Johnny Seagull

Volume 1 . Number 1 . Spring 2006

COVER PHOTOGRAPHY
"blown"
Spyros Misokilis

PUBLISHED BY

ΜΙΑΦΥΣΗ

EDITOR
Evel G. Economakis

SENIOR EDITOR
Philip Dragoumis

CONTRIBUTORS
Andreas Economakis
Virginia Frati
Green Balkan Team
Suzy Heck
Eliza Jackson
Peter Johnston
Lambros Krampokoukis
Susie Mottashed
Ioannis Posnakoff
Philip Spoerri
Sergei Stepanenko
Nina Aalto
James Stephenson
Kurt Trager
Ozkan Uner
Julia Volkova

Athens office: (+30) 210 9240014
Mobile: (+30) 6977 231983
info@inaturenet.org
www.inaturenet.org
Parthenonos 7 / 11742
Athens / Greece

COMPOSITION
Symposium Communications

NOTES & DISPATCHES

STORIES

FEATURES

DEPARTMENTS

Beginnings

Johnny Seagull is a different kind of wildlife magazine. The focus in these pages is not on animals in the abstract: it is on the nexus between Homo Sapiens and animal. The articles and stories reflect and reveal either the social, economic, cultural, political or even military conjuncture in a given country.

As a truly international endeavor–a magazine written by people from all over the world–we were immediately confronted with the greatest problem of all - the problem of language. Our fear was that a high standard of penmanship might frighten off people with stories to tell whose native language wasn't English. Thankfully, that did not happen. The editorial staff worked closely with the authors to reshape and polish their texts without sacrificing local color of expression.

All the material in this magazine is absolutely true. Some of it is so amazing it may seem incredible, even unbelievable. But it is true. And that applies to "Johnny Seagull's Flight Log" as well, a department in which an imaginary bird–Johnny–does the talking.

Evel G. Economakis,
Editor-in-Chief

The International Nature Network

International Nature Network (INN) is a non-profit NGO promoting and reporting on activities for the protection of nature and wildlife worldwide, mainly through international volunteering.

ΜΙΑΦΥΣΗ in our logo and the symbol of our aim. Nature and wildlife do not recognize borders. Consequently, nature protection requires international cooperation and understanding, in particular where prejudice and national differences exist. International volunteering is a means to achieve communication and understanding among peoples. Effective nature protection presupposes friendship and respect of different cultures. INN aims to become active worldwide and contribute to international friendship through volunteer work that will create and support wildlife protection organizations.

» *INN supports the development and operation of wildlife rehabilitation centers and wildlife protection projects wherever there is a need for these, especially in poor and isolated areas.*

» *INN promotes international volunteering for wildlife protection.*

» *INN offers responsible information to citizens, organizations and governments about wildlife protection problems.*

» *INN proposes solutions for wildlife protection.*

» *INN promotes the cooperation and understanding of people and countries for nature preservation.*

» *INN maintains and coordinates an international network of information exchange on wildlife protection related issues.*

Philip Dragoumis,
Director

Notes & Dispatches

Frog Alarm

WAZA, the World Zoo and Aquarium Association, has developed a plan to respond to the threat of extinction now confronting amphibians.

About one third of the 6,000 frog, toad and salamander species are threatened with extinction. More than 120 species have likely become extinct since 1980, and 435 species have declined into the category of greatest threat. In October 2005, WAZA adopted a strong resolution calling on all zoos and aquariums to respond to the global extinction crisis facing the world's frogs and other amphibians. This is part of a wider approach led by IUCN, the World Conservation Union.

Many factors behind the extinction of frogs are still not understood. It is however known that in some parts of the world there is a fungus causing the quick extinction of every amphibian species on the planet. Experts are convinced that the only solution is conservation in zoos and aquariums, with the hope that the species may be reintroduced to the wild at a later stage. This will require a massive coordinated effort, but it is a key solution in addressing the global amphibian extinction crisis.

A Day in April

by Ozkan Uner

I woke up, got out of bed and took my dog Kont for a walk. As we were passing the corner grocery store, I noticed an eye spying me from between the vegetables. It was a bird. Wrapped in newspaper like a batch of parsley, only its head was visible.

I entered the grocery store and asked the grocer about the bird. He told me his mother had saved it from the crows in the morning. They had gathered around it in the street, trying to attack it.

The bird looked like a raptor. I wasn't sure whether it was an eagle or a hawk, but it was definitely a raptor.

Kont and I set off again. When we finished our walk and were returning past the grocery store, the bird was still there. The grocer let me take it to a vet.

The vet couldn't identify it, but said I ought to feed it mice. I didn't like that idea very much, so I took the bird home with me and searched the internet for raptor breeder websites. I found a few forums and sent off some messages. A lady in the United States, Louise, was the first to reply. I described the bird to her, but she couldn't identify it. But she recommended I get in touch with Philip Dragoumis, a Greek wildlife rehabilitator. So I wrote to him *[Turks and Greeks, say nationalists in both countries, musn't fraternize – Ed]*, and asked him for his help.

Philip wrote back immediately. He suggested my mystery bird might actually be a baby swift. He said that was a common misidentification: taking a baby swift to be a raptor.

We were both wrong. When I sent him a photo of the bird, Philip said it was a young sparrow-hawk.

My new Greek friend and I worked together to save the bird. Taking his advice, I fed it chicken liver. But the hawk refused to eat it. Then Philip suggested I give a birdlike appearance to the liver. So I got old feathers from my budgies and made a "birdie" out of the liver. But the sparrow-hawk wouldn't touch that strange looking thing either.

The second day came and went, and the bird still hadn't eaten a thing. So Philip advised me to serve it a live bird, a quail. I thought that was awful, bar-

baric – like killing an animal with you own bare hands.

I emailed Louise, asking her about this. She told me that it was normal to feed live quail (and/or mice) to birds. And her reasoning seemed logical enough. Giving a wild bird the chance to live, she said, was worth killing a quail for. After all, she pointed out, the quail was waiting to be food on someone's dinner table.

So I ran to the store and bought four quail and rushed back home. As I entered my room, I felt extremely tense. I had to play God, and I didn't like that. I had to decide which of the quail to feed to the sparrow-hawk. Muttering under my breath, I closed my eyes and lowered my hand into the box with the quail. I gave them a fair chance. Without moving my hand around, I waited motionlessly for one of them to touch it first. When one did, I grabbed it and put it in the sparrow-hawk's box.

Unable to bear the suspense, I huddled in a corner and waited for the inevitable to happen. My room was so quiet I could hear my heart beating like a drum in my ears. Suddenly the quail started walking inside the sparrow-hawk's box. I heard sounds like it was hitting its beak on the inside of the box. That was followed by nothing, just silence. And then I smelled a new smell coming from the box.

I tiptoed over and saw that the sparrow-hawk had killed the quail and was eating it. That was the first time I ever witnessed a predator at work. Shaken, I left home to walk around for an hour and calm my nerves. Was this a victory, I wondered – the sparrow-hawk was finally eating? Was it a loss – the quail's life?

When I returned home all was silent again, except for the sounds of the other quails walking in their box.

This feeding lasted six days. Three more birds lost their lives, and one went on living. On the seventh day, the sparrow-hawk looked healthy and energic. Philip and I agreed it would be a good idea to free it as soon as possible. Otherwise we ran the risk of its getting used to a cozy life in a cage.

By sheer coincidence, the day before I was to release my bird to nature, Philip found a sparrow-hawk in Greece. It was lying on the ground near a building. And right next to it lay a singing bird. He guessed both birds had hit a window in a chase. The singing bird had died from the collision with the pane, but the sparrow-hawk was well enough the next day.

We decided to set both of our birds free at the same time, on the same day in April, on opposite sides of the Aegean Sea. For the friendship of the Turkish and Greek people.

Dead Vulture

On January 16, 2005, a person from the village of Studen Kladnets in the eastern Rhodopes Mountains found a dead griffon vulture. The Green Balkans team was informed about the case and the dead bird was transported to the Wildlife Rehabilitation and Breeding Center in Stara Zagora. The initial inspection by the Center's veterinarian showed that the carcass was old. The abdominal wall, part of the stomach and liver were missing. According to the necropsy, the bird probably had served as food for jackals and foxes. Despite the condition of the carcass, the necropsy nevertheless found clear evidence the bird had suffered a hemorrhage in the stomach and intestine. Samples were taken from its internal organs and sent the same day for further research to the National Veteri nary Service's toxicology laboratory in order to determine whether there were toxins present that may have lead to the bird's death. A prophylactic X-ray was also carried out to determine bone fractures or pellets in the body. None were found. Concerned that the death of the bird may have been a result of poisoning, an additional inspection was carried out in the area where the bird was found. Fortunately no other dead animals were discovered.

The use of poison bait has long been banned, yet isolated cases are still registered periodically. This is a serious threat to raptors and represents one of the main obstacles to vulture reintroduction in Bulgaria.

Green Balkans is part of the ANTIDOT program, which aims to eliminate this threat as a necessary precondition to the implementation of the Balkan Vulture Reintroduction Plan.

Chimp Shit

by Philip Spoerri

Life is tough in the Congo for wildlife and humans alike. During the fighting in June 1999 in the town of Kisangani, which is located on the Congo River, two scientists from some royal British institute fled into our offices of the ICRC (International Committee of the Red Cross). They had been in the jungle one month trying to find chimpanzee feces, with no success. They needed scientific evidence to support the theory that HIV originated in the jungle around Kisangani, and that the virus had first been transmitted in this place from chimpanzees to humans (either chimps biting people, or people raping chimps).

So during a lull in the fighting, the British scientists, being practical people, decided to try a different approach. They announced on the local radio that they would reward 5 USD to every Kinois (resident of Kisangani) who delivered to them a specimen of chimp shit.

They announced on the local radio that they would reward 5 USD to anyone who delivered to them a specimen of chimp shit.

Much to the surprise of the royal scientists, they discovered hundreds of Kinois lining up the next day, holding all types of receptacles containing samples of chimpanzee excrement. My colleague Alex commented that most of them certainly had asked their wives and other family members to provide samples as well. Needless to say, the scientists quickly scrapped their brilliant idea.

In cool boxes, the ICRC actually flew some of the chimpanzee dung to Nairobi for laboratory examination. I never heard anything about the outcome of the study though.

Philip Spoerri is currently head of the ICRC's mission in Afghanistan.

06

Seagull Mania

A magazine like ours would be disingenuous if it pretended not to notice how many people hate seagulls. We cringe to think how many potential enemies *Johnny Seagull* has. Thankfully, however, he has many friends too.

In December 2005, the BBC held an on-line survey in Jersey, Great Britain, and posted an email article called "Anti-Social Seagulls." Here are a few things people wrote on the subject:

EOJ wrote: "...have you ever heard the distress call of a human when attacked by a seagull for their food...almost stalking a human target whenever they leave the house?"

DW objected: "...have you ever heard the distress call of the parent birds when a nest is destroyed? It is the most pitiful sound imaginable and is very distressing to listen to. Long live the Gulls!"

YNOT said: "If they had long tails and were covered in fur, and were running up and stealing your food, there would be a rush to exterminate them. Get real. They are rats with wings! Destroy them."

BABEK noted: "... they do nothing but squawk, rip open your bin bags and crap all over the place...I think that every Sunday there should be a Seagull Shooting Competition. During the week the counties round up as many seagulls as possible, then on Sunday they release them all at once. Everybody on the Island is supplied with machine guns and ammunition in order to shoot as many as they can. The person with the highest score wins a prize! Sounds fun to me!"

DAEATTUB wrote: "...I try to run them over with my car. And if that method doesn't work, try some Alka Seltzer in a piece of rolled up bread. Oh, that's so funny to watch them explode and take a dirt dive to their rodent death."

HCIR said: "I'm a research biologist at Southampton. We recently did some work on gulls, and have found a large number who show no evidence of ever eating fish – they have evolved (quite naturally) and are conditioned to look for food the easiest way – human scraps. A cull will do no good at all – within a few years you will be back where you started. The only answer is cleaner streets—gull proof bins—and educating humans not to feed them."

JQ observed: "Please cull the gulls. They are ruining my golf game."

BSP had this to say: "No kind of animal alive causes more trouble than the human. Theft, abuse, throwing rocks off bridges, violent attacks, muggings and murder, but we don't bring in measures to keep their numbers down."

> "I think you are all insane! What is wrong with you all? I'm an Aussie and I think gulls are damn cute!"

JS wrote: "Personally I love seagulls. I live on the coast at Barrow and we have loads of em but u don't hear us complaining. You don't need to cull these animals. Just give em a good kickin if they try to nick your sannie. That'll get rid of em."

BB said: "Seagulls terrorize the children? Well then, where can I purchase one of these lovely animals? What makes our children so special? All these snotty kids nowadays deserve to be terrorized a little bit if you ask me!"

SYD wrote: "I think you are all insane! What is wrong with you all? I'm an Aussie and I think gulls are damn cute! And I don't want to be terrorized, bb! I like children seeing as I am one! You people are on drugs! Accept the cute little seagulls and be done with it!"

Bird of the World

If you were to study the history of the world—human history— by studying one bird, what bird would that be? You wouldn't pick stormy petrels, would you? They're normally found only in very southern latitudes around Antarctica. People have never inhabited the highest, coldest, quietest, driest and most distant of continents. That means studying the stormy petrel wouldn't tell you much, if anything, about humans.

Neither would you choose migratory birds because they'd only take you to countries that lie along their flight paths, right? Right.

So, what bird would you choose?

The world's most international bird is also its most misunderstood one. Can you guess its name? Here's a hint: it's classed in the game bird order with fan-shaped tails and wattled necks. And it has more names than St. Petersburg, Russia, has nicknames. To most Arabs it's called dik rum or "Roman bird" (in colloquial Egyptian Arabic it's known as the "Greek bird"); to the Greeks, it's gallopoula which means "French girl" or "French bird"; in Scottish Gaelic it's called cearc frangais, meaning "French chicken"; in the Malay language of Malaysia it's known as ayam belanda, or "Dutch chicken"; the Portuguese word for this majestic fowl is peru, which refers to the eponymous country; in Catalan and Hebrew, it's "Indian chicken" (gall dindi and tarnegol hodu, respectively); and the Turkish and French names are both "coming from India" (hindi and dinde). The Dutch word is kalkoen, from the city of Calicut in India; likewise kalkun in Danish and Norwegian, and kalkon in Swedish. In Italian it's called tacchino; the Japanese name for our friend is shichimencho, and chilmyenjo in Korean, both of which translate to "seven-faced bird" because of its ability, particularly the male, to change the form of its face depending on its mood. In Chinese it's called huoji, "fire chicken," after the color of its head.

You know the bird. The most accurate name for it is perhaps the one the Russians gave to it: indeika, which means "American Indian" (Indian from India would be "indiets" in Russian). The Spanish first found it in the Americas more than 400 years ago and brought it back to Europe.

Yes, that's right: the turkey, a case of mistaken identity par excellence. The reason for all the confusion is that the Spanish mistakenly identified the species with the African Helmeted Guinea-fowl (numida meleagris), also known as the turkey cock because of its importation to Europe through Turkey (lots of shipping went through the Bosporus at the time). And the name stuck, even when people realized the birds weren't the same. The confusion is also reflected in the scientific name: meleagris is Greek for Guinea fowl.

This explains the bird's name in English. To explain all its other nominative perambulations and

variations, you would turn off your computer and head to a large library or archive – somewhere you might perhaps be able to dig up the names of the Spaniards who first found the bird. Armed with this information, you would then learn that there are two species of turkey: the North American Wild Turkey, meleagris gallopavo (could the Latin name explain the Greek gallopoula?), and the Central American Ocellated Turkey, or meleagris ocellata.

Knowing of course that the Conquistadors landed in South America, you would logically conclude that the Portuguese name for the bird—peru—refers to the Ocellated Turkey. And further research would tell you that the Mayans domesticated it. From secondary sources, you would learn that it has been speculated that this species is more tractable than its northern counterpart, and was probably the source of the present domesticated stock. You would also soon discover however that no morphological evidence exists to support this theory. The chest tuft of domestic turkeys is a clear indicator of descent from the Wild Turkey, as the Ocellated Turkey doesn't have this tuft.

Several other birds that are sometimes called turkeys are not particularly closely related. The Australian brush-turkey is a megapode, and the bird sometimes known as the "Australian turkey" is in fact the Australian bustard, a gruiform. Turkeys also have snoods, the flap of skin that hangs from their beaks, an abnormality that humans sometimes develop too.

In short, to explain all the national misnomers, you—being a good historian—would embark on a journey that would cross-reference so many places, cultures and events, you would end up learning reams about world history, particularly beginning with the Age of Discovery. Incidentally, the fact that Asian countries have names for the bird that have no connection to geographic place names tells us how isolated countries like China and Japan were at the time.

Turkeys have been wholly and thoroughly misunderstood. And not just in terms of the names people have given them. Although they are generally deemed foolish and easily confused (and the word turkey is a synonym for "foolish" in the English language), any hunter will tell you the turkey is a game animal of considerable cunning.

It bears noting, finally, that Benjamin Franklin wanted to make the wild turkey the national bird of the United States. Fortunately the Bald Eagle won out! Otherwise millions of Americans would eat their national symbol on the last Thursday of every November, Thanksgiving Day.

Stories

Nice Bird

by Virginia Frati

Having always loved the outdoors, I didn't exactly surprise myself when I quit my longtime job as a secretary and founded a wildlife rehabilitation center. The paycheck I got from my nine-to-five job couldn't match the reward of watching a wild thing fly away - healed and free.

One sunny Saturday afternoon, our center received a call from the local police department. They reported that a car near Otter Pond had hit a goose.

We arrived to see one of the officers holding a large brown-and-white domestic goose. It had been lucky. Though blood oozed from the wound on its leg, the only damage was a broken toe, minor abrasions and a bruised wing.

To comfort him while tending to his wounds, I told the goose he was a nice bird. When I'd patched up his toe and ministered the other medical care, he nudged my arm.

I started calling him Nice Bird. Hearing this, he'd cock his head, looking at me out one eye, then the other. It was as if he were sizing up the name.

During his rehabilitation, he'd nip my legs if I didn't set his food down fast enough. And when the dish was empty, he'd honk loudly. Whenever anyone passed his pen, he'd honk, demanding attention.

Then the time came to release Nice Bird. Normally a happy occasion with wildlife, it isn't always so with domestic waterfowl because the wild isn't their natural habitat. But this bird's home was the wild. So I took him back to Otter Pond, where I left a pile of food and drove off slowly, looking back at him.

Nice Bird seemed puzzled. He honked loudly and ran a few steps after the truck.

The days passed. Driving by Otter Pond with my co-worker Jim, we'd

often spot Nice Bird grazing with his friends. We'd stop sometimes to give him and his pals some cracked corn: the weather was growing colder, making it hard to find food. Nice Bird always recognized us and would hurry over to greet us.

One day Jim and I passed Otter Pond but didn't see Nice Bird. I asked Jim to stop. We got out. His friends ran up to us, but there was no sign of Nice Bird. Alarmed, I walked further toward the water, calling to him. Nothing.

Suddenly I heard his familiar honking. As my eyes scanned the pond, I saw his head far down in the shoreline vegetation. Moving closer, I spotted him running back and forth, honking frantically. Something was wrong.

I worked my way through the briars and brambles, finally reaching a little clearing. To my surprise, a young herring gull lay among the thorns, weak and frightened. My big brown-and-white goose stood guard over him. Stooping to pick the gull up, I felt his bones, how dangerously thin he was.

I ran back to the truck with the gull, and Nice Bird waddled curiously behind.

We drove quickly back to the center. On the way, I wrapped the bird in a warm towel. Could it be, I wondered? No, mere coincidence. Had Nice Bird tried to get our attention by staying by the gull's side, then calling us to come and help his feathered friend? Could it really be?

Back at the center, we placed a heat lamp near the gull's cold body, and started fluid therapy. Later that day, Jim and I went past Otter Pond again. Nice Bird was grazing happily with the others.

Despite our efforts, the gull didn't make it. But as life left him, peaceful and warm, his last breath was drawn with the knowledge that someone cared for him, had tried to save him – a few humans and a big brown-and-white goose called Nice Bird.

Virginia Frati is director of the Wildlife Rescue Center of the Hamptons.

Release

by Kurt Trager

"There are diseases children can get from touching turtles," Monica half-turned in her seat and warned us in her thick German accent.

My wife Julia and I exchanged confused glances. I figured the driver might know more about this than we did, and so I made eye contact with him in the mirror. Lambros was a part-time security guard and full-time wildlife volunteer. The look he returned said he hadn't a clue either.

The Plexiglas box on Monica's lap contained a dozen year-old turtles. I wondered if the adult turtles in the open canvas bags at our feet were their parents. The fifty-year-old German teacher had saved them from the yard of a condemned house just minutes before the demolition men showed up with a tractor-hoe and a wrecking truck.

"Don't touch the turtles," Julia told our five-year-old daughter Anastasia, just to be on the safe side.

I made a mental note to learn more about turtles and their diseases.

As we pulled into the designated meeting place –the parking lot of the 2004 Olympic kayak complex at Marathon–Monica looked over her shoulder at us again. "And when teenagers kiss their lizard pets," she declared somberly, "they're kissing death."

"Death?" I inquired.

"Yes, death. Lizards carry bacteria that are absolutely deadly to humans."

We piled out of the car and were greeted by Giorgos, Kostas, Marousa and Elva from Greece's WWF chapter, Patrick, a certified vet's aide from London who'd lived in the Highlands and sounded Scottish, Rene with her tattoos from the States, Gabby and Rob from Canada, and somber-faced Jan, a photographer from Hungary.

Minutes later Filipos, the director of Miafisi Nature Network, drove up in his khaki Land Rover. There hadn't been enough room for my German shepherd in Lambros' car, so Bara had ridden in his jeep squeezed between the cardboard boxes with the rehabilitated birds Filipos had brought to Marathon to release.

I let my dog run around the parking lot, but not for long. That was because a pit bull jumped out of the last car to join our party, a black RUV. Only a puppy, it was a bitch too, and full-grown. Worse, it wore neither leash nor muzzle.

Doing my best to avert a dogfight, I put Bara on her leash. The other guy—the pit bull's master—didn't copy, and that pissed me off. What can I say, I'm prejudiced. Not against pit bulls, but their owners. And I've got good reason to be. A year ago in Russia I was attacked by a man who set his pit bull on me. The dog ripped my hand right open. What had I done to deserve that? Nothing other than remark to him that his dog ought to be wearing a muzzle, especially around children. It turned out my assailant was a policeman. I wasn't foolhardy enough to press charges.

Leading Bara away, I tried to think calmly, open-mindedly. You can't judge people by their dogs, I told myself. And this guy didn't seem like the chip-on-the-shoulder type. Plus he had two little girls with him. His daughters were dressed identically in pink. Okay, I resolved. I was going to give him the benefit of the doubt. Pit bull or no.

We climbed back into our vehicles and drove a few more kilometers to Skinya, the sickle-shaped beach flanked by marshland and small lakes where the Athenians defeated the Persian host in the battle of Marathon in 492 BC.

Carrying boxes with birds in them, we strolled over to a pond. Rene, whose tattoo of a magic mushroom showed on her slender shoulder, got a mallard out of one of the boxes and placed it in the water. It paddled around but didn't fly away.

We trekked over to a forest to release other birds. When we were inside the forest, Rob from Vancouver opened a cardboard box to pull out a hawk. But before he could grab it – whoosh! – the hawk shot out of the box like a bullet. It flew straight for a pine tree, dodged it at the last moment, and rose vertically to the heavens.

Photo by Viktor Takacs http://www.viktorphoto.com

Bara kept straining at the leash. I was getting tired of holding her back. What I wanted to do was enjoy the show like everyone else. But that damn pit bull was running around unrestrained. We were in a forest, for crying aloud. Why couldn't my dog run free too? So I put a muzzle on Bara and unclipped the leash from her collar.

The pit bull ran over and my old bitch tore after her, hair raised on end, barking furiously. I was glad the other guy called his dog over.

Now Gabby reached into one of the boxes and cupped a sparrow hawk in both hands. Slowly, she held it up for all of us to admire.

In five different languages, our small crowd cheered as the bird spread its wings and flew away over the ancient battlefield.

What happened next happened to Giorgos. He pulled a starling out of a box but he wasn't sure how to release it. "What should I do now?" he asked no one in particular, smiling confusedly.

"Hold it high, to the wind," Filipos advised. "When you're ready, give it a little toss."

Giorgos did just that. The starling, however, had different ideas. It dropped to the ground and took flight, but not in the air – it darted further into the woods like it had wheels on, like that cartoon of the Roadrunner.

"Gee, it flew across my living-room with no problem this morning," observed one of the Greeks.

"Well it obviously needs more time before its wings are strong enough," said Filipos and took off running after the bird, followed by Evi, his Finnish wife.

Luckily they chased it down. But then, as they were returning with it, the starling hopped out of Evi's hands and disappeared into a bush.

Photo by Viktor Takacs http://www.viktorphoto.com

It was a large bush – at least six meters in diameter, and very thick. We all circled round. To get a better look, I got on my knees on the soft ground and started pushing aside branches, thankful there were neither thorns nor brambles on them.

Then I saw it. "I've got it!" I shouted.

"Where?" my daughter Anastasia inquired from the opposite side of the bush.

But I was wrong. What I'd taken to be the starling were two large pinecones that had fallen from a tree into the bush.

Ten minutes elapsed with no result. People began to stand up and give up. That was when the two girls in pink joined the search. They stepped into the bush and one of their feet landed a few inches from my nose.

"Don't step into the bush!" I yelled at them both.

"Yes, get out of the bush!" Monica took up angrily. "If the bird's in here, you'll squash it!"

The girls looked at us like we were half-witted. Fortunately their father—the pit-bull master—ordered his daughters out. I was very impressed. I was almost beginning to like this guy.

Lambros suggested we take the bush apart. But none of us had a knife and the stems were as strong and elastic as the branches of a rubber tree. No matter how hard you tried, they just wouldn't snap.

Those who went on looking were convinced the startling was still in the bush. The rest of us were dead sure the tricky little bird had managed to flee unnoticed.

Another ten minutes went by before we all quit that fucking bush and headed out of the forest.

"If it manages to survive a week, it'll be okay," Evi struck up optimistically.

I wasn't so sure, especially after we walked by a pack of wild, hungry-looking dogs that roamed the beach area just outside the forest.

Philip raised our flagging spirits when he told us he'd saved the best for last. Besides Monica's turtles, there was still an eagle to release.

So our caravan made for the mountains, for the Monument to Nemesis the Athenians built two-and-a-half thousand years ago to commemorate their victory. The lush green foothills we drove through reminded me of my own country, Ireland.

The honor of releasing the eagle was all Patrick's. Yet when it left his hands, the eagle flew neither far nor straight. Like a paper airplane, it landed lopsidedly a couple dozen meters away.

As the Englishman stood wondering what the symbolic meaning of the eagle's poor performance might be, Filipos and Jan, not wasting a moment, marched off to fetch it. Frightened by their noisy determination to seize it, this time the majestic bird flew away properly, soaring high in the sky.

I looked at Patrick. The smile on his face couldn't have been broader.

Monica unpacked her turtles on the grass among the columns of Nemesis' monument. But then someone noticed a problem with an adult turtle. One of its legs was badly infected. There were insects on its impressively ugly, suppurating flesh, just where it entered the shell.

My wife and I stole a glace, remembering Monica's advice in the car. It hadn't been so bad after all.

"This turtle needs to be disinfected," Lambros observed. "It'll die otherwise."

Before returning to Athens, most of us went to a country taverna outside Marathon. I was secretly happy the pit bull family didn't join us.

Sitting at the long table, it quickly became evident that all of the North American volunteers were vegetarians and nearly all the Europeans were not.

When Rene dropped her fork, Patrick offered her his fork. She politely refused to take it: it had already touched the *paidakia* (lamb chops) when he'd used it to scoop them onto his plate.

An awkward moment of silence passed.

Then the waiter brought Rene a clean fork, and the conversation returned to the day's events. Helped along by the retsina, our international party hit stride again.

Johnny Seagull wants your stories!

He needs them to stay airborne!

Send your story to MIAFISI, Parthenonos 7, 11742, Athens, Greece or email to info@inaturenet.org

How I Became a Wildlife Volunteer

by Susie Mottashed

It all began very innocently. My early morning hike started out like any other. The cold crisp air, the crunch of the gravel under my feet, and a distant coyote searching for his breakfast all set the scene. Being a birder, I had my binoculars in hand.

I walked a mile or so, then stopped dead in my tracks. I felt my jaw drop and my heart begin to race. I didn't need the binoculars. An adult bald eagle was perched in a leafless tree just ahead of me, commanding the trail. It was absolutely huge and magnificent. I could see how big he really was because several crows were perched courageously on a nearby branch. They seemed as small as sparrows in contrast.

Three joggers came by and I stopped them to share this sight. They thanked me, as they would have just run past without noticing the eagle.

That was a defining moment in my life. It led me to apply to the Birds of Prey Foundation in Boulder, Colorado. I attended their volunteer orientation, visiting the mouse house, the quail house, the intensive care unit and the flight cages. My volunteer work began two days later.

I learned that every aspect of volunteering at the Birds of Prey Foundation has an impact on the birds. It's important to understand the function of the mouse house and the quail house. These areas are part of the backbone of the Foundation. Keeping them clean, providing the mice and quail with fresh food and water each day, and treating these animals with respect and dignity, plays an important role in the well being of the birds.

As a rookie volunteer, I spent a good deal of time in the mouse house. My time in ICU progressed at a slower rate. The first few months were filled with sensory overload: so many new sights, sounds and smells. And fear kept me from cleaning the occupied cages. But desire and training won that battle in the end!

I still have a healthy fear for our patients in ICU, but I'm able to go in and tender to their needs. Gradually, I've grown stronger, gaining a certain calm confidence when dealing with great horned owls, hawks and eagles.

The first few months were filled with sensory overload: so many new sights, sounds and smells.

I've learned that every aspect of volunteering is important – from washing the floors to cleaning an eagle's cage. Naturally, there are highs and lows. Hand-feeding a nestling cooper's hawk brings joy. And sadness comes when a bird doesn't make it. Both emotions are part of the learning process. But the greatest reward is watching an injured bird you've helped recuperate be released back to the wild. For me, that's an experience that rivals the sight of that bald eagle on that cold morning hike.

Susie Mottashed is the author and illustrator of the award-winning book, Who Lives in Your Backyard?

Home for the Holidays

by Suzy Heck

In the summer of 2000, a juvenile Brown Pelican was found walking the streets of downtown Lake Charles. He was all right, just tired and thin. Heckhaven Rehabilitation Center, which picked him up for rehab, has seen this many times: young, late hatchling pelicans in this condition. What happens is that when the parents decide it's time to migrate, some of the late hatchers that haven't clocked in enough practice flying hours take to the air with their parents, and head out across the Gulf of Mexico. That means their wings aren't strong enough for the long journey. These are the ones you sometimes see riding lone in the middle of the seas, or plopping down on a fishing trawler for a rest. And these are the ones that tire and land, and are found wandering around in the most out-of-the-way places, as if looking for someone to give them directions. "Brownie" was one of these pelicans.

After a few weeks of re-hydration, and many pounds of fish, Brownie was released into the center's pond area to mingle with the other pelicans. Heckhaven is conveniently located near the Calcasieu River. When they're strong and healthy enough, the pelicans and other waterfowl follow the river south down to the Gulf, or north up through the States.

So with fall arriving, Brownie would take to the sky and circle the Center and surrounding area. He'd follow me as I fed the other animals, sometimes landing in the middle of the deer pen to see what was on their menu. Each day he flew further, always returning for meals and nighttime roosting. He also discovered that by stopping at the nearby golf course, the workers would feed him fish as they cleaned the ponds of the summer overgrowth.

One day Brownie took to the air but didn't return. He'd found a brown pelican group, and flew off to join them. We all missed him of course, but were also glad: we'd done our job.

The following February, while I was feeding the deer, a shadow passed overhead. It looked like a small pterodactyl. Then it landed in front of me, bill open wide, waiting for a fish. Brownie had returned. That winter had been colder than usual, and the fish had gone deep. I figured

he remembered our "Free Eats" and came back to wait here until the weather warmed up. He stayed two weeks, flying to the river every few days, but always returning by dinnertime. When he left, he took a few of the pelicans with him.

Four years went by. Like clockwork, Brownie returned each Christmas. Sometimes he stayed a couple of weeks, sometimes a month or so.

2005 was different. Hurricane Rita brought disaster to Heckhaven, destroying the Center and devastating the land. She took down half our tall pine trees, uprooting them or snapping them in half like matchsticks. The city and surrounding area was unrecognizable. With my home and the Center undergoing major repair work, I spent Christmas in a trailer.

I worried about Brownie. Had he been in the area when Rita hit? Was he dead?

Then one day in late December, as clouds were gathering and I was hurriedly replacing the tarp on my trailer's roof, I noticed the pterodactyl shadow glide across the roof. It looked up – it was Brownie circling. I called to him repeatedly, but he wheeled around a few more times, and then flew away.

He returned some days later, flying over the barn and the release pond. But by the time I ran and got a fish, he was gone.

He simply hadn't recognized the place. And no wonder. The trees shading the pond, the wood lean-tos that the pelicans used for shelter, the deer pen, the Center's feeding room where he could look through the glass door and watch his dinner being prepared – all the landmarks were gone. Not to mention the noise of the construction work and the unfamiliar workers.

I had no idea how to make him understand he was in the right place, how to let him know a free meal was down here waiting for him. I took comfort from the fact he was alive and looked healthy. But I was very sad anyway.

But my worries were in vain. The very next evening, as Brownie flew overhead checking us out again, he recognized the lady down below yelling his name and flapping her arms. It sure didn't look it, but he realized this was the place – home.

Suzy Heck is director of Heckhaven Wildlife Rehabilitation Center, Lake Charles, Louisiana.

Features

International Party Turtles

by Andreas Economakis

September, 2005. A small mosquito bite hotel near Kalamaki Beach, Zakynthos, Greece.

I look at my cell phone clock. 5:15 AM. The mini van will be here to pick me up in 45 minutes. Groggy-eyed, I crack open the balcony's aluminum-and-plastic shutters and peak outside. The subwoofer beat of house music that drove me nuts all night becomes even louder. Across the dark green cow pasture that fronts my small cement hotel, a noisy electric orgy of laser and neon and Tungsten light dominates the skyline. It's coming from the throbbing strip mall road that is the village of Kalamaki.

The party is still in full swing in the scores of tequila slammer bars, 10-euro booze bonanza discos, Red Bull liquor stores, English fish-and-Guinness pubs, Singh Beer Indian restaurants and drink-until-you-scream karaoke joints.

As I shiver in the ice-cold shower (it's solar heated and so brutally cold at night) I have a revelation: how different the world would be were there sun and nice beaches in Birmingham, Tokyo, or Duluth. Perhaps only then would pristine places like Zakynthos be spared the homogenized amusement park sprawl that seems to have taken over most of the beautiful, sunny areas in the world. I don't know if it's funny or sad that it's easier to find a gin-fizz in Kalamaki than an ouzo. I wonder why tourists even come to Greece? To eat the same food and swill the same booze as back home?

Zakynthos: home of the Caretta caretta sea turtle. During the last few years these tranquil Loggerhead turtles have been fighting an uphill battle of their own. The enemy loves the coastline and quickly blankets everything in cement and noise and lights and garbage and smoke and plastic. It's a wonder a single sea turtle has managed to survive this invasion of their ancient nesting grounds. That's why I'm in Zakynthos. To help the sea turtles in this highly uneven and one-sided fight.

My name is Andreas Economakis and I'm a Greek-American filmmaker. I've been commissioned by Archelon, the Sea Turtle Protection Society of Greece, to make a promotional film about the volunteers who come to the Society's program from all over the world to help conserve the beleaguered Loggerheads and their threatened environment. My first destination is Zakynthos, where the Society's volunteer program is particularly important: it is on this lush, emerald-green Ionian island that the Mediterranean's largest Caretta caretta population returns each year to nest.

A car honks in the driveway and I grab my video equipment and leave the hotel.

The van doors slide open. Right away, long-hared Yonni, Archelon's volunteer driver for the day, calls out *"Shalom! Kalimera!"* with a heavy Israeli accent and a big grin. I squeeze myself into the van next to Angela, an Archelon supervisor and the only other Greek in the vehicle (well, she's half Rumanian), Aude, a French woman with a nice smile, another Yonni from Israel (this one

has a shaved head), and tiny Joe-John from New Zealand.

There's a warm moist wind as we speed to Kalamaki Beach for morning patrol. I stare out the smudged windshield at the tropical explosion of jungle greens and browns and blues and oranges developing in the road up ahead. We turn left and head down a wet pot-holed road that leads directly to the beach. The sun is just coming up. A mandarin-colored sky with intense dark gray-white clouds caps a frothy blue and menacing sea, which is particularly agitated today.

Yonni pulls up to the beach entrance and everyone piles out. "See ya Scorcese!' he shouts at me with a smile and a wink, flooring the mini-van's gas pedal and disappearing up the road. When I turn around, Angela, Joe, skinhead Yonni and Aude are already on the beach, looking at their clipboards. I pull out my camera, slide on my headphones and hustle down to film them.

Every summer hundreds of Loggerheads lay their eggs on the exact same beach where they were born. Apart from those on Zakynthos, Caretta caretta do this at a handful of other beaches in Greece as well: in Kyparissia, Koroni, and a few beaches in the Laconic Bay in the Peloponnese, as well as on Crete. No one knows why the turtles are hard-wired to return year after year to the land of their birth to lay their eggs. This internal compass system worked well for them over the millennia but now it's proving to be their Achilles Heel - the reason their numbers are being drastically reduced.

Returning annually to the beaches of their birth, most of the Caretta caretta are finding these overrun by humans and all their egg-destroying detritus: beach chairs, umbrellas, bright lights, cement, pollution, garbage, noise, sometimes even outright predatory behavior. The number of sea turtles that actually manage to lay their eggs on these hard-hit beaches has been in a steady decline for years. Were it not for the efforts of Archelon, WWF and a small handful of other conservation groups, the Caretta caretta wouldn't have a fighting chance against the all-consuming human invasion of their ancient nesting grounds.

> The party is still in full swing in the scores of tequila slammer bars, 10-euro booze bonanza discos...

As soon as I step onto Kalamaki Beach, I realize that the whistling wind and crashing surf are so loud I can barely hear Angela explain to Joe, Yonni and Aude what the morning's tasks are. I get closer. In English, the default language of Archelon's volunteers, she tells them that because of the previous night's rainfall, the hatchlings' traces to the sea are probably not going to be visible and so cannot be counted. She instructs them instead to look for signs that the baby turtles have hatched in the marked (and sometimes unmarked) nests: the indentations and bulging in the sand. She also wants them to count the number of tourists on the beach and get them to move closer to the waterfront if they've laid their towels or beach chairs near the hatching nests. These tasks, in a nutshell, comprise what is known as "Morning Patrol," one of Archelon's most effective tools in its coterie of efforts to help conserve the sea turtles and their environment.

> "I'll set them straight, the thoughtless cretins," she huffs in Greek and heads over to the couple.

Armed with their clipboards, National Marine Water Park tags and Archelon volunteer t-shirts, Angela, Joe-John, Yonni and Aude start walking down the beach, their eyes scanning the light brown sand. Not yet desensitized to the immense amount of garbage on most Greek beaches, Joe-John starts picking up beercans, plastic bottles and assorted garbage that has washed up, stuffing it all in his backpack as there are no waste bins anywhere in sight. He's obviously shocked at the amount of waste lying about. Aude tells him that she too collected the garbage at first but soon gave up as it got too heavy to carry around every day.

The group's first stop is a nest that started hatching a few days back. Its protective bamboo cage has been knocked askew by the wind. After Angela shows the group how to restore the cage to its original position, I ask Joe-John how he learned of the program and ended up here. He tells me he heard about Archelon from a previous volunteer while traveling in Borneo.

Further down the beach, Yonni and Aude spot a ghostly-white couple sitting too far up on the beach, near a couple of nests. Yonni gently nudges Aude forward and she hurries over to inform them that they need to move closer to the waterfront and away from the nests.

"Eastern Europeans for sure, or Russian," Yonni tells me as Aude approaches the couple. "You can tell by their flip-flops," he adds with a smile.

At first the ghostly-white couple seem annoyed by the early-morning French invasion. They don't appear to speak a word of English or French. Aude resorts to asking them to read a paragraph on her clipboard that explains in a variety of language what she needs them to do. After some hesitation, the man and woman finally understand and move closer to the water.

"Sometimes they don't speak English and they don't speak French and they only speak very little German. And even when they read the thing they don't understand," Aude says in her heavy French accent when she returns. "So I have to find a way to explain to them that they need to move. It's very hard sometimes because of the tongues."

"Where are they from?" Yonni asks her. "The Czech Republic," she answers rolling her R's. Yonni smiles at me, and I smile back. He was right.

We continue down the beach and round some rocks. A very long beach appears before us, with big hotels and lots of commercial action all along it. "This is Laganas, the main nesting beach on Zakynthos," Angela tells me. "And also the most abused," Yonni adds.

Soon we link up with Irini, the only other Greek Archelon volunteer in Zakynthos. A college student from Athens, Irini started her morning patrol on the other side of Laganas. She's wearing a bright pink volunteer t-shirt with baby turtles crawling on it. As we all walk on together, Yonni spots a pretty blonde sunbather lying near a nest. He quickly hustles off to give her the drill. Aude looks at me with a frowning smile. "You'll soon learn that he only talks to pretty young ladies," she informs me. "He'll be a while."

Further up the beach, the group spots a good-looking couple skewering a large umbrella into the sand right next to a nest. They've brought an intense amount of beach junk with them and have spread it over a large radius, partially covering another hatching nest. The coup de grace is when the guy stamps his cigarette out on the sand next to the nest and covers it up with sand. "Jeez!" Joe-John exclaims. "Should I go tell them?" he asks Angela. "They look Greek," she replies. "Better let Irini talk to them."

Irini nods and lights up. "I'll set them straight, the thoughtless cretins," she huffs in Greek and heads over to the beach-junk couple.

Just as she enters a long conversation with them, Yonni rejoins us with a smile and phone number. Aude rolls her eyes.

Looking towards Irini, Angela tells me that there's a shortage of Greek volunteers at Archelon, something that's felt on morning patrols, particularly when the volunteers have to approach Greek sunbathers. "Sometimes the Greeks don't want to

listen to foreigners because they feel like they're local and who's this foreigner to tell them what to do in their land. But generally, they're compliant," she says. A nodding Yonni remarks that he doesn't seem to have too many problems, even though he doesn't speak Greek. He attributes his luck with Greeks to the fact that he's Israeli and thus more in tune with the Mediterranean mentality. For Yonni it isn't so much the language barrier that's the main problem with the locals, but rather the economic issues. "Most Greeks speak English anyway. The tourists are usually very concerned and very cooperative. Yeah, and they really like the efforts that we're making. But with the locals it's a different story, because they feel like we're taking their income away and it makes them pretty upset. What they don't know is that in the long run it might increase their income."

It starts thundering and we all gaze up at the suddenly dark, steel-grey sky. Irini, who appears to be having problems with the argumentative beach-junk couple, seems relieved that at least the weather will clear the beach of all ill-behaving people. The first fat drops of rain start to fall and the couple hastily starts collecting their gear.

Irini rushes over and joins us. "Well?" Angela asks her. "Italians," she shakes her head with exasperation. "They barely speak any English and couldn't understand me."

The sky thunders again and a Biblical deluge begins. Everyone on the beach, volunteers included, runs for cover. I shield my camera and follow suit. I catch up with the volunteers and we take shelter under the roof of a small open-air tourist kiosk by the beach, near a road with lots of bars on it. "That's it for morning patrol," Angela says. "What now?" I ask. "Well, it's kind of a standby situation until the afternoon. If the sun comes back out, we'll continue with the beach patrol, and in the afternoon we'll do some nest excavations to count eggs."

"I know a bar up the street," Yonni tells us. Before anyone can answer, he slides the hood of his poncho over his shaved head and bolts up the road. Before I can say a thing, the rest of the volunteers take off after Yonni.

I point to a bar that's right next to the beach. "Why not go to this bar?" I ask Angela and Irini. "We would never go there," Irini replies. "See that laser light? They represent everything we're against."

A few hundred meters up the road, Yonni cuts into a shanty-styled bar called The Captain's

Hook. Fishnets and swords and black pirate hats and empty rum bottles decorate the wood-paneled walls. A bored looking English bartender perks up when she see us. Soaking wet, we sit at the bar and before long a variety of beers appear before us. "This is the best part of volunteering," Yonni grins. We all clink glasses and drink. Aude goes over to the jukebox and punches up a few songs.

A couple of stumbling Brits enter the bar, wearing wide grins on their faces. One of them hits on Irini. He's fascinated by her crawling baby turtle t-shirt, and yells out: "International Party Turtles! Yeah!"

Then the sun breaks through the clouds and a bright beam of light enters The Captain's Hook. "Lets get back to work!" Angela calls out and the volunteers get up and exit the bar, dripping wet but with smiles on their faces.

Don’t Shoot the Birds

Until just yesterday we admired swans for their majestic beauty. Today, these very swans have become “samples” to be sent to London for testing.

The tune of Hitchkock’s *Psycho* now accompanies images of pelicans and flamingos in the lakes of northern Greece. Europe’s most important wetlands were the pride of the country until recently.

We’ve already forgotten that the existence of birds is tied to our own existence and that birds were linked to our civilization.

Over and over again on television we see the same grebe leaving its last breath on the beach. The picture was taken in 2004 at Lake Coronias, when it served as evidence against the destruction of the environment. Today it has become a symbol in matters of public sanitation.

In less than one month, all the beautiful and positive things birds always symbolized to us have been lost. It seems we have very short memories. We’ve already forgotten that the existence of birds is tied to our own existence, and that their presence, their flight and voices, their colors – these all showed us there was life and health on the planet, and that birds were linked to our civilization. Didn’t we use to see many of our own human qualities in them?

So swallows will no longer bring the spring? Or storks babies? The dove can no longer be associated with peace? Does this mean swans will sing only one song - their song of death? And the nightingale’s song? Ironically it will become an alarm when it sounds in April, warning of the birds’ return from Africa!

I have devoted many years of my life to wild birds. I continue to do so today

through the MIAFISI nature network, an organization that unites activities whose aim is the protection and rehabilitation of wild birds. The new way birds are being confronted saddens me profoundly.

Let's not allow the panic spread by the mass media to change our perception of wild birds. Having said that, not for a moment do I mean that measures oughtn't be taken to deal with problems of public sanitation. These measures are very simple, correct and logical. Wash your hands! All I'm saying is that these measures, and the way in which they are presented in the media, musn't make us forget the beauty and value of nature. We musn't forget the respect we owe nature.

All I'm saying is that these measures, and the way in which they are presented in the media, musn't make us forget the beauty and value of nature.

Today most birds are threatened with extinction. Even species that were up until recently so numerous they represented something of a scourge–like starlings–are being reduced with the passing of each year. Yet the disappearance of birds will itself constitute a public health hazard. Does anyone imagine how many insects are eaten by swallows each year?

Does anyone imagine how many more insecticides and toxins will be used if the populations of other insect-eating birds are reduced? The mass media has created its own monsters. They managed to do this with a simple change of music and pictures of men dressed in white uniforms. As passive television viewers, let's at least remain objective when we watch the things they show us.

Hook Lake Wood Bison

by Nina Aalto

There are two different subspecies of bison or "buffalo," as they are more commonly known: plain bison (Bison bison bison) and wood bison (Bison bison athabascae).

Wood bison are threatened in Canada and endangered in the United States. There are an estimated 5,300 individuals still roaming free in Canada but none living in the wild in the U.S.

Due to strong laws, hunting is no longer the major threat to these animals. Human impact however has brought other threats to their survival. The livestock industry has introduced cattle born diseases like tuberculosis (Mycobacterium bovis) and brucellosis (Brucella abortus) to plain bison, which spread them to wood bison. Brucellosis is a bacterial disease that causes abortions and consequently is responsible for significant reproductive losses in all bovine animals. And along with tuberculosis, it poses a risk to human health as well.

Although domestic cattle herds in Canada have been brusellosis free since 1985 and tuberculosis cases are extremely rare and sporadic, both of these diseases are still common among bison. In the world's largest wood and plain bison reservoir, Wood Buffalo National Park (WBNP), forty nine percent of 342 individuals tested positive for tuberculosis in 1997-99. Indeed, WBNP is considered to be Canada's brucellosis reservoir.

Another concern is loss of genetic diversity. In an attempt to salvage bison from extinction, both subspecies were relocated to the same protected areas in the 1920s. Yet apart from spreading the diseases, this led to cross breeding and a considerable loss of full-blooded wood bison.

The Hook Lake Wood Bison Recovery Project aims to salvage the genetic diversity of wood bison. The project began in 1996 with the capture of free-roaming wood bison calves. In the following two years, 57 newborn calves were captured and bottle-fed. The idea was to create a disease-free wood bison herd by raising these calves in captivity where they wouldn't be exposed to possible disease carriers. Only calves that tested negative for brucellosis were chosen for the project (no effective treatment exists for this disease). Moreover, during the next several months, the calves

were given antibiotics to eradicate the possibility of tuberculosis. The founder animals (captured calves that started the herd), were raised to adulthood. Thanks to their successful reproduction, by February 2005, the size of the herd had already reached 122 (57 founders and 65 animals born in captivity).

I participated in the project's ongoing disease testing. We tested for tuberculosis by taking skin tests as well as serologically from blood samples. In addition, post-mortem examinations or autopsies were conducted. Brucellosis was examined from placentas and blood and this too was done twice a year. In November 2005, in addition to disease testing, pregnancies were scanned by ultrasound and semen was successfully collected from several bulls. This part of the reproduction process was especially significant in our attempt to save the genetic diversity of these animals. By collecting the semen now and in the future, the genes aren't lost.

Despite their prolonged captivity, these animals—these wood bison—are by no means domesticated. It takes twenty-five generations for them to begin acting like the kind of cattle most people are familiar with. We were fortunate to have access to the latest technology: huge cattle equipment that worked like a giant squeeze. The animals were sent down a corridor and separated by gates. Then we took one at a time to the squeeze, where we were able to fix the animal's head for sampling. That of course didn't prevent these guys from occasionally sitting and kicking, but I was nevertheless surprised at how well everything went. We performed the tuberculosis tests on the skin of the tail (caudal fold) and took blood from both the veins on the animal's tail and neck. Neither was easy. Thankfully the pregnancy checks were easier (even though the participants obviously weren't very willing to cooperate).

Bison are surprisingly fertile when you consider that they're on their own without any help from the vet. Perhaps we vets aren't that essential after all? Well, no, of course we are. And the ones I worked with in Fort Resolution definitely are! I was in professional heaven surrounded by veterinarians, biologists and technicians, and I enjoyed every moment of being a member of the Wood Bison Recovery Project. It was an excellent learning opportunity and I appreciated all the knowledge that surrounded me. And the people were a lot of fun too, which made working quite a lot easier, no matter the Canadian cold. I may be Finnish, but I'm a tropical bird at heart and get cold easily. Thank goodness I didn't get frostbite (one of my toes seemed slightly pale for some time, but the circulation returned and I still have the toe). Remember lesson number one: if your feet hurt, go inside. In addition of all the professional stuff, we played Canadian drinking games. Lesson number two: Canadians are really good at these games. Don't think you can beat them just like that.

I thank all the staff for having me there in Fort Resolution, especially Amy Maund and Dr. Brett Elkin. It was a great honor to be a part of the conservation program of these magnificent animals. From the bottom of my heart, I wish a successful future to the Hook Lake Wood Bison Recovery Project. It's good to see that people are both willing and able to make such a difference in maintaining the wood bison as part of Canadian's amazing wildlife.

Nina Aalto is a Finnish veterinarian (DVM). She is currently working in a small community in Finland.

An American in Bulgaria

by James Stephenson

I strolled past an old Byzantine fort on the Turkish-Bulgarian border with five kilograms of quickly thawing horsemeat swinging in two plastic bags at my side. The early morning sun bathed the golden hills with a tranquil glow, foreshadowing the tremendous heat that would come later that day. Perhaps it would rain, an answer to the prayers of the local villagers whose watermelons—and livelihoods—depended on the spring rains. Looking up at the cloudless sky, I noticed my feathered protégés circling above: a pair of Imperial Eagles.

I climbed the hill before me, as I'd done every day for the past month, watching for movement in the bushes that covered the rolling hills. I'd observed foxes, badgers and rabbits in this area that teemed and bristled with nature. But I was looking out for the venomous snakes the locals had warned me about. I was on their turf, so I tried my best to avoid an unwelcome confrontation. Bouncing my five-foot-long walking stick back and forth in front of me, I hoped the vibration would send the snakes down their holes and tunnels.

I was headed for the bare boulders at the hill's summit. My task was to give my offerings to the

young Imperial Eagles whose three nestlings were in the ravine below. I'd then continue to another nest eight kilometers away and repeat the task. Afterwards I'd spend the day hiding happily in a wildlife blind until late sundown, the nest barely visible in my binoculars, as part of the Green Balkans Imperial Eagle Nest Guarding Project.

Protecting these majestic birds, some of the last sixteen pairs in the country, is the work of the Green Balkans Federation of Nature Conservation and the Wildlife Rehabilitation and Breeding Center in Stara Zagora. I'd come to Bulgaria through the United States Peace Corps, a two-year volunteer program, and was assigned to work with the latter organization, one of the country's oldest and most active non-governmental organizations. I didn't have any experience in wildlife rehabilitation, but I did know my way around the grant-writing process. After an initial period of disorientation that came from being in an unfamiliar location (the Balkans) and listening to an unfamiliar language (Bulgarian), my hosts' natural hospitality helped me find my place much quicker than I'd expected.

The history of the Wildlife Center, the only such center in Bulgaria, began with one patient over ten years ago, an injured Imperial Eagle. It was rehabilitated in an empty room in one of the anonymous Soviet-style apartment blocs in the foothills of the Balkan Mountains. In that same year, 1995, the organization took over an abandoned building on the grounds of a local veterinary gymnasium. Gradually the Centeer formed valuable partnerships with the International Wildlife Rehabilitation Network and local universities. As public awareness of the Center grew, so did its volunteer base.

The Wildlife Center has grown to become Bulgaria's centerpiece in the field of wildlife rehabilitation. With new facilities for exotic and rare species, a modern veterinary operating room and large aviaries for the breeding of large vulture species, the Center is a far cry from its humble beginnings. Over one hundred volunteers work throughout the country under the guidance and direction of professional veterinarians and other staff members. Turnout at the weekly meetings is normally over thirty people. These are mostly students and local youth who want to get involved in nature protection.

I spent my two years chopping up unbelievable amounts of horsemeat and chicken to give to the 1,000-plus animals that pass through the center's doors each year. I gained a new appreciation of

the dedication and perseverance of wildlife rehabbers all over the world. In those chilly Bulgarian winter months, my feet cold and my hands numb from constantly banging the meat cleaver against a frozen wooden table, I sometimes questioned the importance of my role in the cause of nature conservation. But on those wonderful days when we released birds to the wild, be it on the coast of the Black Sea or in a valley in the rolling Rhodopes mountains, I knew I was part of something much larger than myself, and would smile at the sight of a rehabilitated lesser spotted eagle or long-legged buzzard soaring in the air again.

My hosts gave me the chance to participate in some of the many Green Balkans activities: from building a "vulture restaurant" in the Eastern Rhodopes, to working with locals to stop corruption and illegal timber harvesting in the Balkan mountains, to guarding the Imperial Eagle Nests in the Sakar region. And it was in the Sakar Mountains on the Turkish Border that I was overwhelmed by the beauty of nature but also by its fragility and how important it is for everyday people to protect biodiversity for future generations.

So it was in that capacity that I lived in a little Bulgarian village, woke at dawn and returned at dusk to help all the Imperial Eagle nestlings survive to repopulate their former domain. Looking outside my apartment window today, as the traffic rolls down the busy streets of Manhattan, I think of those beautiful wild areas of our world and applaud all those people working so hard to protect them.

James Stephenson is a graduate student in International Relations at Columbia University.

Yoko

Zachary

Adopt A Chimpanzee

In Defense of Animals-Africa, a non-governmental organization in the Republic of Cameroon, wages an extensive public education and sensitization campaign aimed at saving Cameroon's chimpanzees and gorillas from extinction.
In addition, IDA-Africa's Sanaga-Yong Chimpanzee Rescue Center provides sanctuary in a natural habitat to chimpanzees orphaned when their mothers were killed for the illegal bushmeat trade. Some orphans were captured by hunters as babies, often still clinging to their mothers' bodies, to sell as "pets" or as hotel "mascots." Others languished in confinement for decades. Today, fewer than 150,000 chimpanzees remain in Africa (where as recently as the early 1900's the wild forests were home to nearly 2 million chimpanzees). The illegal bushmeat trade and habitat loss are the primary threats to ape populations.

For a monthly donation of $15 for at least six months you will receive

» an 8x10 photograph of your chimpanzee with a full biography
» periodic updates and photos
» Certificate of Guardianship
» the satisfaction of knowing you have made a difference in the life of your new chimpanzee friend in Cameroon!

Adoptions make great gifts! Updates are sent to both you, the donor, and the friend or family member in whose name the adoption is made.

IDA AFRICA

Visit www.ida-africa.org to see photos and short bios of the chimpanzees in our adoption program!

To adopt a chimpanzee simply complete the convenient on-line form at www.ida-africa.org, call IDA-Africa at 503-643-8302, or print a form from our web site and mail it to the address provided.

Fast as a Bullet, Shy as a Butterfly

by Lambros Krampokoukis

Did you know the Cheetah started developing as a species 4 million years ago, long before lions, tigers, leopards and jaguars, which evolved about 1.6 million years ago? This big cat's name comes from the Sanskrit for "bright" and the Hindi for "spotted one." In Africa, cheetah are called "duma," a Swahili word.

Cheetah are entirely different from other big cats, both anatomically and behaviorally. They're built for speed. Their spine works as a spring, giving added reach for each step of their powerful hind legs. Special paw pads and non-retractable claws provide excellent traction, and big nostrils and lungs provide quick air intake. A large liver, heart and adrenal glands also facilitate a rapid physical response. And their long body is streamlined over light bones. Small collarbones and vertical shoulder blades also help lengthen the stride. The tail acts as a "wheel" for quick turning. And a cheetah's eyes are designed to provide a wide-angle view of its surroundings. There are dark tear marks beneath each eye that help reduce sun glare, an important feature when hunting.

A cheetah accelerates faster than most motorcycles. It does 0-50 kilometers per hour in just 2.3 seconds, and reaches a top speed of 112 kilometers per hour.

But this live bullet, this perfect killing machine, is a shy animal. The cheetah is easily frightened, permanently worried and very sensitive. This is a lonely animal. Males and females live apart and come together only to mate. Like most animals, they are territorial and mark their territories with secretions. The average size of a male's territory is 35-38 square kilometers; that of females can extend to 800 square kilometers.

Cheetah live between ten and twelve years. Mothers typically have between two and nine cubs.

The cubs are born blind and toothless. A newborn cheetah weighs half a pound and grows faster than other big cats. To prevent predators from eating their cubs while away hunting, mothers constantly shift the location of their young.

When the cubs are two or three months old, she starts giving them fresh meat. And when they're eight months and their teeth have appeared, she brings them live prey, usually gazelles.

Cheetah reach adulthood at eighteen months, when their mothers leaves them for good. Less than one-third of the cubs survive to adulthood. Once on their own, brothers and sisters go their separate ways.

Unlike most other wild cats, cheetah hunt mainly by day, usually early in the morning or at noon. They stalk their prey from a distance, mostly large herds of gazelle, impala or antelope, selecting old, injured or young animals. Once they've chosen the target they give chase, literally flying at the prey. Their powerful jaw muscles enable them to grip the prey for several minutes, thus suffocating their catch by clamping its windpipe. In this final phase of the kill, the cheetah's enlarged nasal passages enable it to breathe more easily. When the kill has been made, the cat will often pause to regain its strength before eating. This is when it's vulnerable and can often lose its prey to packs of hyenas or other scavengers of the open plains.

Cheetah have unusually clean eating habits. They never return to their kill nor do they eat carrion. They leave the skin, bones and entrails of their prey to less discriminating animals.

Just one hundred years ago, cheetah existed in all of Africa and in Asia (from as far west as Turkey to as far east as India). In 1948 they disappeared completely from India, when in one night a farmer killed the last three cheetah in his country. Gradually they began to disappear from other countries in south Asia as well.

With a registered population of some 60 in Iran and Afghanistan, today extinction is but a step away for the Asian cheetah (acinonyx jubatus venaticus). Things are better for the African cheetah. There are about 12,000 alive (there were 120,000 one hundred years ago). The greatest populations are in Namibia (over 2,000) and Botswana (over 1,500).

About ten thousand years ago, the species went through a genetic "bottleneck." For some unknown reason, at least 99 percent of the entire world population of cheetah died in a very short period. Some scientists have even suggested that the population may have dropped to just one pregnant female. As a result of this population crash, and the subsequent inbreeding, a male cheetah has a sperm count that is 90 percent lower than that of other big cats. To make matters worse, 75 percent of the sperm produced is abnormal. This is likely the main reason explaining the existence of King Cheetah, which instead of stigma has large black stripes. It's exceedingly rare and has been sighted only six times in nature, in Zimbabwe and Zambia.

Cheetah are losing the battle with other carnivorous animals. They simply can't compete. Predators kill a large number of cubs, and lions, hyenas and leopards steal over 50 percent of their prey. To avoid conflict with enemies, cheetah hide. The best places to do this are environments with bushes, tall grass and large plants. Their main enemy of course is man, rather, human overpopulation which encroaches upon their territories, transforming them into farmland. And as if that weren't enough, farmers kill them because they perceive them to be a threat to their livestock. In the 1990s alone, they killed over seven thousand cheetah with cage, trap, poison and rifle.

There are three international organizations that set the standards for the protection of cheetah. These are the World Conservation Union (IUCN), the Convention on International Trade in Endangered Species (CITES) and the International Cheetah Conservation Foundation (ICCF). Most of the work however is done in Africa by organizations active in the field.

The main ones are:

» Cheetah Conservation Botswana (www.cheetahbotswanacom) Botswana
» Cheetah Conservation Fund (www.cheetah.org) Namibia-Kenya
» Africat Foundation (www.africat.org) Namibia
» Dewildt Cheetah and Wildlife Center (www.dewildt.org.za) South Africa
» Cheetah Outreach (www.cheeta houtreach.org) South Africa

For all the problems, cheetah go on resisting. Recently, a number of cheetah were discovered in southern Egypt. This is a very encouraging discovery because for many decades they were considered to have vanished from that country. Hopefully other such nuclei exist in other countries – even if we humans never find them!

Stork Release in Filipiada

Western Greece, June 2005

photos by Viktor Takacs, www.viktorphoto.com

Zoology

by Peter Johnston

Take the Bahn to the Berlin Zoo. You'll notice the train girders, the signs and clocks: there are long razor blades on all of them. Pigeons are not a problem here, not any more at least. Visiting Berlin, you'd never guess the first animal to be kept in captivity anywhere – in the first zoo – were pigeons (around 4500 B.C., in what is now Iraq).

2,000 years later, elephants were semi-domesticated in India. And from the Egyptian tomb pictures at Saqqara depicting antelopes and gazelles wearing collars, we have the earliest known examples of zoo management. By 1500 B.C., Queen Hatshephut was organizing expeditions to capture monkeys, leopards, cheetah, birds, large cattle and giraffes from as far afield as Somalia.

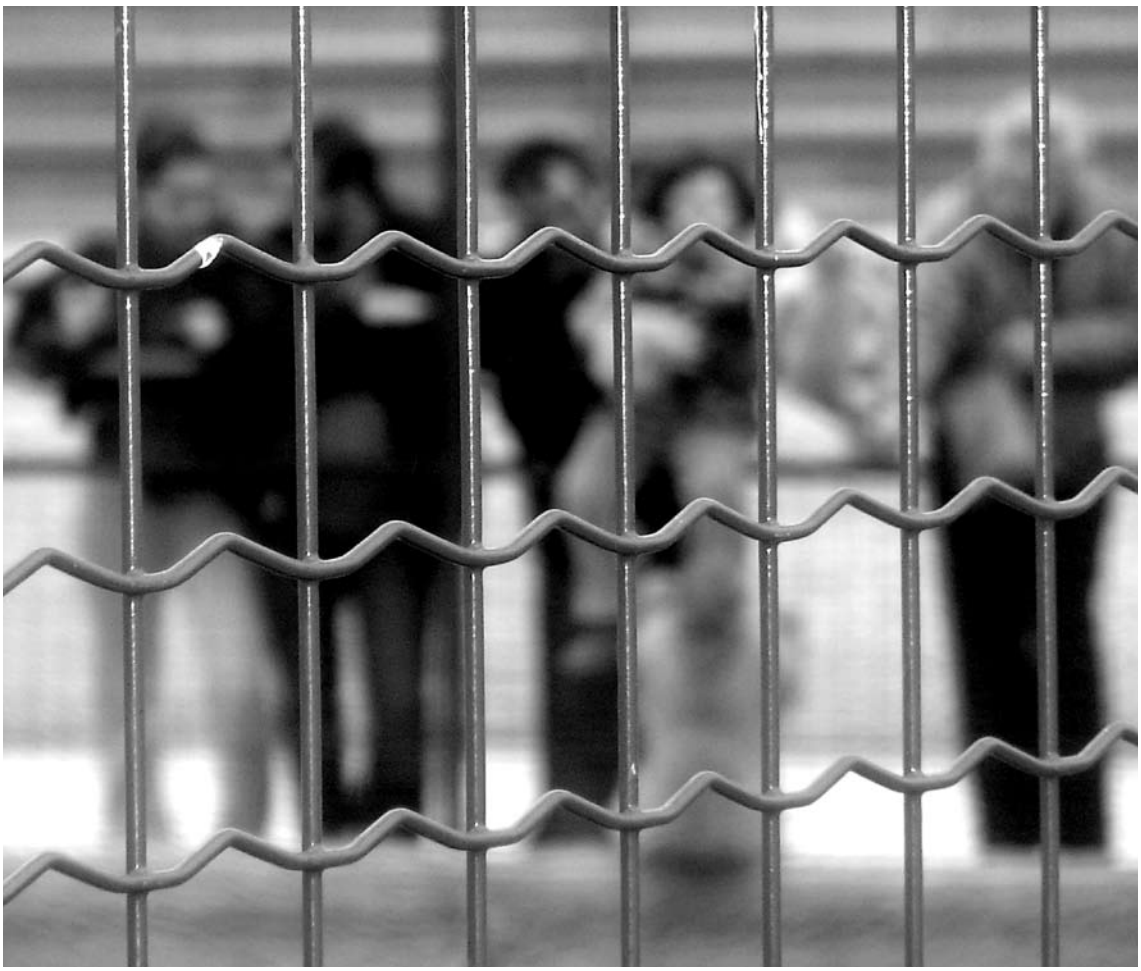
Around 1150 B.C., the Chinese empress Tanki built a great marble House of Deer. Wen Wang, who reigned just before 1000 B.C., established a zoo of 1,500 acres, called Ling-Yu, or Garden of Intelligence.

But it was the ancient Greeks who began keeping wild animals in the seventh century B.C., that were the first to charge an admission fee to zoos. By the fourth century B.C., zoos existed in most Greek city-states. In fact, it was an accepted practice to lecture to students in the city zoos. Aristotle did.

Ptolemy II developed the Alexandria zoo into the greatest collection of animals the world had yet known. It had so many animals it took all day for them to pass by the city stadium on parade.

Unlike the Greeks, the Romans kept wild animals mainly for spectacles in the arena, where army deserters and Christians fought dangerous beasts.

Although modern zoos claim to have built the first "walk-through" aviaries, the idea originated



with the Romans. Birds were kept for both study and table, and were allowed to fly freely in the dining room where some were caught, cooked and consumed.

Zoos fell into decline with the end of the Roman Empire, but we know that in the 8th century A.D. Charlemagne maintained animal collections. The most extensive zoo during the thirteenth century was the one Marco Polo visited at Kublai Khan's palace in Asia. It even housed fish.

When Cortez arrived in 1519 in Tenochtitlan, the zoo kept by Montezuma II, king of the Mexican Aztecs, astounded him. The huge number of carnivores and raptors ate five hundred turkeys a day. The collection was so extensive Montezuma had three hundred staff caring for the animals.

During the Renaissance and Age of Discovery, the nobility and merchants of Europe experienced a period of unsurpassed prosperity. The large varieties of animals brought back to the continent were kept in magnificent menageries built on the grounds of castles and palaces. Some of today's best zoos were founded in that era. Indeed, modern zoo keeping began in 1752 with the founding of the Imperial Menagerie at Schonbrunn Palace in Vienna. Opened to the public in 1765, it still flourishes today.

By the mid-nineteenth century, zoos were being opened all over the world.

Have you ever wondered which is the biggest zoo in the world? The answer of course depends on what you understand by "biggest." If you mean number of mammal species, then the biggest zoo is the Berlin Zoo, with 261.

The best available data on the question is that compiled by IUCN, the World Conservation Union. Headquartered in Switzerland, it serves as the United Nations of conservation. A Ph.D. dissertation could well be written based on this data, and not only because it hasn't been done before.

Such a study could reveal a lot not only about animals but about humans as well. Of course the doctoral student who eventually undertakes this study will have to approach it with the utmost care and caution. He or she must know statistics, and be prepared to journey far and wide to locales to conduct research.

Available data on zoos is not perfect. Large gaps exist. The directors of zoos, for instance, don't always respond to the IUCN's request for information. That's in keeping with the fact that the aim of most zoos nowadays isn't the study of animals but public entertainment and commercial gain. In some cases the only information available is the name of the zoo. Other times, the situation is quite bizarre. For Mozambique, for example, we found the name of the zoo in the country's capital, Maputo, but the entries for the numbers of mammals, fish and other animals were all "0". Further research revealed that a doomsday scenario had come to pass in that poor country. During the civil war, most of the zoo's animals vanished – eaten by hungry people. John Ryle, a *Guardian* journalist who visited the place in August 1998, wrote that the keepers had converted the zoo into a small livestock enclosure to breed pigs and chicken. The zoo had served as a barracks, and with the return of peace it had become a trysting ground for young Mozambicanos. Rounding a corner, the journalist found himself face to face with a white rhino, a very rare animal indeed. The poor beast had body art scratched onto its hide by the soldiers. *"Viva o Revolucao,"* announced its left flank. *"Abaixo o Imperialismo,"* declaimed its right. "The animal was a monument to the political history of the country," noted Ryle. "Sadly, its fate, somnolent and alone, mirrored that of many of the radical aspirations of the liberation movement."

From the zoo in the country's capital the entries for the numbers of mammals, fish and other animals were all "0"

Another non-entry in the IUCN's roster of world zoos is the one in Kinshasa, Democratic Republic of Congo – erstwhile Zaire. Created in 1933 by the Belgian colonial administration, the zoo had long served as a transit zone for animals destined for export to Belgium, the first Western country to come seriously and for a long time to Africa, for rubber. As Keith B. Richburg reported for *The Washington Post* (March 31, 1992), in a city whose people couldn't find enough food, many of the animals had died of starvation: "Two brown bears that live in a concrete pit have become so emaciated that when they stand up, their ribs poke through the fur. Two lions languish on a nearby rock, hungrily eyeing the zoo's few visitors. A caged chimpanzee named Sakombe sticks his arm through the bars of his pen, his palm open upwards, begging for something to eat." More recently, *Agence France-Presse* reported that the zoo had no safety guarantees either for the species or the visitors: "One zoo worker was bitten by a famished chimp ready to grab anything that looked like food." (September 12, 1997).

A caged chimpanzee named Sakombe sticks his arm through the bars of his pen, his palm open, begging for something to eat.

Because of the lacunae in the data, it is impossible to calculate the total number of animals held in captivity around the world. However, the available figures do permit us to cull valuable information and draw interesting conclusions.

The following table shows the zoos with the greatest number of mammal species and the greatest number of mammals.

The numbers in parentheses on the right—1-to-10—indicate the order of magnitude of each zoo in terms of the number of animals it houses.

Mammals

Zoo	Species	Number	
Berlin	261	1,551	(5)
San Diego	212	1,363	(6)
Singapore	207	1,747	(4)
Grodno *(Belarus)*	n/a	1,304	(8)
Rostov-on-Don	182	745	
Plzne *(Czech Republic)*	175	1,273	(9)
St. Petersburg *(Russia)*	159	551	
Germany	155	571	
Johannesburg	151	642	
Belgium	149	1,207	(10)
Cincinnati	145	648	
Chicago	143	1,316	(7)
Bronx	136	2,021	(2)
California*	122	1,801	(3)
Catskill Game Park	66	1,060	
Sochi *(Russia)*	7	2,147	(1)

* The name of this zoo in California was "lost in the shuffle" because IUCN's Conservation Breeding Specialist Group recently discontinued its Global Zoo Directory (from which all the data was gathered for this article).

The situation concerning birds is as follows:

Birds

Zoo	Species	Number	
Berlin	556	2,385	(6)
San Diego	537	2,325	(7)
Wild Birds *(S. Africa)*	400	3,000	(4)
Plzne *(Czech Republic)*	387	1,281	
Tenerife *(Canary Islands)*	356	3,760	(2)
Vogelpark *(Germany)*	350	1,000	
Vogelpark *(Austria)*	350	2,200	(9)
California	323	1,615	
Bolivia	310	1,435	
Beijing	277	1,930	
Palmiros *(Canary Islands)*	274	1,321	
Giza *(Egypt)*	n/a	5,000	(1)
England	n/a	3,078	(3)
Abu Dhabi	n/a	2,426	(5)
Alexandria	n/a	2,317	(8)
Mexico	n/a	2,136	(10)

Do note the zoo in tiny Bolivia, and how it stands out for its number of bird species.

In terms of reptiles, the table looks like this:

Reptiles

Zoo	Species	Number	
San Diego	217	1,069	(9)
Plzne, Czech Republic	169	713	
Moscow	166	604	
Houston	164	482	
Madrid	150	487	
San Diego	148	785	
St. Louis	145	548	
Berlin-Friedrickfeld	141	639	
Texas	140	643	
Ohio	130	1,264	(6)
Center for Herpetology *(India)*	24	7,873	(1)
Tortoise Farm *(Canada)*	75	4,500	(2)
Croc Park	3	2,189	(3)
Indonesia	2	1,844	(4)
Instituto Butantan	60	1,550	(5)
Brazil	18	1,260	(7)
Abu Dhabi	45	1,097	(8)
Sao Paolo	63	998	(10)

One can only wonder at the amazing number of reptiles kept at the Center for Herpetology in India. Are they in captivity to serve medicine? This is the kind of question our graduate will have to tackle. And clearly the purpose of the Tortoise Farm in Canada and the Crock Park in the United States is to impress tourists with the sheer number of concentrated reptiles. Or perhaps they're farmed for the pet trade (keeping turtles as pets isn't the wisest thing to do)?

Amphibians present this picture:

Amphibians

Zoo	Species	Number	
Detroit	80	900	(1)
Kentuky	61	357	(6)
California Aquarium	60	200	
Nagoya	59	414	(4)
Plzne, Czech Republic	54	297	(9)
London	53	202	
Berlin	34	550	(2)
Budapest	34	457	(3)
St. Louis	33	100	
Germany	31	325	(7)
Bronx	31	359	(5)
Trinidad & Tobago	13	310	
Tokyo	26	268	

As concerns fish, we have:

Fish

Zoo/ Aquarium	Species	Number	
Florida Aquarium	738	13,125	(7)
Toba Aquarium	535	14,301	(6)
Stuttgart	459	6,195	(10)
New England Aquarium	432	4,568	
Sea World California	429	7,640	(9)
Tokyo Sea Life Park	398	53,319	(1)
Tokyo	393	10,301	(8)
Shima Moreland	375	4,937	
Suma Aqualife Park	277	24,657	(2)
Tenerife, Canary Islands	193	17,175	(4)
Seattle Aquarium	213	16,928	(5)
Fuzhon Giant Panda Research, China	20	20,000	(3)

Why are there so many fish at the Fuzhon Giant Panda Research Center? Also rather strange, and not shown in the table, are certain other centers in China where there are thousands of fish – but all of one species (like the Shanghai Zoo, for instance, which reported 1,582).

Invertebrates, as the smallest animals, are found in the greatest numbers:

Invertebrates

Zoo/ Aquarium	Species	Number	
Insectarium de Montreal	n/a	160,000	(1)
Florida Aquarium	434	5,309	
Japan	270	2,671	
Germany	244	9,838	(6)
Monterey Aquarium	233	120,000	(2)
Plzne *(Czech Republic)*	211	1,867	
Vancouver Aquarium	197	4,336	
Berlin	190	6,329	(10)
Seattle Aquarium	164	4,078	
Bermuda	143	12,141	(5)
Washington	135	6,962	(8)
Tokyo	120	60,500	(3)
Tokyo Sea Life	125	26,501	(4)
Sea World California	79	7,660	(7)
Sapporo	13	6,399	(9)

So what conclusions may be drawn from all of this data? Two zoos figure in most of the above tables, and deserve to be singled out: the Berlin Zoo and the San Diego Zoo. The Plzne Zoo in the Czech Republic also merits special attention. For such a relatively small country to have such a rich zoo is quite remarkable. All the more so given that only about 25,000 people visit this zoo annually. Bigger zoos around the world might justifiably question why so many animals are hidden away at Plzne Zoo.

In terms of the number of people who visit zoos annually, the "biggest" zoos in the world are:

Zoo/Aquarium	Visitors	Staff
Beijing	11,000,000	1,140
Chapultepec, Mexico	5,520,000	117
Giza, Egypt	5,000,000	165
Busch Gardens, Florida	4,500,000	140
Tokyo	4,319,121	115
Lincoln Park Zoo, Illinois	4,000,000	96
Sea World Florida	3,900,000	1,800
San Diego	3,412,126	1,130
Berlin	3,393,817	258
Hong Kong	3,388,352	761

Struck by the number of visitors at Beijing Zoo, I investigated further. And indeed, I found that 11 million visitors annually is quite possible given that on some days up to 300,000 people stream through this zoo!

The final table is the most interesting. It shows the countries with the greatest numbers of zoos, zoo-goers, the population of these countries, the ratio of zoo-goers to population, and the GNP of each country.The brave graduate student who undertakes such a study will of course crunch these numbers. Even a cursory glace, however, tells us that the richer the country (as measured by GNP), the greater the proportion of people who visit zoos.

Americans aren't the richest people on this planet, and neither are they the most "zoo-going". First place goes to Switzerland, where the average income is 40,630 USD per annum, with over 60 percent of the population visiting zoos each year. Japan, Monaco and Denmark follow suit, with variations. Although not as well-off as the Japanese, we see that the Danes visit zoos more often. Monaco is obviously a red herring. Three times its population visits zoos because of tourism.

But you don't need to be rich to love animals. Observe the entry for Uruguay. The average Uruguayan makes about 5,000 dollars a year, yet over half the country's population visits zoos!

What zoos tell us about a country or a society and its people is a fascinating question. Now all we need to do is find that graduate student.

Country	Zoos	Visitors	Population	Percent visitors/population	GNP (USD)
USA	327	107,975,569	272,639,608	39.6	26,980
Japan	152	56,018,339	126,182,077	44.3	39,640
China	133	62,129,450	1,246,871,951	4.9	620
Germany	98	36,607,870	82,087,361	44.5	27,510
UK	85	16,458,305	57,832,824	28.4	18,700
India	73	35,364,934	999,826,804	3.5	340
France	53	12,235,152	58,978,172	20.7	24,990
Canada	49	9,429,781	31,006,347	30.4	19,380
Australia	34	6,650,895	18,783,551	35.4	18,720
Switzerland	25	4,414,771	7,275,467	60.6	40,630
Brazil	24	10,049,980	171,853,126	5.8	3,640
Mexico	24	10,005,003	100,294,036	9.9	3,320
Indonesia	21	13,667,956	216,108,345	6.3	980
Italy	19	2,593,545	56,735,130	4.5	19,020
Denmark	13	2,991,146	5,356,845	55.8	29,890
Sweden	13	4,243,721	8,911,296	47.6	23,750
Czech Republic	13	2,762,265	10,280,513	26.8	3,870
Netherlands	12	7,615,239	15,807,641	48.1	24,000
Austria	12	2,604,077	8,139,299	31.9	26,890
Belgium	10	2,047,203	10,182,034	20.1	24,710
Finland	4	819,415	5,158,372	15.8	20,580
Uruguay	3	1,700,000	3,308,583	51.3	5,170
Egypt	2	6,840,000	67,273,906	9.9	790
Estonia	1	595,516	1,408,523	42.2	2,860
Monaco	1	975,634	32,149	300.3	30,347

“First to the Moon” Russia, 2005

Departments

Johnny Seagull's Flight Log

Snakes and Pumps

It was 3:12 a.m. and Johnny Seagull was flying above India's Andhra Pradesh, crossing from Mahbubnagar into Anantapur State. Suddenly he heard a strange cry coming from the parched fields below. He wheeled and dropped altitude, getting closer.

"Aaah! Aaah!" It was a teenager yelling near an electric pump. He was hopping about, favoring one foot. Then he kneeled over and dropped onto his side.

Johnny Seagull flew on, wondering how the boy had hurt his foot.

He hadn't flown three kilometers, when he heard another human howling in pain in the fields. It was a man in his mid-thirties. Like the boy, he too had fallen onto his side and was clasping his foot. And he, too, was a couple meters from a pump. After a while, the man rose and hopped off down a dirt path that led to a village.

Odd, how odd, Johnny thought. He decided to see if he could make heads and tails of this all.

Landing on a nearby palm tree, he saw something black and shiny glisten in the field. It was water coming out of a pump.

Soon a mangy dog approaching the field. It lowered its head and drank its fill.

"Dog!" Johnny Seagull called to him. "I'm up here."

The dog looked up, and came over to the palm tree.

"What's going on?" Johnny asked. "Why are people shouting so painfully?"

And the dog told him the story. He said that in those districts the occasional encounter with a snake was an occupational hazard for farmers. That usually happened when the rains came or during the harvest. But recently, he said, many farmers had been tasting the serpent's tooth with alarming frequency. And they were doing so at around 3 a.m.

As he listened to the explanation, Johnny noticed a couple snakes chasing rats. He also saw a wild boar approach the water.

The dog said that the rise in snakebites was tied to a government policy that released electric power for farming at 3 a.m. The current was switched on at that hour and a family member had to be in the fields to monitor the pump-set and the flow of water.

"I see," Johnny nodded understanding. "Snakes are shortsighted and don't expect humans to be stepping on them at 3 a.m. when they're hunting."

"That's right. And the appearance of water in parched fields has other effects too. Like scorpion bites. All of us creatures need water. When water shows up at 3 a.m. so do wild animals. A woman was gored by a wild boar last week."

"Poor people," Johnny said sadly. "Tell me, who's responsible for this irrigation practice?

The dog smiled wryly. "Certainly not the farmers. It's the bureaucrats in Andhra Pradesh State who are to blame. Few states have followed the World Bank-chartered script for power reform so diligently. Apart from massive hikes in tariffs that squeeze millions of small farmers—that's why I

wander the fields at night in search of food—the government is abandoning public health and draining it of funds. The victims of power reforms have become the victims of health reforms. Primary health centers (PHCs) are turning the poor away and referring snakebites to the vaids…"

"The who?" Johnny Seagull asked confused.

"Vaids – traditional healers. For a couple of coconuts or some rice, they try to save people's lives."

"There isn't anti-snake bite serum?"

"Not enough to go around. Because of the deficit, a vial can fetch as much as 1,000 rupees on the black market. The serum shortage is aggravated by militant groups like the People's War Group (PWG), the Liberation Tigers of Tamil Eelam (LTTE) and others in jungles who buy it up in large quantities." After a pause, the dog added: "Well, the ocean's far and I bet you want to be getting on your way. As for me, I need to try and catch a mouse."

Johnny Seagull thanked the dog for his information, and flew off.

Twenty miles into Anantapur district, he heard someone shouting "Aaaah!" He kept on flying.

Gribniki

Johnny Seagull was flying in rainy Russian airspace fifty kilometers south of the medieval Swedish town of Vyborg, not far from the Finnish border. He crossed over the Vyborg highway, which goes directly north out of St. Petersburg. Cars were parked all along the road. Below, *gribniki* (mushroom-gatherers) were clearing the woods of *lisichki*, or chanterelles ("foxies" in Russian, because they're chestnut-orange), *volnushki* ("wavies," which grow in ripples), *masliata* ("oilies," as they're covered with a slimy film) and *podosinoviki* ("under-the-asp-trees").

An hour later, deep over a virgin forest of spruce and asp, Johnny Gull noticed two men with baskets below. How had they come that far into the forest, he wondered? Landing on the top branch of a spruce tree, he observed them. Were they lost? The lead man was studying his compass, a concerned expression on his face.

An hour later, deep over a virgin forest of spruce and asp, Johnny Gull noticed two men with baskets below.

Wishing them luck, Johnny was about to spread his wings and fly off again when he heard the other man shouting, "Ivan! Ivan! Come here quickly!" His voice was more than alarmed.

The man with the compass spun around and ran toward his partner, crashing and splashing through a swampy section in the woods.

Johnny couldn't see from his perch, so he flew closer.

The sight was unreal: a man lay dead, face down in a small clearing, a mosquito net covering his head. There was no blood on him, not even a scratch. He was wearing rubber boots, jeans and a military overcoat. A wicker basket lay on its side next to him, and half the mushrooms had spilled out of it.

But that wasn't the amazing thing. In the underbrush about ten meters away from the dead man, was a huge black mound. It was a dead bear, slumped on its side. The bear, like the dead man, looked middle-aged.

Flying away, Johnny figured out that when they'd stumbled across each other, the man and the bear were so startled that both of them had heart attacks. He'd flown over those woods before, but hadn't ever sighted men or bears in them.

The Prison

Gliding over the island of Aegina, which isn't far from Athens' port of Piraeus, Johnny Seagull noticed a bird flying with difficulty. Getting closer, he recognized an eagle owl he'd met on the island back in 1998. He asked him what the matter was. The owl explained that in 1999 a novice hunter had mistaken him for a partridge. But the hunter turned out to be a decent fellow. He picked him up and drove him to the local wildlife rehabilitation center to have his shattered wings mended.

The center, said the owl, was unusual – it was housed in an abandoned prison.

"I want to see the place," said Johnny. "Take me there."

Soon the two birds were perched on the old prison's red-tiled roof. The building was deserted, abandoned to weeds and lizards. The local authorities, the eagle owl told him, had reclaimed it from the wildlife volunteers who'd squatted in it in the late 90s.

Johnny's friend hopped over to the roof's inner edge, and looked down into the large courtyard. Cell doors flanked it all around. He said that many of the birds—himself included—would walk clockwise around the courtyard. Just like the prisoners used to. There were buzzards and pigeons, storks, vultures and pelicans – all walking in circles in the courtyard. Plus a frail donkey parked immobile in one of the corners, gazing at the others. Too old to work, its master had left it to die in some field, and someone had brought it to the center.

Most of the recuperating animals lived in the old prison's cells. Apart from the graffiti that was scribbled on the walls, the cells were identical. They each had a little window that opened up onto another, darker courtyard – the prison's execution grounds, where firing squads had occasionally gone to work before the prison was closed down. And all the cells had a Turkish toilet (a hole in an enamel basin) by the door. The birds liked these holes, and had converted them into makeshift nests. Because the metal doors were so heavy, the volunteers had often used sledgehammers to open the sliding rods. This noise frightened the animals, and they'd scurry or fly out of their enamel nests. And that, smiled the eagle owl, would startle the volunteers, especially the newcomers.

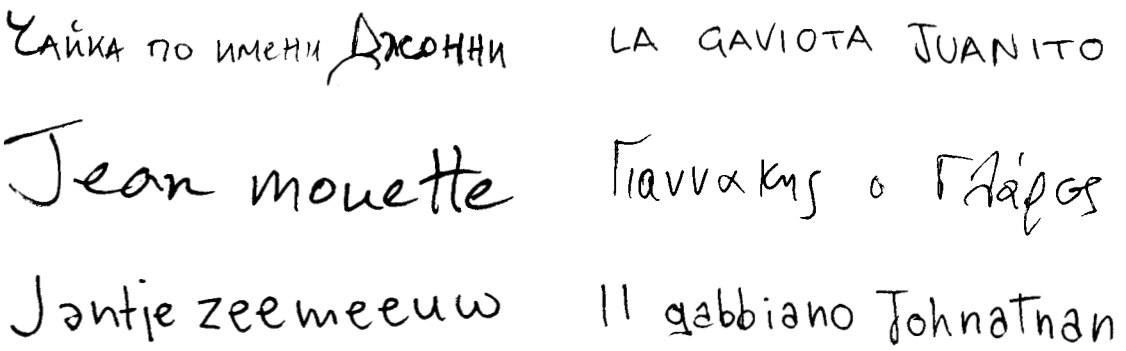
He told Johnny Seagull that there were two things about his stay at the prison he'd never forget. The first was a shot fox that had been found barely alive in the mountains. While the center's vet was removing the buckshot from its hide, it suddenly stopped breathing. Just then one of the wildlife volunteers, Evi from Finland, gave the fox mouth-to-mouth resuscitation and—much to everyone's surprise—it came back to life!

"That fox is alive and well," said the eagle owl. "It's still killing the peasants' chickens."

The second thing he said he'd never forget was the time an old man appeared at the door of his cell. He spoke with a Greek volunteer who was cleaning it out. The old man had been an inmate, a political prisoner in the 1970s, during the colonels' dictatorship in Greece. He said that that very cell had been his own. He also told the volunteer he'd hidden something in the prison, but wouldn't say what it was. All he said was that he'd soon return for it.

"What was it?" Johnny Seagull asked, intrigued. "What had he hidden in the prison?"

"I don't know," answered the owl. "The old man never came back."



Interview

IMAD ATRASH
founder of PAWS (Palestine Wildlife Society)

How did wildlife enter your life so profoundly? Was there a particular incident that triggered your interest in wild animals and nature?

I started this work with my mother when I was a child working in the fields. In 1979 I joined the Boy Scouts in my town of Biet Sahour. Later, at Bethlehem University, I was a lab assistant in the Biology Department for thirteen years. I became very interested in the ecology and geology of Palestine, and started to take nature photos. That's how it all began.

How did your interest lead you to become one of the founders of the Palestine Wildlife Society, the first of its kind in your area?

After my stint at Bethlehem University, I worked for eight years with the Evangelical Lutheran Schools in Palestine, as an environmental educator. I taught environmental awareness and nature conservation as extracurricular activities for students (grades 5 to 11). It was a difficult time for me because there was no information on the subject. But it was a success, a first for Palestine society, and other organizations followed suit.

You've been working in Palestine under conditions that are often adverse, unstable and dangerous. How has this affected your work?

The greatest difficulty was the Israeli Occupation. They often closed our towns and cities yearround, which made our work very hard to carry out.

Have you seen any changes in the reaction of people towards wildlife issues since PAWS began working?

Yes, there has been a lot of change for the better in our society. Our work has yielded very good results. Like our Nature Conservation Concept, whose implementation was utterly inconceivable during the occupation. Also, Palestine's biodiversity strategy has included all of the information we provided. We've been building up to this aim since 1993 and have trained around 700 teachers of this concept. A lot of people have gone on to get B.Sc., M.A. or Ph.D. degrees in various environmental subjects. We're very proud of that.

Do people around you think that wildlife issues are a waste of time when there are so many unsolved human problems?

Yes, that was true in the beginning. People would say I was wasting my time on the wrong things. I had a hard time explaining to our people that we had to protect our nature, that it was for us and not the Israelis...I remember when we started bird watching with children. It was a completely new activity, but the kids accepted it. Now adults do it too.

What are your plans for the future of PAWS, and what do they depend upon?

We are looking to increase our numbers and the people who can lead these activities in the future. We would like to see more donations, so we can help our conservation future. We need more support. The general situation here is so difficult...

Interview by Philip Dragoumis

Odds & ends

Sharks vs Seagulls

French Foreign Minister Dominique de Villepin wrote a book comparing the Americans to vicious sharks and the French to a graceful seagull. One "shark" responded by reminding him that seagulls are referred to as "rats of the sea" and people feed them Alka-Seltzer to watch them "asplode".

Sounds

According to Human Rights Watch, detainees were transported blindfold to and from the Secret Detention Center at Temara in Morocco, a place where torture was routine. The prisoners however were able to recognize where they were. They could hear the sounds of animals coming from a nearby zoo.

Baiki

Sergei Stepanenko, a 40-year-old biker from St. Petersburg, Russia, reports:

"My contact with wild nature has been interesting recently. As I was riding my Harley to a friend's dacha, I saw some fresh road kill. It was a large hare. I hate waste, so I picked it up and took it to a dog I know (a very clever dog), and gave it to him. By evening, not even the hare's paws were left. The dog was very content.

And in the nearby woods, magpies stole fledglings from a starling nest, and ate them.

A couple weeks ago I ate part of a deer that a friend had shot in Pskov Region. Cold meat with horseradish is very tasty. The fat gels immediately, just like goat meat.

What else? Oh, yeah. On the tube the other day there was a program about "crow hunters." These are rich New Russians who drive their cars to St. Petersburg's suburbs after work and shoot crows. Their weapons cost 1,000 euros each, and come complete with laser and telescopic sights.

Soaking Wet

A subscriber from Greece, who prefers to remain anonymous, writes:

Hey, Jon Gull. This happened in January. My wife was on her way out the door with our one-year-old son. But just then it started to pour so she grabbed an umbrella and left the little one behind.

Because my son was all dressed up, I let him out onto our covered balcony. At least he'd get some fresh air, I figured.

I returned to my computer and went back to work. Suddenly, I heard my boy laughing loudly. I turned around and looked at him. He kept on giggling happily at something in the courtyard. Wondering what was up, I went out and joined him.

And guess what? My son was laughing at a soaking wet gutter rat! It was darting around the courtyard, desperately trying to find cover from the rain.

Literature

Animals in Russian Literature

by Julia Volkova

The name Larisa means "seagull" in Greek, a proud and strong bird eternally fighting the cold and the winds. We associate its flight with freedom, with the joy of change, and its cry makes us pine for unknown distant lands, for the endless sea.

Larisa was a heroine in one of Aleksandr Ostrovsky's plays, *Bespridannitsa* (Girl Without a Dowry). She lived in a provincial Russian town on the Volga, and possessed an extraordinary personality. Larisa loved and was loved, but her beloved chose to marry a woman with money. At the very moment when her life had lost all meaning and she was about to become the concubine of the local rich man, Larisa was shot and killed out of jealousy. And she thanked her killer for that. Fog and the cries of seagulls accompany the last act of the play.

In Anton Chekhov's excellent play, *Seagull*, the action takes place at a noble estate on the banks of a large lake. The seagull here is the symbol of a happy life. Yet the only seagull that has a role in the play is a dead one. The heroes often repeat that a dead bird is the sign of a life lived in vain, a life spoiled by ennui and boredom, wasted on frivolities. And, again, the bird here has a double: Nina Zarechnaia.

In the great writer's play *Drama at the Hunt*, the forester's daughter, a naïve beauty, entangled herself in a web of love. She loved one man, married another, and slept for money with a third. She was dealt with harshly, and became harsh and unfeeling herself. One day while hunting, she casually observed the agony of a mallard that had been shot but not killed. Her lover asked her whether she felt sorry for the bird. "Let it suffer, as others suffer," answered the girl. Her lover finished off the duck, then shot and killed her too – to put her out of her misery.

Ivan Turgenev's novel *Mu-Mu* is about a deaf and dumb serf, Gerasim, who was terrifically

strong. Gerasim became thoroughly attached to a dog he called Mu-Mu (how else would he call it?).

Gerasim's master, a noble landlady, liked the dog at first. But it bit someone and was given away, far away. Then the dog returned and the *barynia* ordered it killed.

So Gerasim put on his best clothes, went to the local tavern, fed his Mu-Mu lots of tasty food, got drunk himself, then took the dog on a boat and drowned it in the middle of the lake. Next, he returned to the estate, took his things and went off to his village, never to be heard of again.

The topic of serfdom has played a major role in Russian literature. There are countless examples in which the *pomeshchiki* (noble landlords) treated their serfs like chattel and slaves. Occasionally free people, too, were dealt with no better than animals or live toys.

In his tale *Dubrovsky*, Aleksandr Pushkin described a case that actually took place. A wealthy landlord kept a chained bear in his basement. There was only one corner where it was possible to save oneself from the teeth and claws of the hungry beast. Once, following a hearty dinner party, one of the guests was pushed down to the bear, and then everyone had fun watching through special peepholes how the poor man strove frantically to avoid death.

The topic of serfdom has played a major role in Russian literature. There are countless examples in which the noble landlords treated their serfs like chattel and slaves.

Dubrovsky, the son of a financially ruined *pomeshchik*, found employment as a French teacher at the cruel landlord's estate (he pretended he was French). And soon he found himself locked in the basement, one-on-one with the bear. Without hesitation, the young man whipped out the pistol he always carried in his pocket, and shot the bear in the ear. The evil landlord was so impressed by this display of cool decisiveness in the face of death, that he concluded that the French doubtlessly possessed greater courage and valor than the Russians.

And a horrible example of the inhumane treatment of serfs may be found in Fyodor Dostoevsky's masterpiece, *The Brothers Karamazov*. Ivan, having foresworn the laws of God and rules of the Church, told his brother Aleksei, who was preparing to become a monk, how a noble landlord had dogs kill a serf boy only because he accidentally crippled one of the puppies in his kennel. Moved by the story, Aleksei told Ivan that he would have killed the *pomeshchik*. That statement gave Ivan cause to laugh at his brother's faith.

Let me close this short account on a happier note. Aleksandr Kuprin wrote a short story called *Elephant*. It is about a strange illness that afflicted the six-year-old daughter of well-off parents. Her illness was total disinterest in life. She had everything any child might wish for: wonderful expensive toys, sweets, friends, dotting parents. Yet nothing interested her. She lay in bed and grew thin, weak and depressed. The doctor suggested to her parents that they try and amuse her.

One day the girl told her parents that she wanted an elephant, but not a toy elephant – a real one. And an elephant was brought home to her from the circus. He was a very clever and funny elephant, and they dined and played and spent the whole day together. The next day the girl woke up full of energy and interest in life.

As a girl I loved that story, but having grown older, I was appalled. What was that? An invitation to spoil children by fulfilling their most fickle wishes? Or perhaps the story was an ironic tale about the life of the rich? About people who have everything and thus nothing more to desire out of life?

Well, now that I write these lines, it has just occurred to me that the story is about something entirely different. It is about the joy of communicating with a live being, one similar yet so different from us. It is about how important it is for children to have contact with the animal kingdom. Because that world is full of wonder – and wonder is the basis of all interest, a stimulus toward creative thinking. Let us be amazed by these wonderful, fluffy, feathery and tailed beings! Time and time again.

My Cockroach

by Ioannis Posnakoff

I woke up one morning when I was about thirty-five years old and walked into the kitchen intending to prepare some coffee. As I approached the sink to put water in the coffee pot, I saw this huge cockroach on the edge of the sink lying upside down moving its legs and antennae trying, I thought, to turn right-side up.

I put the coffee pot down on the counter and picked up a paper towel and approached the creature intending to….what? Kill it? Grab it and throw it out the window? I had no idea, and for an instant I hesitated because I thought I heard a voice saying, "Please, don't! Just help me turn back onto my feet." I stopped, transfixed. I brought my head close to the struggling cockroach and asked, "Are you talking to me? Do you talk?"

"Yes," he said (I thought of it right there and then as a he). "I am talking to you. And yes I can talk and yes you can hear me!"

Without hesitating I placed my left hand open by the edge of the sink and with my right hand I set him on his legs.

"Thank you!" he said and I felt a lovely sensation on my hand on which he rested looking at me as I lifted my hand closer to my eyes.

"Do you have a name?" I asked instead of the many other questions that rushed into my head.

"No," he answered, "but you could give me as many names as you want and I promise I will be true to all of them." And before I could think of how to respond, he continued: "Why don't you pick the names of three of your favorite people from the past and give them to me? I have access to them all. You can talk to them through me and they will talk to you, answer any questions you may have."

I was speechless. After a moment's thought, I told the cockroach, "I give you the names of my three favorite people: Socrates, Diogenes and Pythagoras."

"I give you the names of my three favorite people: Socrates, Diogenes and Pythagoras."

"Good choice," he said. "Now go make your coffee and when you are ready take me into your living room and we will talk as much as you want. In the meanwhile leave me a few grains of sugar and a few drops of water on a small plate."

For the next ten years, Socrates, Diogenes, Pythagoras – all three through the body of the cockroach – were my teachers, my advisors and friends. For purposes of brevity and convenience, I used their initials: SDP, or any of the other five combinations – SPD, DSP, DPS, PSD and PDS.

Then one day I realized that the one real teacher had been the cockroach I'd befriended that morning and given three names to.

Ioannis Posnakoff is a Greek-Russian-American painter, philosopher and homme de lettres who began his long and distinguished career as a naval architect with degrees from Berkeley and M.I.T. before devoting himself entirely to the muses.

Case Study

An Electrocuted Crane

by Philip Dragoumis

Our collaborator, Mr. Mikhalakakos from Sparta, phoned and said: "I have a huge injured grey bird that looks like a crane but I can't tell for sure, it's huge…"

I went to the bus station convinced I'd be picking up another grey heron. From the weight of the box however there was no doubt this time it really was a crane.

Cranes are rare in Greece. They stopped breeding in this country over sixty years ago and seldom appear on passage. I've never held one, and in the wild I've only seen a flock in Finland, where they're still common.

The bird was unable to stand. But it was strong and aggressive. Upon physical examination I easily diagnosed electrocution: there were two slight yet obvious burns under both wing tips.

I phoned Mr. Mikhalakakos and asked him where exactly the bird had been found. Oddly enough, he said it was on a mountainside in a dense fir tree forest, with no sign of power lines around.

This was a mystery. We assumed that the bird must have glided a long distance after having been electrocuted and only realized it could not stand up again upon landing.

The actual way the accident occurred was clear of course. With its huge wingspan, it touched both power lines. I've seen this hundreds of times before with storks, pelicans, herons, eagle owls and many other species.

So I sent off the following email message to a whole lot of people:

"…we have a crane, the first one ever under rehabilitation in Greece, so there is no experience with the species. It was on migration and was found in a dense mountainous forest, high altitude. It's a European grus grus, the common crane, but not so common as its name. The bird is huge (4 kilos). It has been electrocuted (light burns on both metacarpi) and one leg is hanging loosely. The bird cannot stand, X-ray showed no fractures…"

My message included two questions: "1) What would you feed it & how would you present the food to get it to self-feed instead of force-feeding it (given it cannot stand)?; and, 2) Any suggestions about treatment for the condition of the leg (what I would do is dex, electrolytes (LRS), vit b and physiotherapy)?"

Soon after I sent the message, a miraculous thing occurred. An international "Save the Crane in Greece" special interest group formed, and people began sending electronic mail back and forth across countries and continents providing valuable advice and regular updates about how to help the injured animal.

The Crane Group included Oli Vuori from Finland's Heinola Wildlife Rehabilitation Centre,

Jeb Barzen, a biologist at the International Crane Foundation, Barry Hartup, a veterinarian with the same organization, Marge Gibson from the Raptor Education Group, Kimberly Pan, from China's Rescue Center for Herons, and Pat Fisher from Wisconsin, a rehabilitator with experience treating cranes.

Soon I had all the information I needed to treat the bird. I also received valuable help from our vet, Mr. Dimitriadis, who conducted blood tests and X-rays.

Everybody agreed the crane had to be slinged, fed well, and massaged. Long-legged birds can't stay down for long. I feared we were in a hopeless race against time.

Marge Gibson gave me an excellent explanation of what electrocution can do to a bird:

"The burns on the metacarpals will heal well unless the bones have been fractured in the process. Metacarpals are always a problem when fractured. Electrical induced fractures do not heal as well as impact fractures. Likely tissue death and/or compromise of the circulatory system in the area are to blame. Electric current is not easy to predict once it enters a body. It does not necessarily travel in a straight line between the entrance location and the exit. In fact it would be odd if that were the case. We often see fractures of the humerus and pelvis that are caused by the extreme contraction of the attached muscles and ligaments when the shock occurs. Pelvic fractures are often difficult to visualize.

Damage to the bird's internal organs and circulatory system are common with electrical shock as well. One must consider that a fall from many meters, in the case of electrical poles, can also cause injury from impact alone.

If the problem is simple nerve injury it may be reversible, allowing time for nerve regeneration. However, most of the damage comes internally in the form of tissue death and necrosis even within the bird's body. My best guess with this crane is that the circulatory system has been compromised in a serious way. Electricity traveling through the body is not unlike cauterizing inside the bird with the veins and arteries being effectively severed. Regeneration is unlikely in these cases. Cranes have additional species-specific problems with those long elegant legs. The joints are very sensitive to lack of use or even to growing too quickly in the case of a young crane.

Atrophy would be a serious problem. You will need to get her up on her feet in a sling apparatus as soon as possible. This will allow the correct position for the leg/joint and muscles of the entire structure. Even when just the muscle attachments on the back and abdomen are injured, a crane can be off its feet with the unfortunate domino effect of leg atrophy resulting. Lack of movement is the bird's worst enemy at this point."

During the next twenty days, the international Greek crane interest group was in deep suspense. At first the bird responded to treatment. Its leg got stronger, it started self-feeding and attacked me every time we met – a good sign it was healthy (psychologically, at least). I would hold its dangerous beak while Evi, my wife, massaged the leg. We did this between five and six times every day.

For a while, the crane was able to put considerable weight on its leg. But it wasn't gaining weight and was never strong enough nor could it coordinate its leg movement to stand without the aid of the sling.

We all did our best. I was very impressed by the interest shown in this crane by the International Crane Foundation, which tries to save every individual crane. (I became a member of the foundation in the process.)

But we didn't win the battle. The ending was sad. As I wrote in a message I sent to the other members of our international team:

"Although on Thursday he seemed better than ever, was eating with good appetite all day long and even gained some volume, suddenly on Friday evening he seemed somehow more depressed. On Saturday morning he stopped attacking me, refused to eat, his head plumage was fluffed up, had a sad look in the eye, head tucked under the wing. I knew he had abandoned all effort to live and would let himself die.

I opted for euthanasia, instead of letting him die slowly or trying to help him out by force-feeding and/or injectable fluids."

Pat Fisher helped me overcome my sadness. She wrote: "I feel your loss like it was my own. It is so sad when they try so hard and then give up. It still makes you a better and stronger person for trying and working with the animal. We are worlds apart and yet I feel I have known you for a long time. We are the same person, just worlds apart. Please let your sorrow have its day and then go to the next animal that needs you so badly. You do good things – never forget that. The crane is home and at peace."

We were a real team!

Endnotes

Animals in Translation

The people who went to the gas chambers in Poland went stripped of their clothes and human dignity. Even if some of them didn't believe the lie about the showers, most of them had no idea they were going to their deaths. By lying to them the Nazis weren't displaying humanism, just the banality of evil. Because had these masses of humanity known the truth, it wouldn't have been impossible to round them up and ship them in cattle cars to the death camps.

You can lie to people, but you can't lie to animals. That's because animals don't think with words. Like people with autism, animals don't have complicated emotions. They can't, say, love somebody and be jealous of them at the same time. Autistic people have just four emotions: happy, sad, angry and scared. They don't have mixtures of emotions or "mixed feelings." They don't look at a beautiful sunset and go, "Oh, how beautiful." They've got much less emotional turmoil than the rest of us mortals.

They can't, say, love somebody and be jealous of them at the same time.

A new book written by Temple Grandin and co-authored by Catherine Johnson, **Animals in Translation: Using the Mysteries of Autism to Decode Animal Behaviour** (Bloomsbury, 2005), seeks to understand animal behavior. It also develops a new theory of autism that's grounded in the idea that the autistic mind has more in common with the animal mind than the human one.

The book has a practical purpose, one steeped in humanism. Grandin is a woman with autism (most people with autism are male). Her condition gives her a special understanding of animal behavior. Her co-author, Johnson, isn't autistic but she has two children who are. These two women have used their knowledge of the disorder to help make the lives of animals happier, especially in the last few moments of their lives. They have done very much to alleviate real animal suffering. We may not like the fact that the world will continue to eat meat in the foreseeable future. But that is the reality. And what Grandin, in particular, has done is help remove the unnecessary stress and fear animals experience in the process of becoming meat for the table.

The chutes and pens she's designed have become industry standard. She's brought major changes to slaughterhouses that have led fearful, struggling animals to change their nature in an instant and wander contentedly to their deaths. Grandin has an international reputation for humane designs of cattle-handling equipment, and for setting standards of good practice in handling animals. She's often called to trouble-shoot difficult behavior in domestic and agricultural animals, and has synthesized the knowledge of animal breeders, animal trainers and zoologists into a wealth of practical advice on how to deal with animals.

Grandin's main innovation was to make cattle chutes circular or spiral in form. Instead of cattle being pushed in a straight line to a point where they can be restrained, they are pushed round a curve. This responds to two instincts in cattle. Leave them to their own devices and they'll tend to walk in circles and never come home. And if they can see something unexpected ahead, they'll halt and go no further.

"One of the things I got to thinking about," she says, "was that these cattle wouldn't be here if we hadn't bred them. But we owe them a decent life and I think cattle have a decent life – they live outside. We haven't messed them up genetically the way chickens and pigs are getting messed up."

It wasn't easy for her at first. Grandin got kicked out of a feed yard because the cowboys' wives didn't want to have a woman there. And someone put bull's testicles on her car. But she kept go-

ing, fueled by the desire to leave a legacy. "To me, that's the meaning of life," she observes. "But most people live more for an emotional satisfaction."

Her book analyzes animal behavior down to the details, so she can often predict what an animal will do. We learn that unlike humans, animals don't have such a highly developed ability for abstraction and generalization. Grandin uses the analogy of a dysfunctional office for the autistic brain – a place where emails get lost in the system, where Finance is unable to phone the Marketing Department. Animals think very simply, she says. Like Google. It's all detail to general. And like animals, people with autism have superior perception of detail. They think in pictures and see the detail, not the general. So they often miss the small linkages between elements that most people take for granted.

Human behavior is much harder to systemize than animal behavior. Animals have four primal emotions (rage, prey-chase, fear and curiosity) and four primary social emotions (sexual attraction, separation distress, attachment and playfulness). By contrast, humans have at least 412 discrete emotions. Yet despite this complexity, an autistic person doesn't have difficulty making sense of other people's behavior. Strange as it may seem, he (or she) does this not by systemizing people (and people with autism are hyper-systemizers), but rather by empathizing.

Human behavior is much harder to systemize than animal behavior.

In her attempt to create a new theory of autism, Grandin has successfully systemized animal behavior. The behavioral psychologist B.F. Skinner tried to do this in the 1950s, arguing that one ought not to speculate about an animal's emotions, thoughts, perceptions and drives. He recommended instead that scientists focus on the environmental factors that either reward the animal's behavior or punish it. Skinner studied animal behavior based on observable facts (e.g. irritation-reaction). Grandin, by contrast, tries to understand the animal mind from within. And she does this in a very simple way. She follows animals on the way to slaughter, trying to see what the animal sees, trying to understand what frightens or soothes it.

Grandin's acute observation of animal behavior is reinforced by her knowledge of neuroscience. **Animals in Translation** is full of interesting information. We learn, for instance, that like most mammals, cows have dichromatic vision. They see just blue and green (humans see these colors plus red; birds see ultraviolet as well). That means that yellow objects frighten cows because the color yellow is very stark to them: it has the highest contrast. But when that same object is painted grey, the cow won't panic.

If an animal has to walk through a tunnel (to be vaccinated, for instance), it will refuse to enter if it hears unexpected noises, like sounds from the plumbing. Similarly, if there's a moving object (say a coat hanging on a fence, flapping in the wind), or if the light contrast is too severe going from light to dark, the animal won't enter either. But if that same object is held still, and the light contrast is eliminated, it will. Similarly, if a moving light overhead is reflecting on the floor, the animal won't walk over that part of the floor. Get rid of the light, and it will.

Ninety percent of the cattle slaughtered in North America die in plants run according to guidelines drawn up by Grandin. In the 1994 "McLibel" suit –in what was to become the longest-running libel trial in England– McDonald's sued two members of Greenpeace for libel. The trial judge sided with the two activists on the argument that McDonald's was "culpably responsible" for cruelty to animals. Alarmed, McDonald's adopted Granlin's guidelines and hired her as a consultant. She accompanied McDonald's executives on field trips to meat plants. For some of the executives this was their first experience.

"The day we went to a cow slaughter plant," she says, "there was an emaciated half-dead skinny cow. They watched it walk up a ramp and right into their product. They were not happy. They were like, 'Ye gads, we've got to make some changes'."

Source: Simon Baron-Cohen, "Why Cows Hate Yellow," Guardian, June 25, 2005.

Animal Colors

Animals differ in what colors they can see. Some are colorblind and see only in black and white, such as dolphins and seals, while others, like birds and insects, can manage better than us.

Andrew Parker's **Seven Deadly Colours: The Genius of Nature's Palette and how it Eluded Darwin** (Free Press, 2005) is an exquisite history of animal colors. Parker shows that there isn't one kind of eye that does one thing. The eyes of different animals have varying capabilities and are built to see different kinds of colors.

In his *On the Origins of Species* (1859), Charles Darwin expressed his puzzlement concerning the eye of an animal – how could such a remarkably complex and complete thing have evolved by natural selection? Parker lays these worries to rest by giving fascinating examples to show that the eyes of animals differ in fundamental ways, and that the evidence suggests these differences arose by natural selection. He thus adds to the work of biologists who've found all sorts of rudimentary eyes among lowly invertebrates, and discovered that eyes, primitive and advanced, have certain common genes. In other words, the elaborate eyes of octopuses and mammals don't have totally independent origins but rather a common foundation.

Parker tells us about the chemical and physical basis of colors. We learn that pigments produce many animal colors. There are also iridescent physical colors, however, like those on the surfaces of some minerals and bird feathers. In the chapter on the color blue, he talks about bioluminescence, a way of chemically manufacturing light in the dark (think fireflies and certain fish, various invertebrates and unicellular organisms that can be seen in the wake of a boat or the dip of an oar in warm seas). Some fungi send off a glow at night, like glowworms. This activity is used to attract mates, or prey, or for seeing in the dark. For strange abyssal fishes, the luminescence comes from symbiotic bacteria that glow in a special chamber below their eyes. Like headlights, or the signal lights of ships, they flash them by moving a membranous shutter over the luminous pocket. Parker notes the interesting recent work on these luminescent bacteria, research that could be of interest to scientists struggling to come to grips with such phenomena as bird flu and other potentially catastrophic viruses. It has been shown that the bacteria can glow only if they are in a group of sufficient numbers, something they sense automatically. And this is true of bacterial pathogens too: they have their damaging toxic effect only if there are enough of them to form a quorum.

In the chapter on the color ultraviolet, Parker explains the seemingly odd phenomenon of kestrels hovering over the shoulders of highways where their prey is well camouflaged. How do they manage to pounce on the voles? How do they see the scurrying furry balls? The answer is they don't – but they do see the trails the voles leave behind by secreting various marking chemicals in their urine, some of which absorb ultraviolet light. Kestrels have the gift of seeing ultraviolet to which we are blind. The section on the color orange is interesting for its example of milk snakes. Found in both Americas, they are beautifully banded: white, black and orange. The bands are very conspicuous, which is surprising since milk snakes are harmless and have numerous predators. They look like coral snakes that are highly venomous. Parker performed some ingenious experiments to show that the milk snake has an additional way of eluding predators: it can move very fast and reach a speed where the colors become fused into a uniform color such as green or pink. This happens because their predators can capture in their eyes and brain only a finite number of images per second, and beyond that the striking bands turn into a blur.

An excellent discussion of mimicry follows, where an edible species will acquire the marking of a distasteful or dangerous one. Henry Bates first discovered this phenomenon in butterflies, deep in the Amazon jungle in the middle of the nineteenth century. He observed that edible and harmless species imitate distasteful ones to avoid being eaten (this is called Batesian mimicry).

Many of the color patters, Parker shows, serve as camouflage. Indeed, some marine forms, like see-through fish and shrimp, become transparent. This happens because the normal pigments of their bodies transform so that they no longer absorb light.

Seven Deadly Colors has a lot to offer to the interested layman but to the biologist as well. Parker explains the physics that surround all color, a complex subject that he deftly manages to make easy. We come away from this book with a wealth of new knowledge, learning never to underestimate the cleverness of primitive organisms.

Source: John Tyler Bonner, "Shades of Force and Flirting," Times Literary Supplement, October 14, 2005.