instance, while we're looking to do more by computer, we still need to make copies. We recently discovered that the 100% recycled content letterhead paper we bought does not work with our copy machine—it jams the machine. So, we are working with our printing company to find a better recycled paper for our letterhead. On the one hand, that's a pain to deal with—we just want copies made. On the other hand, it provides us with an opportunity to do things right and perhaps collaborate with our printing company in a new way, thereby changing the way they do business.

Here's another example. We are located in a fairly rural area in New York. So, everyone drives to work—mass transit or walking is not an option. A recent audit of our carbon footprint revealed that as much as



What you buy makes a difference. While Audubon International does not certify green products we do recognize and support certifications of other groups, including these logos.

60% of our organization's carbon debt comes from our collective daily commutes. To fully reduce our carbon footprint from commuting we need to either find a donor to give all employees electric vehicles powered by alternative energy, or reduce vehicle miles traveled and work to offset the rest of the emissions. So, we've begun to reduce our commuting impact by allowing staff to work from home periodically to reduce total commuting. While technology allows for a virtual office, face-to-face interaction among staff is critical. It's a balancing act. This is not perfect, but it's better to take a half-step, than no step at all.

Q: What are the challenges of a “green” or “sustainable” lifestyle?

A brilliant philosopher once stated, “It's not easy being green.” Yet, I don't know if green is the right word anymore—or if it ever was. Becoming more sustainable is more complicated and nuanced than a single word. That's part of the challenge. I like to think we're learning to live more “eco-logically.” We're using sound science to understand how to better live within the limits of nature, while promoting a strong economy and addressing our quality of life. It's really only been in the past forty years, or so, that we've come to understand that nature is not limitless and cannot support human activity indefinitely. We understand that we do have the power to influence the functioning of entire ecosystems. So, it is possible that the hardwiring of our brains makes this type of change all the more difficult. Regardless, we'll keep working to help make environmental stewardship and management become the norm. ●



Hollyhock Hollow Sanctuary—the Audubon International headquarters—office has the same environmental concerns as any other office. The staff have committed to the development and implementation of our own “Sustainable Resource Management Plan” for our buildings, grounds, and operations.

Fact Sheet

AUDUBON
INTERNATIONAL



ENVIRONMENTAL STEWARDSHIP AND MANAGEMENT

Getting Through the Winter— Helping Frogs and Salamanders Survive

BY JOSHUA CONWAY

You can do many things to encourage frogs on your golf course or in your local community. The simple actions you take, when repeated many times over by landowners, can have a significant positive impact. And an abundance of frogs on your property will be strong evidence that you are taking good care of both land and water.

Frogs are amphibians, a word of Greek origin that means two lives. Most adult frogs live in damp places in woods or near streams or ponds. But when mating season comes, usually in the spring, they migrate to ponds, wetlands, and seasonal pools to lay their eggs. The eggs hatch into tadpoles, which is a completely aquatic stage that breathes with gills and eats algae. Depending on the species, they remain in the tadpole stage for as long as a year before they develop legs and lungs and move onto land as adults.

Eggs, tadpoles, and adult frogs are a crucial component of many ecological communities. A vital link in the food chain, they serve as food for aquatic insects, fish, mammals, and birds. But carnivorous adult frogs do their share of eating too, feeding on mosquitoes, flies, and aquatic invertebrates. Some frogs even eat small fish, amphibians, reptiles, birds and rodents. A recent study found that a healthy frog population removes over 50,000 insects per acre per year during the spring and summer months. Winter on the other hand is a critical time for all wildlife species including



Southern Chorus Frog

MARVIN BOJKINIGHT, OLDFIELD NATURALIST, SC

frogs. Severe weather in many regions, combined with diminished food supplies, presents a formidable challenge and many will not survive.

Instinct prepares wildlife to meet the hardships of winter in a variety of ways. Migratory birds have long since flown to wintering grounds in the southern U.S., Mexico, and Central and South America. Mammals have completed intense eating periods or hoarded this year's natural harvest in order to store fat for the lean months ahead. Amphibians, too, are getting ready for winter and there is much you can do to lend a helping hand.

Regional differences in the severity of the season ahead have a profound influence on how frogs and salamanders spend the winter. In the southern U.S., many frogs and salamanders are active throughout winter months. Winter rains in Florida, for example, can bring on a great deal of active migration, calling, and

reproduction. In contrast, freezing weather in the northern parts of the U.S. and Canada stops all amphibian activity and forces a period of hibernation.

Providing hibernation sites

Because amphibians regulate their internal body temperature with external heat sources, like the sun, they are known as ectotherms. When temperatures drop, amphibians restrict their activity and diets, allowing them to survive extreme temperatures. Some, like the wood frog, which breeds inside the Arctic Circle, can even freeze to some extent without dying. However, all amphibians in cold areas need a place where they can be protected from the worst extremes of winter.

- **Ponds**—Hibernation sites differ among various groups of amphibians. Many aquatic amphibians hibernate in mud and debris in the bottom of a pond. Some spring breeders, like leopard frogs, also have been reported to hibernate in the

sites they will use for breeding activity in the spring. In addition, some species have larval stages that require more than one growth season to metamorphose into adults. For all of these amphibians, it is important that water levels be sufficiently deep so the pond bottom doesn't freeze solid in mid-winter. *Refrain from draining ponds, as this practice can cause aquatic amphibians to perish.*

- Wooded Areas**—Other aquatic breeders, like wood frogs and mole salamanders, hibernate in their summer habitat locations, generally in wooded areas, and wait until spring to move to breeding ponds. These species typically hibernate under leaves, logs, rocks, and other cover objects. For them, as well as for the terrestrial breeders like many of the lungless salamanders, it is important to have sufficient cover on the forest floor. *Leave rocks, limbs, debris, leaves, and other cover materials in woodlands. Amphibians will burrow under cover for warmth and protection.*
- Streams**—Population studies suggest that certain species also migrate to streams to spend the winter in moving water that contains more oxygen than still water. It is not certain how common this wintering behavior might be, but it is likely to occur in places that get cold enough to freeze the surface of ponds, but not the running water in streams. *Remove limbs and other debris from streams to ensure continuous water flow as the surface waters freeze.*
- Travel Corridors**—Regardless of whether frogs and salamanders move in the spring or fall, and regardless of whether they spend the winter in their breeding habitat, their summer habitat, or a third location, they all need to move back and forth between these different places. *Make sure your property includes a network of suitable habitat connections that link breeding, summer, and winter habitats together. Movement distances can be 500 feet or more between these habitats.*

Leapers, Climbers, Walkers, and Swimmers

There are close to 100 different species of frogs in North America, so what species you have on your property will depend on where you are. In general, there are several main groups that you are likely to see in most places. This chart describes the most common types of frogs.

TYPE	DESCRIPTION	EXAMPLES
Water Frogs, or True Frogs	Tend to be large and green, with long legs for leaping; true frogs are found near water. Some, like the bullfrog, stay in ponds all summer, while others prefer to retreat to land after breeding takes place.	Bullfrog, Green frog, Wood frog, and Leopard frog
Toads	Tend to be brown, dry, and warty, with short legs for hopping. They can be found hopping around in broad daylight (unlike most frogs, which are nocturnal)	Woodhouse's toad, American toad, Western toad, Great Plains toad, Canadian toad
Treefrogs	Tend to be small with smooth skin. Range in color from green to brown and gray. They can be distinguished by the large sticky toe-pads that they use to climb. Treefrogs spend most of their time in the woods, but are frequently seen in the spring at breeding time in shoreline vegetation near shallow ponds.	Green treefrog, Gray treefrog, Barking treefrog
Chorus and Cricket Frogs	More frequently heard than seen, chorus frogs are tiny, generally green or brown frogs found near shallow bodies of water with clumps of grass or other vegetation used for cover. Although related to treefrogs this group stays close to the ground and climbs little.	Spring peeper, Ornate chorus frog, Western and Pacific chorus frogs, Little grass frog, Northern and Southern cricket frogs
Spadefoots	Smooth skin with scattered bumps and a characteristic small, sharp-edged "spade" on each hind foot. The spade is used for digging underground during dry weather. Generally found in dry, sandy, or loose soil. Can be distinguished from other toads by their vertical pupils. Spadefoots emerge with spring rains and head for breeding ponds or vernal pools for breeding. Take care when handling them because many people have allergic reactions to their skin secretions.	Western-, Plains-, Eastern-, and Couch's spadefoot

Profiles of Green *Continued from page 6*



Local food is not only good for the environment and Joellen's budget but it also tastes better!

their opinion. "You never have paper towels in the house!" You know, I never realized how important paper towels were to my mother. My kids brought up an old favorite. I would refuse to allow things in the house that were "CPC" (it stands for "cheap plastic crap"). The boys ask for a lot less CPC now that they are older, but they do still roll their eyes when I refuse to buy things in the store that are over-packaged. Basically, for my family, my greenness is defined by what I won't do.

But, I ask myself again, do these choices make me green? Or just cheap? I once read a book entitled something like "100 Ways to Save Money." Turns out the book could have easily been titled "100 Ways to Save the Environment." That "saving the environment" also translates to saving money is an idea we certainly promote through the ACSP. But I will pay more for some things that I believe are worth investing in, such as renewable energy. In the end, I think it is financially a wash. The replacement windows I installed have lowered my propane bill. If my younger son agrees to wear only

10% of the clothes I have put away, it still more than covers the extra electricity expense. Washing baggies does not save enough to purchase solar panels for the house, but it does cover the cost of local maple syrup.

Alas, this piece could also be a confessional of all my "eco-sins." Every time I make a quick stop at the fast food joint while rushing the kids from place to place, I promise myself it will be the last time. The long, hot bath is a prime example of a resource consuming activity I just won't give up. I would rather, however, wrap this up with the thought that we are all works in progress. Our challenge is not so much to figure out what we should give up, but how we can improve our lives while protecting our future. Jumping on my bike and pedaling the three miles to go to the local library to borrow a DVD improves my health, saves money, and I still get to enjoy a good movie with my family that we will probably only watch once anyway. ●



Take the Treasuring Home Pledge!

Valuing and caring for the natural resources and unique landscapes in the places we call home is critical to creating a healthier and more sustainable environment for the future...and it all starts in our own backyard. Audubon International's guide to environmental stewardship for homeowners, *Treasuring Home*, includes simple indoor and outdoor actions, as well as steps for extending environmental stewardship efforts from households to neighborhoods and communities. Make a commitment to get involved where you live by taking the *Treasuring Home Pledge* included in the guide. If you would like to obtain a copy of the guide, or purchase multiple copies for distribution, contact Audubon International at (518) 767-9051, extension 113, or email jconway@auduboninternational.org. Homeowners are also welcome to view the guide and take the pledge online at www.auduboninternational.org/homepledge

Do you have stories about your personal greening?
Send them to us at jconway@auduboninternational.org



Get Going... Support Audubon International today!

When you make a donation in support of Audubon International, you help generate the momentum that keeps us at the forefront of environmental education and stewardship efforts.

Your gift provides essential funding for our initiatives, helping us deliver programs and expertise necessary to make a difference.

We hope you'll consider joining our growing group of individual donors who are helping us to further our mission of helping people help the environment.

PLEASE CONSIDER MAKING A GIFT TODAY:

Online: Visit www.shop.auduboninternational.org

By Mail: Send a check to the Development Office,
46 Rarick Road, Selkirk, NY 12180

Audubon International ■ 518.767.9051 ext 120 ■ AudubonInternational.org

Stewardship News

Audubon International publishes *Stewardship News* six times a year. Inquiries, contributions, or letters to the editor should be addressed to:

Joshua Conway, Editor
Audubon International
46 Rarick Road
Selkirk, NY 12158

Or sent via e-mail to: jconway@auduboninternational.org

Layout and Design: 2k Design,
Clifton Park, NY

Printing: Benchmark Printing,
Schenectady, NY

Audubon International is a non-profit environmental organization dedicated to fostering more sustainable human and natural communities through research, education, and conservation assistance. Programs seek to educate, assist, and inspire millions of people from all walks of life to protect and sustain the land, water, wildlife, and natural resources around them. Funding is provided by memberships, donations, and program sponsorship. The ACSF Golf Program is sponsored by The United States Golf Association.

The newsletter is printed on recycled paper.

Look inside for a tear-out fact sheet!

Help us to keep up to date!
If you have a change of address or contact person, please let us know. Call (518) 767-9051, ext. 12 or E-mail jbatza@auduboninternational.org

Audubon International
46 Rarick Road
Selkirk, New York 12158
Phone: (518) 767-9051
Web Page: <http://www.auduboninternational.org>
e-mail: acss@auduboninternational.org



AUDUBON
INTERNATIONAL

Non Profit Org.
U.S. Postage
PAID
Permit No. 55
Delmar, NY 12054