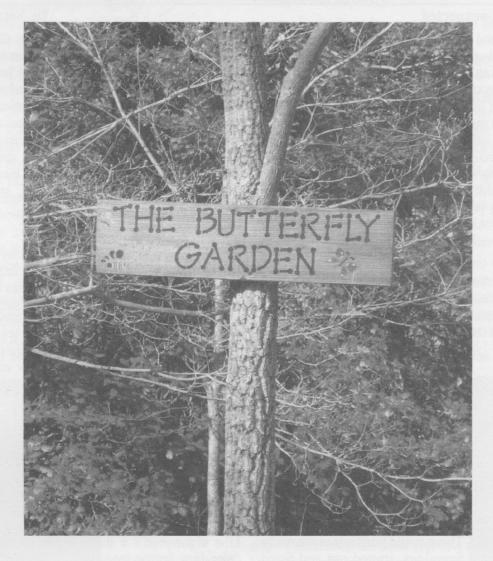
The BEAVER DEFENDERS



Read about the Unexpected Signs of Spring! ~ Page 2 ~

APRIL 2006

They shall never be trapped anymore.

The BEAVER DEFENDERS



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Editor: Sarah Summerville

April 2006

Good News from Unexpected

A birder friend of mine once told me that he did not believe the old axiom: "Birds of a feather flock together", and looking out the cabin window on a warm March morning, I would tend to agree with him. In the Main Pond, the eight little duck bottoms pointed skyward are attached to both mallard and woodduck couples, and preening nearby is a small flock of Canada geese. A piedbilled grebe is swimming both above and below the surface of the water, popping up a good 15 feet from where she dove. Along the bank, not far away, is a majestic great blue heron standing perfectly still with impressive dark breeding plumage. Above all this togetherness are the newly arrived tree swallows, seeking out the newly arrived airborne insects.

The story at the old log feeder is no different, with chickadees next to cardinals next to doves. The sturdy little juncos have departed, and in their place are the redwing blackbirds with their beautiful, melodic spring songs.

We replaced several old nest boxes with new ones,



and the bluebird couple has been critically inspecting our installation; the chickadees were not so picky. These boxes are from a Georgia-based company called Bluebird Housing (www.bluebirdhousing.com), founded in 1972 by Hope Buyukmihci's brother, Lawrence Sawyer, and his wife Adelaide. These rustic birdhouses are made from logs, routed out and fitted with metal caps. They come complete with pole and predator protection, and they are very complementary to any natural setting.

One of the new nest boxes In preparation for the return of the prothonotary warblers, Don from Cherry Hill donated one of these log birdhouses to the Refuge, along with one that he made himself.

by Sarah Summerville

Prothonotary warblers winter in Central and South America, and they return to Southern New Jersey on or near April 15th. This beautiful little yellow bird is one of only two warbler species that breed in holes, and since they breed in wooded areas over or near water, beavers provide perfect habitat with dead trees and wetlands. Don and I went out in early March and installed the new boxes near Wild Goose Blind and then spent the rest of the morning cleaning out all the other boxes. Hopefully we will be rewarded with their sweet, sweet, sweet call in mid-April.

Human Activity

Last fall, we were adopted by a little ball of fire named Susie Highland. Susie is just full of great ideas, and one of the projects she developed was the creation of new trail signs. This may not seem like such a task, but if you consider that we have over ten miles of trails, which host almost 300 cracked and faded signs, it is a considerable job to say the least. Susie designed the hand painted signs,

and shortly after hanging the first batch a local Boy Scout turned it into his Eagle Scout project. Susie has shown him the ropes, and he is off and running. Susie can now turn her attention to her U n e x p e c t e d calendars, cotton tote bags and, hopefully, a little bird watching.

It was an unusually windy winter, and with the brief but heavy snow fall we had in February there were

Addition of the second second

Susie and Mark Highland after installing a free-standing sign at Muddy Bog

February, there were a lot of broken trees and fallen branches to clear out. Many thanks to our volunteers,

Karen, Dolly, Mike and Jonathan, Bob, Don and MalagaMoe for helping out with clean-up, clearing and equipment T.L.C. The trails are all in pretty good shape, and are ready for hiking.

Beaver Activity

During the winter there was a surprising amount of beaver activity going on in New Jersey. Though our beavers were quiet and snuggled up in their cozy little lodge, others were out and about, causing a stir with the neighbors.

I was invited to the Borough of Wenonah by members of the Environmental Commission when beavers began taking trees down in the Mantua Creek floodplain (which also happens to be a whole lot of back yards).

Commission Chairman Bob Bevilacqua and I surveyed the creek and floodplain from our kayaks, and although there were not very many beavers living there, those few were very busy. I gave a slide show, Beavers 101, to the local homeowners followed by discussions about beavers and how to live with them. Most of the residents were very receptive to having these furry creatures living in the creek, and one fellow said he didn't care if they took all the trees down in his yard, as long as his three year old daughter got to watch. Environmental Commission decided to incorporate the beaver works into their regular nature walks, lead night walks and perhaps see the beavers and provide beaver talks to the school children in town. They also offered to assist homeowners in wire wrapping and sand painting trees they did not want to lose.

Needless to say, I found the frame of mind of everyone effected by the beavers very refreshing. Considering that Wenonah is smaller in size than Unexpected Wildlife Refuge and has dedicated over 20% of their land to conservation, their attitude shouldn't have come as a surprise. In March, the town has a Turkey Vulture Festival to celebrate the arrival of hundreds of vultures that were forced out of their habitat by development in a neighboring town. The people of Wenonah embrace education, compassion and activism and take their role as land stewards seriously.

Another area that experienced some new beaver activity was in Morganville, New Jersey. Len Flynn found out that he had beavers in his pond and was thrilled. However they were damming up the creek and flooding out his neighbors, who were not so thrilled (See "Letters").

Len did his homework and investigated ways to keep the beavers in his life and keep

the neighbors happy. After researching the problem and reaching out to every beaver expert he could find, he settled on installing a flexible pipe that will allow him to control the level of the water behind the dam. Ultimately, the water will be high enough for the beavers, but low enough for the humans. Len is getting installation support from HSUS and some local Beaver Defenders, like Janine Motta from New Jersey Animal Rights Alliance. We will keep in touch with Len and let you know what happens.

Unexpected Activity

Early Tuesday morning I put my kayak into Main Pond to see what the beavers have been up to. The sun was low in the east with cloud cover generally blowing out to sea and a promising brilliant blue in the western sky.

I found lots of beaver chewed sticks as I tipped the boat over five small dams, working my way downstream. Before I knew it, I had crossed eight little dams, going much further than I had intended with my investigation.

The wind was picking up, so I decided to continue downstream to Miller Pond, check on the lodge, stash the kayak along Unexpected Road and hike back to the cabin for the truck. (Yes, I was too lazy to re-cross all those little dams upstream.)

The lodge was secure, and no one came out into the choppy water to say hello. As I navigated through the vegetation and old stumps in the marshy part of the pond the weather suddenly turned. It became quite rough with the wind blowing whitecaps at me sideways and rain pelting my face. It became cold, and I still had quite a bit of water to cover.

At the wind's suggestion, I hugged the bank and worked hard to go forward. As I neared the road, I entered a small protected cove where things were much calmer. I stopped paddling and rested while the gentle waves did the work.

On the bank, I saw a little brown furry body slip into the water. Sure enough, a yearling beaver was floating nearby, watching me intently. He swam around the boat in our tight quarters and gave one half-hearted slap. I examined the bank and saw that he had been eating blueberry and sweet pepperbush with his peeled sticks littering the entire area. I had discovered his own private dining hall. He had even tasted the pitch pine (though not much of it).

I thought that being out near the road at mid-morning was a little odd for a beaver. But perhaps his mother had kicked him out of the lodge while she had this year's kittens. He did not stray far from the cove, even with me in it.

Perhaps he, too, mis-judged the weather and was resting in the calm.

Hello next generation:

Today was very exciting at the Morganville Flynn's pond -- I saw the beavers this evening around 6:00 PM! We have a family of at least 4 critters. First, I saw two small brown beavers cruising through the water by the main dam across Deep Run Brook. One climbed the bank next to the dam and crawled into the swamp. The second stayed on the dam then went on shore to eat a few small sprouts.

A bigger adult beaver then swam across the pond and annoyed the smaller one until it returned to the water. This critter was also brown and I guessed it was the mother beaver, because out of the dark and deep water next came

... A BIG adult beaver -- presumably Dad. The big fellow was really impressive -- dark brown and stocky with a presence that clearly stated this was HIS pond! Adult male beavers are supposed to weigh about 40-60 lbs., and this guy seemed to me to fit easily in that range. He swam around with Mom then they both went to work gnawing brush.

Eventually, Mom beaver swam by with a branch in her mouth taking it upstream. Later, Dad swam by after

chewing up another branch, I guess it was his dinner. Only after the beavers had left did I begin to appreciate the chill of the night and decide to go back indoors.

I was so excited! For months I had admired their constructions -- dams, toppled trees, and the lodge. Now I finally had met the engineers. By just standing absolutely still I was able to watch and not frighten them away. They all looked directly at me and nobody flinched. There was no need for camouflage or concealment. My light brown quilted shirt was fine for beaver-watching, just as long as I did not move.

Last night I told Marlboro Boy Scout troop #85 about the beavers, and the boys, their parents, & the scout leaders all seemed quite interested. And this was BEFORE I saw the animals! Prospects for the beavers and the reduction of flooding with the "Flexible Leveler" appear brighter now. Soon I shall advise my waterlogged neighbors that we may have the solution for flooding actively underway.

For family -- including the 4 new furry members,

Len Flynn

ATV laws

Many people agree that the illegal use of dirt bikes, allterrain vehicles and trucks on public and private land is very dangerous, damaging and destructive. The people who make, sell and own off-road vehicles are quick to say publicly subsidized parks for these vehicles are the only solution.

However, the basic concept that the establishment of legal riding areas will actually reduce illegal off-road vehicle use has never been proven or substantiated. There is a complete lack of evidence to prove that legal parks will significantly reduce illegal use.



The park for off-road vehicles in Chatsworth did not stop illegal operations elsewhere, and there appears to be no compelling reason to keep it open.

With 165,000 off-road vehicle owners in New Jersey already and 14,000 new units sold each year, the proposed strategy of

building ATV parks to stop illegal off-road riding is just a nod to the political power of the off-road vehicle industry.

And why hasn't this industry created even one legal park for its customers in New Jersey? Could it be that it is not profitable and the liability risks are too great?

Trespassing and land damage creates an atmosphere of lawlessness that breeds contempt for all our laws. More law enforcement is needed to get this under control, as there will never be enough publicly subsidized legal parks to satisfy the demand already created by the off-road vehicle industry.

FRED AKERS Buena Vista, NJ The Press of Atlantic City, March 30. 2006

Fred Akers is River Administrator for the **Great Egg Harbor Watershed Association**PO Box 109, Newtonville, NJ 08346 or www.gehwa.org

SKUNK RESCUE STORY

I went to the Edwin B. Forsythe Wildlife Refuge today with my good friend Janet to do some bird watching. We saw lots of ducks and other birds. And then we saw a skunk. He came waddling down the road and we thought it was kind of unusual to see a skunk in broad daylight.

Looking through the binoculars, we realized that his head was stuck in a jar. We stopped the car and he kept coming toward us. He crawled under my car, and we got out to try to figure out what to do. When he came out, it was obvious that he was really stuck, and that he needed help. Twice we managed to get our hands on the jar, but it was badly stuck and it wouldn't come off. I had a large canvas bag in my car, so we got that and tried to get him in the bag. It took several tries but we managed to capture him and we carried the bag back to the car.

Picture this - it's below 30 degrees, we're bundled up (and Janet's glove got a slight spray), we're holding a skunk in a canvas bag, and we're in the middle of the refuge on a Saturday afternoon. We didn't have a lot of choices, so we put the bag in the back of the car and drove (too fast) to the refuge office. No one there on weekends.

We called NJ Fish & Game - no answer - the phone just kept ringing. We called 911 and got through to the local dispatcher who put us on hold while she tried to reach animal control. After about 10 minutes (at least) the dispatcher came back on line and said animal control can't help wildlife. But she gave us the number for a wildlife rehabilitator in the region (not real close but our only hope). We called her - Suzanne Fenton - and she said there was a vet's office nearby. We drove directly to the vet - Dr. Lori Nordt at the Atlantic Animal Health Center. It was now about 30 minutes or more since we had captured the skunk, and we were afraid he was going to suffocate.

Dr. Nordt told us to bring the canvas bag with the skunk into the office. Everyone in the waiting room was fascinated, and no one was upset that we were taken right in ahead of them. She took us into



a side room where she found that the jar was stuck because the skunk's neck had become swollen. Attempts to use a solution to lubricate the area didn't work, so she realized the jar would have to be broken. She weighed the skunk to determine how much sedative to give him - then injected him and waited a minute or two for him to relax. Then she turned him on his back to prevent glass from getting into his eyes and hit the jar with a hammer. It shattered, but the rim was still around his neck with jagged edges sticking out. So she pulled the rim up high toward his shoulders, put a cover over his eyes, and hit the rim with the hammer to finish removing it.

Meanwhile, Janet and I were overwhelmed with relief. The skunk was dehydrated, so Dr. Nordt administered fluids, then put him into a spare carrier. We discarded the canvas bag and Janet's glove.

The vet's office called Suzanne Fenton and she said she would meet us at a point halfway to her rehab center. Dr. Nordt refused to accept any payment for the rescue. We put the carrier into my car and drove to the meeting place. Suzanne took the skunk and put him into her van and we all finally were able to relax.

Amazingly, my car only smells a little and I'm sure that Nature's Miracle will help - and neither Janet nor I have any residual smell on our bodies or clothes. The skunk will have an easy recovery and then be released back into his territory.

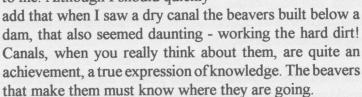
So my message is - DON'T LITTER! That empty jar or can or plastic bag or six-pack holder that you toss on the ground can cause the death of an animal. This skunk was lucky, but most who are victims of human ignorance do not do as well.

We probably broke a few laws today, including removing wildlife from a federal refuge - but we placed him with a licensed rehabilitator and we saved his life. There was no danger of rabies because his head was completely enclosed and we were wearing heavy winter clothing. I do not recommend placing a skunk in your car. But it was worth it! From start to finish, the rescue took about 90 minutes, and it was one of the greatest experiences of my life. Maureen

Founded in 1988, Suzanne Fenton's organization is called Wildlife Aid, Inc. 155 Asbury Road, Egg Harbor Township, NJ 08234 (609) 927-0538. Tax deductible contributions are accepted and greatly appreciated.

The Beavers' Canals, by Bob Arnebeck

When I hear mention of the canals on the surface of Mars, I always think of beavers. I can picture myself making a beaver dam or a lodge. After all what I usually see of them is out of the water. But diving in the water and digging and shaping the mud under water seems quite daunting to me. Although I should quickly



At first glance they look simple enough. I generally see two types: canals that radiate from the pond bringing the beaver closer to trees; and canals that go down from dams to the pond below. A closer look will show the compexity. Since I observe beavers where winters are cold, these canals must be deep enough to allow passage in the winter. Just looking at a large placid beaver pond, nothing could seem easier to deepen. But the beavers created the pond, usually in an area thick with trees and bushes. Afterall that is why the beavers are there, for food. So digging a canal entails more than moving mud. Roots have to be chewed through. And when the trees begin dying and disappearing and sun floods the growing pond grasses and reeds will try to take root. Just today I walked along the shore of the Big Pond. In most places on the south shore there are thick reeds going ten yards out into the pond. But every twenty yards or so along the shore, I saw a deep, grass free canal coming up to my feet. Some had stripped willow branches at their terminus. And most of these canals could probably accommodate two beavers passing in the night.

The series of ponds I call the Third Swamp always strike me as being in an area guaranteed to be short of water. On one side is a gentle slope with not a few small ponds and puddles in it. On the other side is a shear cliff and the ridge above generally slopes the other way into a high valley. The lack of water forced the beavers to connect the series of small ponds with canals. Two dry summers put these canals out of business for beavers. Yet twice I've been reminded of their virtues. Once I saw a Blanding's turtle using a canal. And then last winter the otters used them.

The deep canal was crusted with a foot of ice and below

was more or less dry. But the otters could still scoot through the canal. I pondered for awhile why the otters simply didn't scoot through the snow atop the pond as they often do. I think the reason is that they know that by following the canal they were pointed in the direction they wanted to go - up to another pond.

Another important service of canals, is that the canal of today can become the channel of tomorrow as the pond gets deeper. In Beaver Point Pond the beavers built a new lodge just beside a canal that had been built months before to gain better access to the shore. When the small ponds in the Third Swamp dried out, I walked through one that seemed to be nothing but a nexus of canals.

The test of courage comes when we are in the minority. The test of tolerance comes when we are in the majority.

- Ralph W. Sockman

Otters Win Relocation Battle—For Now From Animal Welfare Institute, Winter 2006

Many otters from Southern California are swimming in "forbidden waters," despite relocation efforts made several years ago by a group of government biologists. The scientists moved the animals north from Anacapa Island to Monterey, Calif. under a federal plan to preserve the species and protect shellfish divers from natural competition. Yet within less than half a year, dozens of the otters had returned to their original habitat. Now the government may abandon its program to acknowledge the fact that the intelligent creatures will not stay within the boundaries imposed for them by man. Environmentalists are also pressing authorities to allow the

otters to go where they want, hoping that it will help the species recover. Subjected to hunting over the years, the Southern California otter population has dwindled to about 2,700 animals.



NEWS FROM ANIMAL FRIENDS CROATIA

More than 60 activists gathered on March 15 on the International Day of Protest Against the Canadian Seal Hunt in front of the Canadian Embassy in Zagreb so as to express their protest against this shameless action. Many celebrities like Paul and Heather McCartney, Brigitte Bardot, Pamela Anderson, and Morrissey gave their support with their appeals and public appearances to protests that were being held worldwide on six continents and in more than 50 cities. On the other hand, activists like eminent doctor Jerry Vlasak started a hunger strike in protest. While the horrible slaughter of baby seals, which will result with smashed heads and skinned bodies, is taking place in Canada, on March 27 Croatian Ministry of Culture – Nature Protection Division with the Rule Book of Transboundary Transport and Trade of Protected Species banned the commercial import of skin and other products derived from skin of seals. Thus Croatia became the third European country, of seven countries in the world, that imposed such bans. Animal Friends Croatia (AFC) congratulates the Ministry of Culture on this praiseworthy decision, which resounded in the whole world.

What's Good for the Goose May Be Deceptive

By Susan Russell

Geese seek tundra nesting conditions: Land near water, with a clear line of sight, permits adults to identify intruders and escape predators, especially during the nesting season. Native foliage of the northeast.



with its layers and grouped trees and shrubs, does not attract large congregations of geese. Tearing down forests, replacing them with airports, hotels, and golf courses — in short, ecological degradation — is at the root of increased Canada goose nesting in the northeastern United States. State, county and local parks, shorn of native vegetation, are a major problem.

Ecological restoration could help address the imbalance; and as the work of David Suzuki and other ecologists indicate, it might also enable us to reduce dependence on pesticide, to improve soil, air, and water quality, and to restore habitat for a broad spectrum of species, including our own, as vacant areas become meadowlands teeming with butterflies and birds, as plants release absorbed rainwater into the air, as wetlands and estuaries purify water and control flooding, with cattails catching and filtering rainfalls and stream flows, removing toxins, and gradually releasing water into creeks and rivers.

Artificial landscapes, in contrast, carry hidden, often lethal costs for native wildlife. Cholinesterase inhibitor-based pesticides, commonly used to sustain mowed grass and gardens, poison

birds by overstimulating their delicate nervous systems, causing acute neurotoxicity or death. The pesticide also drains or leeches into retention ponds.

For campuses and sports fields, marinas, housing projects with storm water retention ponds, agricultural property, and salt marsh restoration sites, hope is within reach. Geese may be dissuaded from setting up residence near fences, lines of shrubs or trees, barrier rocks, decks, native grasses and wildflowers. State, county and local leaders must embrace enlightened forms of managing public green spaces. Local governments can and should encourage responsible private management of corporate parks and golf courses.

A Trusting Nature

Unless attacked or intimidated, Canada geese pose no threat to humans. A number of agencies — even the New Jersey Division of Fish and Wildlife and the U.S. Fish and Wildlife Service, who have relied on the public fear of disease to kill the birds - have found that any health risks posed by the geese are "minimal." Described as "innately placid and highly adaptable

to human rearing", the birds' penchant for peacefully living alongside people is often their undoing.

During the nesting and setting phase, the female is especially dependent upon her lifetime mate. Patrolling the general nesting area, the gander watches the nest, prepared to fly back to it in an instant. Alternatively, he will show himself as a decoy, leading the intruder away

from the nest. Hissing and beating his wings, he will chase anyone who ventures too close to the nest. His behavior is called bluffing, for the intent is not to harm, but to keep the intruder - fox, owl, or human - away from the nest. A calm aboutface will end the engagement. Beavers, muskrats and other species with whom geese peacefully co-exist instinctively know this. A beaver set upon by a bluffing gander charts a change in course without fanfare or injury.

Distinct from bluffing, unprovoked physical attacks by geese are rare. Given their tendency to live in close proximity to humans, the paucity of conflicts is remarkable. Veteran nature writer and biologist Bernd Heinrich writes of the gentle temperament of Peep, a female Canada goose he studied from the gosling to adult stage: "From the time she was a yellow fluffball... until she grew into a splendid specimen of adulthood, the one word that described her character (in human terms) was 'sweetness' - she grew up to be reticent, but she never showed a sign of fear." Geese will actively seek out trusted humans for protection or assistance. (to read the entire Living with Geese by Susan Russell. visit Friends of Animals http://www.friendsofanimals.org/actionline/summer-2005/living -with-canada-geese.html)

Slaughtering Wolves is Out of 'Control' in Alaska By Bill Sherwonit, Anchorage Daily News, March 18, 2006.

Effective protests are grounded in a refusal to accept what is normal. We accept a diminished world as normal... Why is this rage [against the loss of wildness] a silent rage, an impotent protest that doesn't extend beyond the confines of our private world? Why don't people speak out, why don't they do something?... What is unsettling is that we are all so apathetic."

- Jack Turner, "The Abstract Wild"

I'm in the midst of re-reading Jack Turner's "The Abstract Wild," and once again I feel my body grow electric with passion. His love for wild creatures and places is my love. His angst is my angst. His desire to make a difference is mine. But what to do?

One reason Turner's words resonate so powerfully is my disgust with Alaska's ongoing — and steadily expanding — predator-control program. I almost wrote "wolf control," but our state's organized predator-extermination effort now includes bears. I wonder how many Alaskans know this. Or care.

A few weeks ago, I met with a couple of other Alaskans disgusted by our state's "intensive wildlife-management policy," which basically requires the killing of wolves and bears so that humans

have more moose and caribou to hunt. Vic Van Ballenberghe, a widely respected wildlife scientist and former Board of Game member, lamented that any new effort to rally Alaskans in support of wolves and bears would be tremendously difficult.

People have grown numb, Vic said. They're burned out. Twice in recent years, Alaskan voters have loudly and clearly voiced their objection to large-scale, aerial wolf-kill programs. Yet here we are once more, with an even more egregious predator-control program, the worst in decades.

The latest effort to expand Alaska's predator kill-off is happening as I write these words, as the Board of Game — which these days would more properly be called the Board of Game Farming — meets in Fairbanks. I stayed

away because attending would invite only heartache and anger, as board members play out their dishonest charade. The board is determined to shrink wolf and bear populations, and that's that.

The sad thing, as Vic points out, is that these wolf haters — I'm convinced that's what they are — can do whatever they want. They represent the views of Gov. Murkowski, who appointed them, and the Alaska Legislature's most powerful figures. No one in any sort of political leadership role has opposed them, which is depressing in itself. So it appears the only ones who can make a difference are we "commoners," we citizens.

For that reason I applaud anyone who has attended this month's Board of Game meeting and spoken for wolves and bears, or anyone who writes letters or makes calls denouncing current "management" strategies. Still, more is needed. There's the prospect of yet another citizen's initiative, which is hopeful. And we need to vote

Murkowski and regressive legislators out of office.

I'm saddened that the loudest voice against Alaska's predator-control program has been raised by Priscilla Feral and her Connecticut group, Friends of Animals. Surely many Alaskans are just as outraged as she. Why are we largely silent? Why do we hide?

I think that one major reason predator-control opponents have been apathetic and indifferent of late is this: the despicable nature of the killing has been largely out of sight,

and therefore out of mind. Citizen revolts are most likely when we can see or read first-hand accounts of atrocities; for instance, the media's coverage of physician-hunter Jack Frost and his "mechanical predation" of wolves in the 1980s, or biologist Gordon Haber's snared-wolf video in the nineties. The visceral impact was powerful and motivating.

How do we stir up anger and action today? It might help to start with language. "Control" is such a clean, antiseptic word. But when state policies call for eliminating 85 of 120 wolves — to give one regional objective — that's not control. That's a massacre, a slaughter. Board of Game members sometimes talk about the savagery of wolves. But who, really, are the savages here?

Bill Sherwonit is a nature writer who lives in Anchorage.



BIOLOGY AND BEHAVIOR (taken from Virginia Cooperative Extension: www.ext.vt.edu/pubs/wildlife)

The beaver is North America's largest rodent. Adult beavers normally weigh 40 to 50 pounds, but exceptionally large animals may weigh up to 80 pounds. They range in length from 35 to 50 inches, including the tail, which normally is about 10 inches long. Beavers have short legs, strong digging claws on the front feet, and large, powerful, webbed hind feet used for swimming. The broad, scaly, paddle-like tail is used as a rudder when the

beaver swims, and also helps steady the beaver when it stands on its hind feet. Although beavers communicate principally by using whines, grunts, hisses, and a variety of nasal sounds, they will slap the surface of the water with the tail as a warning to alert other beavers of potential danger. The tail also acts as a storage organ for accumulated fat to be used as a reserve energy source during the wintertime.

Beavers groom and clean their

dark brown fur daily using a split second toenail on each hind foot. The fur then is coated with a material produced by an oil gland located beneath the tail. This coating makes the fur water repellent. Properly groomed fur also is capable of holding a thin layer of air next to the skin to help insulate the beaver from the effects of cold water. The short ears and nose each have unique muscles and valves that close to keep water from entering when the animal is submerged, and each eye has a transparent membrane that protects it when under water. These adaptations make the beaver well suited for life in the water.

Beavers have a compact head with strong jaws and sharp chisel-like front teeth adapted for cutting trees and peeling bark. The two center top and bottom teeth (incisors) grow continuously throughout the life of the beaver. These teeth grow at an angle such that they actually are sharpened every time the beaver gnaws on trees.

Beavers have lived as long as 20 years in captivity, but normally average no more than 5 to 8 years of age in the wild. Although they are viewed as being primarily nocturnal, individuals can be observed during daylight hours, especially when dispersing to new territory or when repairing damage to a dam or lodge. Beavers are monogamous animals, which means they pair with the same mate for life. Mating takes place during January and February, and kits are born in May or June. The typical litter has 3 or 4 kits, but may have more or less depending on environmental factors and the physical condition of the female. A colony of beavers usually consists of the adult pair, last year's offspring (often called yearlings), and the current crop of kits. Once the yearlings have reached 2 years of age, they leave or are forced out of the colony by

the adults and start new colonies of their own in other locations.

Beavers today are found throughout all of the North American continent. Here in Virginia, biologists believe beavers are present in every county. Given their large size and the limited amount of time they spend away from the protection of water, adult beavers have relatively few natural predators. However, kits and yearlings may be preyed upon by black bears, coyotes, dogs, bobcats, and perhaps great horned owls. Because of the low natural mortality and an abundance of

suitable habitat, Virginia's resident beaver population currently is expanding, but the exact statewide population has not been estimated.

Beavers will inhabit nearly any water source that has a reliable and plentiful supply of nearby food, but they prefer water systems characterized by low gradient flow. Stream and lake habitats are used heavily, but beavers also may be found in farm ponds, wetlands, sewage treatment plants, and other riparian areas. Beavers are notorious for being Mother Nature's little engineers. In fact, they are one of only a few wild animals capable of significantly altering a habitat to suit their needs. Beavers spend considerable time building and meticulously maintaining dams. In fact, the sound of running water will stimulate a beaver to investigate all its impoundment structures for leaks or breaches. Construction of dams and lodges usually occurs during late summer and early fall. Female beavers assume a major role in the construction of a dam or lodge, whereas males act more as building inspectors. Dams are constructed to impound water of a sufficient depth to provide protective cover for the lodge and to facilitate the beaver's movement about the territory. Beaver dams can range from 2-10 ft. in height and can extend more than

100 ft. in length. In most situations, once water has reached a minimum depth of + 24 inches, the beavers will start construction of the living quarters and will use materials similar to those used to construct dams. Lodges can be identified by their round, dome-like appearance, and may extend 3 to 6 feet above the water's surface.

Beavers enter and leave the lodge through an underwater opening, which helps prevent predators from entering the lodge. Beavers do not live only in lodges. Along the shoreline of ponds, lakes, and larger streams, beavers simply may burrow into the soft embankment to make a bank den. A covering of sticks and mud often is piled just above the burrow entrance along the shore and can help identify the location of a bank den. Beavers are territorial and, as a means to delineate the extent of their domain, they create small mounds of mud, leaves, and sticks, which they then cover with pungent oil (castoreum), to serve as boundary markers. These scent mounds are recognized by other beavers as a warning of their presence.

Once all initial construction activities have been completed, beavers spend their time eating, maintaining the various structures, and collecting food for the winter. Beavers are herbivores, which means they eat plants and plant material. A beaver may consume up to 20-30 oz. of food per day (about equal to the bark and smaller branches of a 2-inch diameter tree every 2 days). They consume a wide variety of aquatic plants and trees, including pine, red cedar, willow, alder, tulip poplar, red maple, dogwood, sweet gum, beech, and others that grow near water. During spring and summer, beavers consume mostly grasses, sedges, rushes, some farm crops (soybeans, corn), and the succulent new growth of small bushes. As winter approaches, they switch more to woody material. Beavers cut felled trees to manageable lengths for transport back to the lodge area and then anchor the stems and branches into the sand or mud at the bottom of the pond. In climates where water bodies are subject to freezing over, beavers will use this underwater food cache of stored tree sections to survive the winter under the ice. Once all the bark and leaves have been stripped and eaten, these limbs and branches will be used as building materials to maintain or repair the dam and lodge. Given Virginia's mild winters, beaver ponds here rarely freeze over for extended periods of time, so beavers will cut and eat fresh trees and plants throughout the winter months. In the event of an unusually harsh winter, beavers will use the stored food cache and rely on their fat reserves to make it through the winter.

WHERE THE WILD THINGS SHOULDN'T BE

How would you like to live in a cage
That was just about ten feet square,
With no toys to play with and nothing to doJust you and a bed and a chair?

Oh, sure you'd be fed (the same thing each day)You'd have water (unless they forgot) And since you would never be going outside



You wouldn't get cold, or too

But oh, you'd be lonely just sitting alone with no one to talk to all day.

You'd remember the trees, and the grass and the breeze, the places where you used to play.

You'd remember your friends, you'd remember the sky, and games and strawberries and sun,

And you'd know you could never go skating again, or go swimming, or ride bikes, or run.

You'd get mad and scream and throw things around; you'd kick and you'd pound on the wall,

And your owners would scold you, and say t themselves, "He isn't a nice pet at all!"

The more you got mad, the less they would like you, the less they'd remember to care
About if you had water of if you got fed
Or if you were lonely in there.

And then you would know what it's like to be kept as a pet when you're meant to be free, And you'd listen when wild things say "Please don't make a pet out of me."



- Beverly Armstrong

The Giant Beaver (From Beringia Research Center)

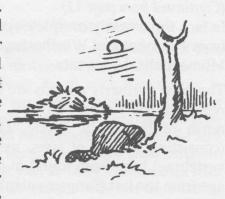
The giant beaver (*Castoroides ohioensis*) was the largest rodent in North America during the ice age (Quaternary - the last 2 million years). How did it look? How large was it? How is it related to living beavers (*Castor* sp.)? These are just a few of the questions people ask when they first hear about the giant beaver.

Unlike the woolly mammoth (Mammuthus primigenius), cave bear (Ursus spelaeus) and steppe bison (Bison priscus) whose images are so vividly recorded on the walls of European caves by Stone Age (Paleolithic) hunters, there is no record of the giant beaver's actual appearance. However, the great similarity between giant beaver and modern beaver skeletons leaves no doubt that the two animals were much alike in appearance and were adapted to similar surroundings. There was one remarkable difference - size! A skeleton displayed in Chicago's Field Museum is nearly 2.5 m long the size of a black bear (Ursus americanus). An animal of this size may have weighed as much as 200 kg compared to a 1 m-long modern beaver weighing about 30 kg. Modern beavers are, to put it simply, "distant cousins" of Castoroides.

Other differences were in the teeth and tail of the giant beaver. Unlike modern beavers with their short smooth-surfaced cutting teeth (incisors), giant beavers had cutting teeth up to 15 cm long with prominently-ridged outer surfaces. Perhaps these strong enamel ridges would have acted as girders to support such long teeth. Although experts on ancient life (paleontologists) do not agree on the function of the cutting teeth, it seems that they could have acted as both wood cutters and gougers. Giant beaver cheek teeth also differ from those of modern beavers in their larger size and simpler enamel configuration. Molar teeth of *Castoroides*, like its relatives *Dipoides* and *Procastoroides*, typically have grinding surfaces with an s-shaped enamel pattern.

By studying the length and width of giant beaver tail vertebrae in relation to those of modern beaver and its actual tail dimensions, I estimate that *Castoroides* had a scaly tail that was about 65 cm long, 12 cm across the base and 14 cm across the widest part. Definitely a beaver-like tail, but

relatively narrower. Although well adapted for swimming, the hind legs of giant beavers relatively short. Considering great weight of the animals, their ability to disperse



overland as some living beavers do, would have been reduced

The first recorded remains of this animal were found in a peat swamp near Nashport, Ohio, and were described, but not named, by S.R. Hildreth in 1837. The geologist J.W. Foster called the specimen *Castoroides ohioensis* in a publication a year later.

What about their ancestry? A primitive beaver called *Dipoides* that occupied Eurasia and North America during the late Tertiary (some 5 million years ago) evidently gave rise to *Procastoroides*, a large beaver about two-thirds the size of the giant beaver. It is worth noting that slight enamel ridges were first seen on the cutting teeth of the Idaho beaver (*Procastoroides idahoensis*), although the closely related Sweet's beaver (*Procastoroides sweeti*) lacked them. So probably the Idaho beaver, or a very closely related form, gave rise to the giant beaver about 3 million years ago. A study of the development of the cheek-tooth pattern in giant beavers also supports the *Dipoides - Procastoroides - Castoroides* lineage.

Another "giant beaver" (*Trogontherium* - not much bigger than a modern beaver) lived in Europe and Asia during the early part of the ice age. Despite some basic similarities in shape, *Trogontherium* and *Castoroides* are at extreme ends of two different lineages. However, perhaps both had developed similar ways of living in relation to modern beavers, with which they coexisted.

Castoroides ranged from Florida to the Yukon, and from New York State to Nebraska, but it has not been found outside of North America. Giant beavers seem to have flourished in the region south of the Great Lakes toward the close of the last glaciation. (Continued on next page)

(Continued from page 11)

In fact, three nearly complete specimens are known from Fairmont and Winchester, Indiana, and from Minneapolis, Minnesota.

The most northerly records are from the Old Crow region of the Yukon Territory, which lies 150 km north of the Arctic Circle. Here, many fossils (consisting largely of jaws, teeth, leg bones and vertebrae) have been found in deposits varying in age from the last (Sangamonian) interglacial (about 130,000 years ago) to the early part of the last (Wisconsinan) glaciation (about 60,000 years ago. Fossils show that both giant beavers and modern North American beavers (Castor canadensis) coexisted near Old Crow during the last part of the ice age. The only giant beaver fossil found elsewhere in Canada is a cutting tooth from last interglacial deposits in the Don Valley, Toronto.

How did giant beavers get so far north? And when? Perhaps they spread rather rapidly northward into the Yukon through chains of lakes which tend to form along the southern margin of the Canadian Shield (for example, during the present interglacial-the relatively warm period covering the last 10,000 years some are: Lake Superior, Lake Manitoba, Lake Athabasca, Great Slave Lake and Great Bear Lake). A likely time for this northward shift would have been near the beginning of a warm period such as the last interglacial, when ice sheets of the second last (Illinoian) glaciation were melting back.

Where did giant beavers live? A possible giant beaver lodge was discovered near New Knoxville, Ohio about 1912. Part of a *Castoroides* skull and the lodge were located in a peaty layer surrounded by loam. The lodge was said to have been roughly 1.2 m high and 2.4 m in diameter, and formed from saplings about 7.5 cm in diameter.

Giant beavers seem to have preferred lakes and ponds bordered by swamps as their habitat, because their remains have been found in ancient swamp deposits so often. Perhaps a rather sudden reduction of these surroundings due to changing climate linked with the giant beaver's apparent inability to build dams like those of *Castor canadensis* and its inability to disperse readily overland to new drainage systems when drought occurred may have resulted in its extinction and the survival of the

smaller, more adaptable modern beaver. Likewise, the Eurasian "giant" beaver, *Trogontherium*, gave way to the living Eurasian beaver (*Castor fiber*), but earlier.

Giant beavers evidently died out near the close of the last glaciation about 10,000 years ago. Because they coexisted with early humans in North America, it seems unusual that there is no evidence that people hunted them.

The cure for boredom is curiosity. There is no cure for curiosity.
- Dorothy Parker (1893-1967

Jurassic "Beaver" is Largest Early Mammal Yet -From Scientific American, Feb. 24, 2006

A new fossil from China proves that the mammals that lived during the Jurassic era were more diverse than previously thought. The 164-million-year-old creature, dubbed Castorocauda lutrasimilis, had a tail like a beaver, the paddling limbs of an otter, seallike teeth and probably webbed feet. And although most Jurassic mammals discovered thus far were tiny, shrewlike animals, C. lutrasimilis, would have weighed in at approximately a pound. Roughly the size of a small, female platypus, it is the largest mammal from this time period on record. Chinese archaeologists led by Qiang Ji of Nanjing University found the well-preserved fossil including

University found the well-preserved fossil, including impressions of soft tissue and fur, in the Jiulongshan Formation in Inner Mongolia. Other fossils had hinted that mammals might not just have been small terrestrial creatures until the demise of the dinosaurs 65 million years ago but the beaver-tailed animal definitively pushes back the date of mammalian adaptation to an aquatic lifestyle by at least 100 million years. "Based on its relatively large size, swimming body structure, and anterior molars specialized for [fish] feeding, *Castorocauda* was a semiaquatic carnivore, similar to the modern river otter," the team writes.

The discovery also highlights how little is known about early mammals. Most are represented by teeth and jaws alone. "We stand at the threshold of a dramatic change in the picture of mammalian evolutionary history," argues mammalogist Thomas Martin of the Senckenberg Institute in Frankfurt, Germany in an accompanying commentary. "The potential of fossil-rich deposits like the Jehol group in Liaoning Province in China or the Jiulongshan Formation in Inner Mongolia is only just beginning to be exploited." --David Biello

From Mother Earth News, Green Gazette - Iowa County Woos Organic Farmers, April/May 2006

By Megan Moser

In June 2005, Woodbury County in northwest Iowa instituted a property-tax rebate designed to entice conventional farmers to switch to organic practices. In this unique program, the first in the United States, participating farmers will receive money from a pool of \$50,000 a year for five years. And in January of this year, the county became the first to mandate the purchase of locally grown organic food, thereby ensuring a market for its organic farmers. Schools, jails and other county institutions must buy organic food grown and processed within a 100 mile radius of the courthouse.

Robert Marqusee, director of Woodbury County's rural economic development, says these policies stem from a decrease in the number of farms in the county and a corresponding increase in farm size. The number of farms in the county dropped from 1,360 in 1987 to 1,148 in 2002, while the average acreage per farm rose from 332 acres to 385 over the same period. As a result, the county has experienced "a loss of community spirit and pride in rural area," Marqusee says. With the new policies, he hopes Woodbury County can revive that spirit. "If we didn't do something different, rural America would be consigned to industrialized farming," he says.

It's also important to draw a younger population to farming, and Marqusee sees the thriving organic food market as a way to do so. Since the average age for an American farmer is about 55, the number of farmers could drop even more as many of them retire. "We had to make farming more attractive to young people," he says. "It had to be more affordable, more realistic."

Marqusee says he is proud of the changes Woodbury County has made. "We're trying to do something in our power as a local entity." He anticipates a "quality local food brand emerging from the increased economic activity." To learn more about these initiatives, visit www.organicconsumers.org.

They always say time changes things, but you actually have to change them yourself.

- Andy Warhol (1928-1987)

Anti-Seal Hunt Activist on Hunger Strike

Charlottetown, PEI, Canada - Dr. Jerry Vlasak, one of three press officers with the North American Animal Liberation Press Office (NAALPO) remains in jail on a hunger strike in Charlottetown, PEI. He was jailed Monday in protest of the unjust conviction stemming from last year's seal slaughter in the Gulf of St. Lawrence and the egregious massacre of the seals that are right now being mercilessly killed for greed and profit. Arrested in March of last year, Dr. Jerry Vlasak and ten other anti-sealing activists were charged with and convicted of violating the blatantly inappropriately named "Canadian Seal Protection Act" after approaching within a half a nautical mile in an attempt to film a seal killer. They refused to pay the fine and were sentenced.

March 31st, 2005, eleven activists went out onto the ice floes in the Gulf of St. Lawrence to attempt to film the futility and cruelty of killing baby seals killed, ostensibly for their negative impact on the codfish population-but in reality to pander to the European fur trade and the Asian market for aphrodisiacs; Dr. Vlasak was punched in the nose and 10 others were violently assaulted by the captain and crew of the Brady Mariner from Newfoundland. Despite extensive video documentation of the assault, none of the seal killers were ever arrested or charged.

A worldwide boycott of Atlantic Canadian seafood products supported by a number of conservationist groups has cost the Canadian economy tens of millions of dollars - far in excess of the value of the skins and penises sold to drape narcissistic Russian princesses or to facilitate the erections of impotent men in Asia. But the Canadian government continues to subsidize the slaughter by providing spotter planes and icebreakers, which cut the deadly swath through the floes directly to the baby seal nursery. This support continues despite the fact that the majority of Canadian citizens oppose the hunt and are embarrassed by the worldwide publicity engendered by the likes of Sir Paul and Lady Heather McCartney.

Dr. Vlasak said from Charlottetown before his incarceration on Monday: "Three-fourths of all newborn seals may have already perished in the Gulf of St. Lawrence due to record warm weather's melting the ice from beneath them. Meanwhile, the violent barbarians are bludgeoning the survivors to death at this very moment. The pathetic murderers of Newfoundland must be stopped.

For more information please call or mail the North American Animal Liberation Press Office

21044 Sherman Way #211

Canoga Park CA 91302, phone: 818.932-9997

Woman Devotes Life to a Legacy, Courier Post, Saturday, January 28, 2006

She lovingly tends wildlife refuge couple created half a century ago

Miller Pond is an eerie place. It's quiet, save for the roar of the wind and the creaking from bleached skeletons of trees killed by the creation of the pond. Sedge tussocks, splayed and drooping, poke from the dark water.

Sarah Summerville paddled her kayak this week to a beaver lodge at the far edge of the big pond, part of the Unexpected Wildlife Refuge. She was checking on its inhabitants -- a pair of beaver parents and their two yearlings. But no amount of waiting or coaxing -- not even handouts of sliced pears and apples -- lured the critters out of their cozy abode and onto the cold, windswept lake.

"They probably don't like the chop of the water," Summerville said, as dusk settled over the refuge, snow flurries spitting from low clouds. The beavers would rarely come out at this time of year anyway. But they have been more active because of milder temperatures. Winter has returned with a series of squalls, starting with a line of freak winter thunderstorms the previous night.

Summerville, 42, manages the nonprofit refuge. It straddles the border of Gloucester and Atlantic counties, taking in parts of Franklin, Buena Vista and Buena Borough. She became its caretaker on June 20, 2001, the day Hope Buyukmihci died. Buyukmihci, a native of New York state, and her husband Cavit, a Turkish immigrant, moved to the area in 1954, buying 85 acres of swampland and woods off Unexpected Road on the edge of the Pinelands. They moved into a tiny, rundown cabin that was once an office for a cranberry farm. They continued to cobble together more land to protect habitat for all kinds of animals -- deer, opossum, raccoons and water fowl.

But it was the beavers that lived in their lakes and swamps that came to define the place, as well as Hope, who would come to be known as the Beaver Lady for her tender caring for the animals and her advocacy for their protection. Summerville learned about the refuge in early 1999, after reading a Courier-Post story about problems Buyukmihci (pronounced bu-yuke-mucha) was having with the municipalities. They were trying to collect property taxes, arguing the refuge lacked formal recognition from the state's Green Acres land preservation program, even though the Buyukmihcis had formed a nonprofit decades earlier.

Buyukmihci was 85 at the time; her husband had been dead for many years. She feared she would lose the refuge. But the state closed the loophole, saving her from paying taxes. Summerville, who was working as an environmental scientist, kept the newspaper clipping in her briefcase for 1 1/2 years before finally approaching Buyukmihci, asking her if she needed help. Buyukmihci was becoming frail; she had come down with a debilitating case of shingles, a skin condition related to chicken pox.

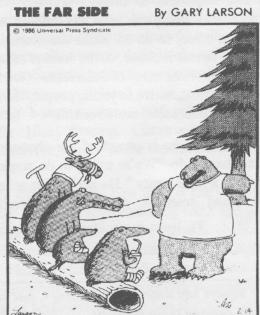
One of the first questions Buyukmihci asked was whether Summerville could split wood. The other was whether she liked to play Scrabble. "We played 340 games of Scrabble in that year that I knew her, and when she passed away, she had won 170 and I had won 170," Summerville recalled, walking over a narrow boardwalk through a swamp that contains the remains of old beaver lodges. "Three days before she died, she beat me and said, "This is a good place to stop.'"

It was as if Hope knew the end was imminent, that she would be passing the torch to Summerville and wanted her to have an even start. Today, Summerville must work two other jobs to support herself. She gets no pay as refuge manager. But she gets to live in Buyukmihci's house, a pea-green affair that holds a collection of more than 1,000 books on nature, heavy on beavers, of course. In return, Summerville patrols the refuge to ensure hunters are not violating its boundaries. She also manages refuge finances, schedules tours and organizes fundraising efforts.

"She has the same passion as Hope," said Helga Tacreiter, president of the refuge's board of trustees. "The beavers are in wonderful hands." Tacreiter noted that the refuge, which had been in a holding pattern during Buyukmihci's latter years, is expanding again under Summerville. The refuge has grown by 194 acres over the past two years, adding 67 acres of woods in Franklin and 127 acres of farmland in Buena Vista. The refuge now encompasses 737 acres. Summerville has also resumed community outreach programs that her predecessor stopped many years ago.

Summerville views beavers as very social, even human-like in their dedication to each other, not pests to be trapped and killed. Giving up her career as an environmental scientist to care for the refuge and become an advocate for beavers just felt natural, Summerville said.

"Basically, the way I rationalized it was, that's a job," she said. "This is a life."



"Listen. You want to be extinct? You want them to shoot and trap us into oblivion? ... We're supposed to be the animals, so let's get back out there and act like it!"

The Beaver Defenders Membership Application

Name:	
Email:	
Address:	
Phone/fax:	

Membership/subscription is \$20 annually, **due each July**. Please make checks payable to Unexpected Wildlife Refuge. All contributions are tax deductible. The amount of your donation in excess of membership dues will be considered a donation unless otherwise specified. THANK YOU!

Mail to: Beaver Defenders PO BOX 765, Newfield, NJ 08344

In the Store!

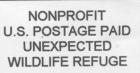
(Please include an additional \$3 for shipping and handling of merchandise orders)

	by Hope Buyukmihci)	\$10.00
Richards and Hope Buyukmihci)		\$15.00
The Best of Beaver D	Defenders	\$ 5.00
T-shirts: Hunter gree	en, on the front - our logo; on the back - I	
support the U	nexpected (with charming beaver)	\$15.00
Mug: Light brown r	mug with green logo, very tasteful	\$ 5.00
Posters: Trapped bear	ver and baby	\$ 1.00
Beavers turn wilderne	ess into happiness	\$ 1.00 (colorable!)
Cards: 12 custom bea	aver block prints created by fifth graders with	
poems written by Bea	ver Defenders, 24 pack, fit legal envelopes	\$ 4.00
Sheet Music: Away	with Traps, Song of the Beaver Defenders	\$ 1.00
We Love You, Little	Beaver	\$ 1.00

Educational Materials free with a self-addressed stamped envelope.

- Unexpected Wildlife Refuge, Home of the Beaver Defenders
 What Beavers do for Waterways
- Beaver Problems and Solutions
- Species found at the Refuge
- Coloring sheets (beaver scenes Hope Sawyer Buyukmihci)
- They All Call it Home
- ► Slandered Do-gooders (snake information)
- ► The Square of Flesh
- Chopper, in Memoriam
- Intruder in a Cageless Zoo (by Ferris Weddle)

The Beaver Defenders is published quarterly by the Unexpected Wildlife Refuge, Inc., a non-profit organization created in 1961 to provide an inviolate sanctuary for wild animals, to study wild animals in relation to humans and to promote humane treatment of animals and environmental protection.





A Positive Attitude may not solve all your problems, but it will annoy enough people to make it worth the effort.

- Herm Albright (1876 - 1944)

