



The Falcon

Our Mission:

To rehabilitate and release injured and orphaned raptors while inspiring environmental understanding through education for the benefit of all living things.

INSIDE THIS ISSUE

Multiplication	1
Featured Species: Osprey	2
Breathing Easy at 30,000 Feet	3
Recent Educational Appearances	4
Education Report	5
Rehabilitation Report	6
Adopt-A-Bird	7
Membership Form	8

**COME VISIT OUR
BOOTH AT THE
CHEAT RIVER
FESTIVAL ON
SATURDAY, MAY 5,
IN
ALBRIGHT, WV!**

MULTIPLICATION (1X1=4+)

By Michael S. Book, Chairman, Board of Directors

The Vernal Equinox is March 21, the official start to Spring. By then the common resident bird population at this latitude will be busily preparing for the start of reproductive activities with lots of singing and behavior consistent with establishing territories. Some of the more aggressive nesters, like the Starling and Mourning Dove, will already have nests.

If you are a raptor and have waited until late March to begin this process, you're late. Our "earliest bird" among the raptors is the Great Horned Owl. They start courtship and establishment of territories as early as late December and early January, with the first eggs laid by the end of that month or in early February. Since they don't migrate, and there's not much else to do on those long winter nights, perhaps they see this as a natural opportunity to get a jump start on nesting. One positive thing that results from this is that they will often use a Red-tailed Hawk's nest from the previous year. It will be a while before the Red-tailed Hawks return, so this saves the owls a lot of nest building—some repairs to the old nest and it'll be good to go.

The Broad-winged Hawks are the exception to this "early bird" nesting behavior. Their diet consists of large amounts of reptiles and amphibians that are not available during cold weather. This is a reason that they migrate in mass in early September and are the latest raptor species to return to our area in the spring.

The larger species usually require a longer time for the hatchings to fledge. Also, when the nestlings consume the greatest quantities of food is when it would be ideal for the greatest amount of food to be available. That may sound over-simplified, but when the raptors' prey species are most abundant is the ideal time for them to require the most food for their nestlings. Weather conditions can adversely affect this, excessive rain or cold as well as heat and drought. Mother Nature can be and is often cruel. These predators, as well as the prey species they depend on, are all at the mercy of Nature and the direct and indirect impacts of human activities. Nevertheless, many species will nest and fledge offspring even under less-than-perfect conditions in their attempt to ensure perpetuation of their species.

—Featured Species—

Osprey

Pandion haliaetus

By Katie Fallon

The Osprey, also sometimes known as the “Fish Hawk,” is one of the world’s most widespread raptor species. These large, piscivorous (fish-eating) birds can be found along the coastlines and waterways of every continent except Antarctica.

The Osprey’s diet consists almost exclusively of fish, which they catch by diving talons-first into the water. Like all raptors (and most birds) Osprey have four toes; usually, three of these point forward and one (called the “halux”) points backwards. However, one of the Osprey’s front toes is “reversible”—the bird can move it so it points backwards, aiding the Osprey in grabbing a fish. The bottom of its talons are covered in Velcro-like spiracles which also help the bird grip slippery, struggling fish. After snagging a fish, the Osprey carries it head-first back to its nest.

A large raptor, an Osprey can have a wingspan of almost six feet. Their feathers are dark brown on their backs (above) and mostly white on the underside of their wings and chests (below). Osprey have a wide black eye-stripe and females often have a “necklace” of black feathers. They sometimes hold their wings in a shallow, gull-like “M” shape, which differs from other raptors. It is difficult to confuse an Osprey with any other bird, except perhaps for a large gull.

Osprey build their nest of sticks in the tops of large trees (often in water or swampy areas) or on artificial nest platforms. Usually, they lay three or four eggs that hatch in about a month. After growing and being fed in the nest

from another month and a half to two months, the young Osprey fledge (leave the nest for the first time).

Osprey (along with Peregrine Falcons and Bald Eagles) suffered the effects of the pesticide DDT, and in the early part of the 20th century their numbers declined. Thanks to the 1972 ban on the use of DDT and other conservation efforts (like the construction of artificial nest platforms), Osprey populations recovered.



Photo by Peter Wallack

A current conservation concern for the Osprey and other fish-eating birds is environmental mercury contamination.

Mercury, the metallic element traditionally associated with thermometers, is released into the atmosphere from coal-fired power plants, smelting plants, and other industrial sources. It eventually falls back to the earth with rain or snow and enters our waterways, where it accumulates in the blood and tissue of every animal it encounters. Since Osprey are top-of-the-food-chain predators, they are potentially exposed to high levels of mercury. For more on environmental mercury, check out the Biodiversity Research Institute (www.briloon.org).

If you’d like to read creative work about Osprey, try two recent books by author David Gessner, *Return of the Osprey* and *Soaring with Fidel*. Both books incorporate travel, memoir, and Gessner’s personal obsession with these impressive birds.

Thank you!!

The WVRRC would like to thank all of you—our wonderful, dedicated supporters—for contributing so generously to our end-of-the-year fund drive to raise money for the construction of our environmental education facility on Bunner Ridge. Every dollar brings us one step closer to the goal we’ve been working toward for several years now. Thanks for being patient with us, and we hope you’ll continue to support the raptors and the work we do at the

WVRRC!

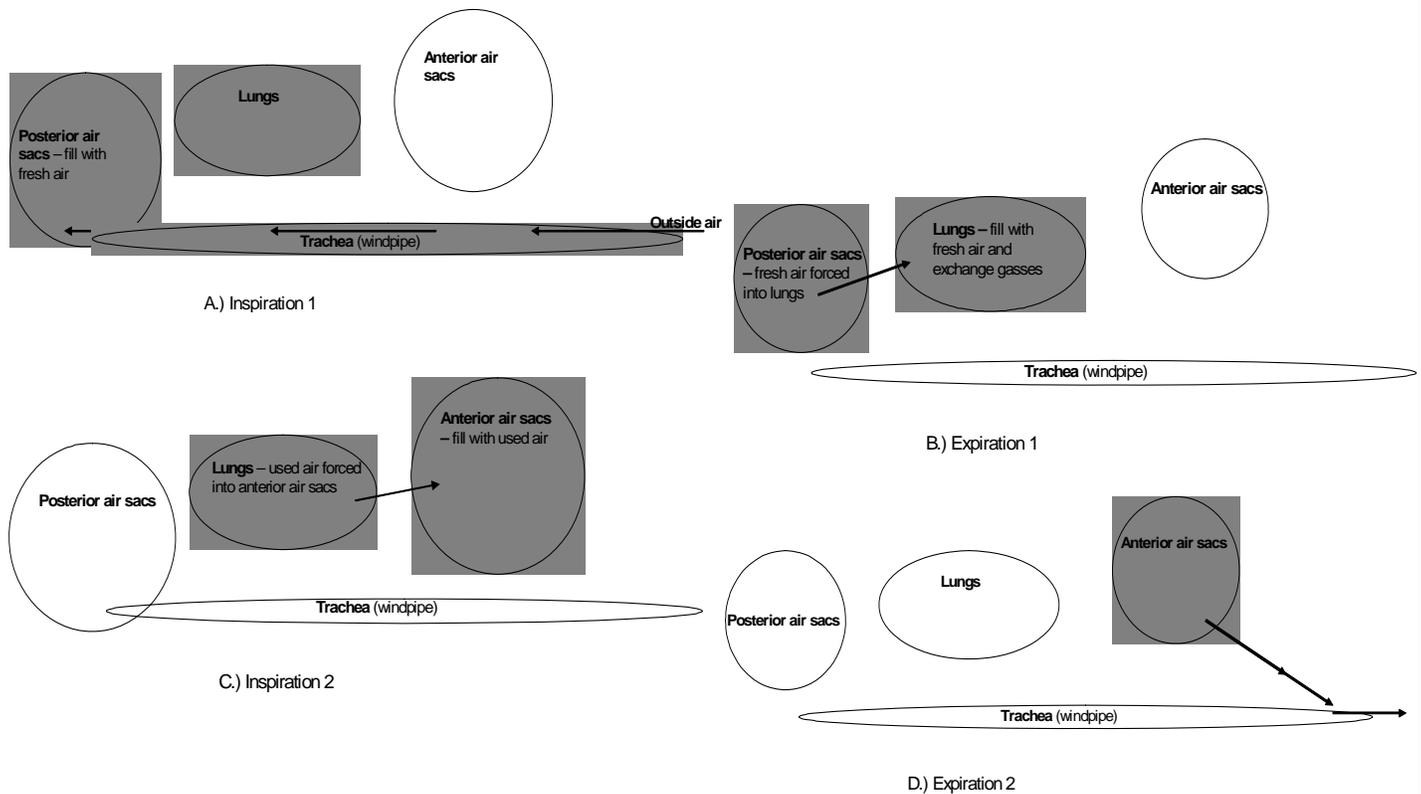
Breathing Easy at 30,000 Feet

By Jesse Fallon

At 29,028 feet, Mount Everest is the world’s tallest mountain. If you or I were to climb to the top, we would have a great deal of difficulty getting enough oxygen to survive. Yet once per year, flocks of Bar-headed Geese fly directly over Everest during their migration. In fact, the highest-flying bird ever recorded was a Ruppell's Griffon, a species of vulture found in Northern Africa that has a wingspan of 10 feet. On November 29th, 1975, a Ruppell's Griffon was struck and killed by a jet flying at 37,900 feet! We humans will never be able to breath at this elevation. In addition to the remarkable heights that some birds reach, the exertion of flying requires a lot of oxygen. **So how can these birds absorb enough oxygen to fly at these elevations?** They have a truly special respiratory system that allows oxygen to be absorbed quickly and efficiently.

Take a deep breath. You will notice that your chest expands when you inhale, and gets smaller when you exhale. When you expand your chest, you are creating a lower pressure in your lungs compared to the outside air (negative pressure) which causes air to rush in. While the air is in your lungs, oxygen atoms are “exchanged” from your lungs to small arteries. From there, the oxygen is carried in your blood to all of the cells, tissues, and organs in your body. At the same time oxygen is going from your lungs into your blood stream, carbon dioxide (a waste product of normal cellular metabolism) is being transferred from your blood into your lungs. When you exhale, you increase the air pressure in your lungs and force air and carbon dioxide out. The basic pattern is fresh air is inhaled into your lungs, and then used air (filled with carbon dioxide) is exhaled out.

Of course, birds need to take in oxygen and get rid of carbon dioxide, too. They just need to do it better and more quickly than we do. **In addition to their two lungs, birds have multiple structures called “air sacs,”** which act to temporarily store air before and after it passes through the lungs. It may be hard to imagine, but when a bird inhales, air actually leaves its lungs, while fresh, oxygenated air enters the lungs as it exhales. This method of breathing in combination with multiple air-sacs allow for a continuous flow of air through the lungs. Follow the arrows in the diagram below to track the movement of air through a bird’s respiratory tract.



This diagram only shows one series of inspiration/expiration and follows a single “gulp” of air. This process would of course repeat itself, with one batch of inspired air followed by the next, and the next, so that ultimately the lungs would always have a constant flow of fresh, oxygen-rich air. **This flow-through system helps birds use oxygen very efficiently, so even at 30,000 feet they can breathe easy!**

RECENT EDUCATIONAL APPEARANCES



In January, volunteers and education birds made the trip to the Charleston Civic Center for the West Virginia Hunting and Fishing Show. In addition to a booth in a prime location (just inside the main doors of the Civic Center!) the WVRRC gave an hour-long educational program in the adjoining Little Theatre.

Our booth was sponsored by the West Virginia Trophy Hunters' Association, who organize and host the annual Show. The WVTHA also awarded the WVRRC a grant to help with the construction of our future facility of Bunner Ridge. These funds, and the opportunity to speak to the folks attending the Show, are very important to us and greatly appreciated.

**WE WARMLY THANK THE
TROPHY HUNTERS, AND LOOK
FORWARD TO NEXT YEAR'S
SHOW!!**

Thunder the Bald Eagle draws a crowd wherever she goes. With a seven-foot wingspan and a powerful flap that can blow the hats off audience members, she's an impressive bird. In addition to hats, the wind from Thunder's wing flaps blew our brochures off our table several times.

While Thunder is our largest education bird, Spyro the American Kestrel is our smallest. Jesse managed to drag himself away from the bass fishing displays in the other room to tell the audience around our booth about Spyro.



Education Report

By Shannon Dey, Education Director

A Month in the Life of the WVRRC Education Program

It's been a very busy two months travel-wise for our Raptor Education Program and all signs point to having a pretty busy spring and summer as well. January started out with some trips to Robert L. Bland Middle School in Weston, Watson Elementary School in Fairmont, and a West Virginia Trophy Hunters Association Hunting and Fishing Show in Charleston. In February we made a trip to Taylor County Middle School. All of these programs had wonderful great audiences and Jesse and Katie Fallon (previous Education Directors) got to join us for the Charleston trip! It's always wonderful to be able to go into the schools and educate West Virginia's youth about the amazing raptors that live right outside in their backyards. They always have great questions to ask and stories to tell about their personal encounters with raptors - for some of their questions I even have to think back to my college classes to remember correct answers!

Some of our upcoming programs that are open to the public include Rotunda Day at the Capitol on March 7th, a family program at the Morgantown Library on March 24th, and in a couple of months – the Cheat River Festival on May 5th. You can check out our event list on our website for other upcoming programs or for information on how to schedule a program for you school or event. Also, if you or someone you know might be interested in becoming an education volunteer feel free to fill out a volunteer application (available on our website)! We can always use more volunteers!



WVRRC BOARD OF DIRECTORS

- Chairman Michael Book
- Operations Director Marilyn Bowman
- Education Director Shannon Dey
- Michael Boyce
- Robert Boyle
- Jesse Fallon
- Katie Fallon
- Lloyd W. Spring, III

Wish List

- Paper towels
- All-purpose bleach-based spray cleaner
- 1/4" diameter natural rope
- Latex gloves
- Heavy welding gloves
- 4-drawer filing cabinet

Rehabilitation Report

Raptor Disposition — January 1, 2006—December 31, 2006

SPECIES	RELEASED	DIED	EUTHA-NIZED	PENDING	TRANS-FERRED	TOTAL
American Kestrel	4	0	0	0	0	4
Barred Owl	1	0	0	1	0	2
Broad-winged Hawk	2	0	1	0	0	3
Cooper's Hawk	0	1	0	0	0	1
Golden Eagle	0	3	0	0	0	3
Great Horned Owl	1	1	0	5	0	7
Eastern Screech-owl	4	3	1	0	1	9
Red-tailed Hawk	1	0	4	3	0	8
TOTAL	13	8	6	9	1	37
PERCENT	35%	22%	16%	24%	3%	100%

A Look Back at 2006

It's beginning to feel like Spring is just around the corner, and while we're looking forward to it at the Center, the long winter months provide us with an opportunity to reflect on the previous year. Our final rehabilitation numbers for 2006 look a bit more dismal than usual. Typically, we are able to release close to 50% of the birds we treat; in 2006, however, we were only able to restore 35% to the wild. This lower-than-usual number is due in part to the birds we carried over from 2006 to 2007—as you can see from the chart above, nine birds pending release were being rehabilitated at the Center at the end of the year. We also had quite a few birds arrive at the Center with mortal injuries—some with bones too shattered to be fixed and others with severe, irreparable tissue damage after being tangled for hours in barbed wire. While it can be upsetting to see so many of these birds with such severe injuries, it's part of what we do at the WVRRC. Without us, these injured birds would have even less of a chance of survival, and some would go on suffering for days or weeks.

As we gear up for the Spring, we realize that our supply of necessary everyday items is getting low. We need paper towels—the cheap kind are ok—39 gallon garbage bags, and boxes of Latex gloves. We also need rolls of natural rope, 1/4 inch in diameter. We use this rope to wrap perches—it allows the birds to hang on to the perches with their talons, and helps keep their talons in good condition. Heavy welding gloves are also needed; we use these to protect our hands while handling the birds.

If you're interested in donating any of these items, mail them to us, or call or email us and we'll set up a way for you to drop them off. We're always in need of these supplies—each and every donation is appreciated!!

Adopt-A-Bird Application



YES, I would like to adopt a(n) _____

My check for \$ _____ is enclosed.

Name: _____

Address: _____

City/State/Zip Code: _____

SPECIES:	CARETAKER:	STEWARD:	PARENT:
Bald or Golden Eagle, Peregrine Falcon	\$250	\$100	\$30
Osprey, Vultures, Hawks, or large Owls	\$200	\$90	\$25
Kestrel or Screech Owl	\$150	\$80	\$20

PARENT receives an adoption certificate and the WVRRC newsletter. STEWARD receives a photograph of the sponsored bird, an adoption certificate, and newsletter. CARETAKER is entitled to be photographed with the adopted bird, receives an adoption certificate, and newsletter.

WE NEED YOU!!

Spring is just around the corner, and everyone's looking forward to daffodils, forsythia, and the return of the migratory birds. We're looking forward to those things, too, but at the WVRRC, Spring also means MORE injured raptors, MORE orphaned babies, and a lot MORE educational programs. Unfortunately, we're a bit short on volunteers for the upcoming season, and we could really use your help! We need rehabilitation volunteers as well as volunteers to conduct educational programs. If you think you might be interested, or know someone else who might be, here are the qualifications and characteristics we look for in potential WVRRC volunteers:

- **Responsible and self-motivated.** The birds we treat rely on volunteers for their daily care, feeding, and treatment. Without responsible volunteers, the lives of both our education birds and rehabilitation birds would be in danger.
- **Willingness to learn.** You don't need any previous experience working with birds or wildlife to volunteer with us. We'll train you and provide you with materials to learn about our organization and the work we do.
- **Be available at least two hours a week.** Feeding and caring for all the birds at the Center usually takes a pair of volunteers two to three hours per day. Volunteers work with the Operations Director to set up their schedule. Typically, each rehabilitation volunteer feeds and cares for the birds one set day of the week. We try to schedule two or three volunteers per day, when possible.

Volunteer experience looks great on a resume—especially for graduate or veterinary school. Plus, it's a way to learn about raptors, meet new friends, and give back to your community. Call the WVRRC at (304) 366-2867 or fill out our online volunteer application at www.wvrcc.org. Thank you!

WEST VIRGINIA RAPTOR REHABILITATION CENTER

PO Box 333
Morgantown, WV 26507

Phone: 1-800-540-6390
(304) 366-2867
Fax: (304) 592-1482
Email: raptor@wvrrc.org

Prsrt Std
U.S. Postage
Paid
Presort Plus, Inc.

*Working to improve the
environment for **all** living things.*

Printed on recycled paper

WE'RE ON THE WEB!
WWW.WVRRC.ORG

WVRRC MEMBERSHIP FORM

Membership in the WVRRC is open to anyone who shares an interest in the Center's mission. Membership is based on the calendar year in the following categories:

Student / Senior	\$7	Supporting	\$35
Individual	\$10	Donor	\$50
Family	\$17	Sponsor	\$100
		Patron	\$500

NAME: _____

ADDRESS: _____

MEMBERSHIP LEVEL: _____

Would you like your newsletter emailed?

Email address: _____

Phone Number: _____

To join, please complete this form,
enclose a check or money order made
payable to WVRRC and send to:

WVRRC
PO Box 333
Morgantown, WV 26507

The WVRRC is a non-profit, volunteer-based organization with 501-c-3 status. All donations are tax-deductible.