The magazine of The UK Wolf Conservation Trust, published quarterly

WolfPrint

Issue 18 Winter 2003

WolfPrint

Published by:
The UK Wolf Conservation Trust
Butlers Farm, Beenham,
Reading RG7 5NT
Tel & Fax: 0118 971 3330
e-mail: ukwct@ukwolf.org
www.ukwolf.org

Editor
Denise Taylor
Tel: 024 7626 4326
e-mail: denisetaylor@ntlworld.com

Editorial Team
Julia Bohanna, Andrew Matthews,
Gwynne Power, Sue Sefscik

Contributors to this issue:
Zanete Andersone, Dominic Earl, John Linnell
Ralph Maughan, Sue Sefscik, Monty Sloan
Elena Tsingarska, Stuart Williams

Design Team: Phil Dee Tel: 01788 546565
Stephania Balbo, Paul Swainson

Patrons
Desmond Morris
Erich Klinghammer
Christoph Promberger

The UK Wolf Conservation Trust Directors
Nigel Bulmer
Charles Hicks
Roger Palmer
Denise Taylor

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Aims of The UK Wolf Conservation Trust

- To enhance the conservation, scientific knowledge and public awareness of the environment.
- To stimulate greater interest in Wolves, their food, their habitat and their behaviour.
- To provide opportunities for both ethological research and for people to interact with Wolves.
- To improve the chances of survival of European Wolves in the wild.
- To set up an education programme for schools, conservationists and dog trainers.

Cover price: £3.00
Subscription rates (incl P&P):
United Kingdom: £14.00 (non-members);
£12.00 (UKWCT members).
Rest of world: £16.00 (non-members);
£14.00 (UKWCT members).

Editorial

Looking back on 2003, the World Wolf Congress in Banff in September was the highlight of my wolf year. The congress brought together 500 people from around the world to talk about wolves and their conservation. I met old friends and made some new ones, and I was motivated and inspired by the discussions taking place, especially those that involved the ethics and philosophy. My own pet theme, education , was also high on the agenda at the conference. I have written about some of the highlights from my time in Canada in this issue, but these by no means include everything I experienced in this beautiful part of the world. The organisers did an excellent job bringing together such a diverse group of people, and should be justifiably proud of this great achievement. And as for Banff – if you haven't been there, then I strongly recommend that you do. The scenery is incredible, the people are genuinely friendly, and simply waking every morning and breathing in such fresh mountain air was intoxicating for a city girl like me.

One of our regular contributors, Sue Sefscik, has written about the Dire Wolf, which has been long extinct. In contrast, other contributors have written about very recent events: the current outbreak of rabies in the Ethiopian wolf population, a report on a meeting in Spain in November, and updates from Bulgaria and Latvia.

And finally, an apology to our readers. I know Wolf Print is sometimes late landing on your doormat, which is mainly due to the fact that we are all volunteers at the UK Wolf Conservation Trust and undertake this work in our spare time. This time, I have also had the added difficulty of overcoming a nasty viral illness which has refused to go away. It is my New Year resolution in 2004 to try and stick to magazine deadlines wherever possible. And on that note, I also hope you have a happy and prosperous 2004, and that you continue to support our work at the UK Wolf Conservation Trust in helping wolves and their conservation in the wild areas of Europe and the wider world.

D Taylor

PICTURE CREDITS

Cover and of various wolves on pages 6, 8, 9, 14, and 17, Dominic Earl

WolfPrint is printed on re-cycled paper. Printed by Colorco. Coventry (024) 7671 1005

Inside this issue...

Wolves of the World

EUROPE AND SCANDINAVIA

United Kingdom

Wolves: the new Nessie

HAVING made this benighted heath a safe haven for foxes, who would bet against the Scottish Executive sanctioning the reintroduction of the wolf? Older readers may recall seeing a wolf as recently as 1745. Since then, alas, sightings have been rarer than tax cuts. But that could all change. Paul van Vlissingen the wealthy Dutch businessman who owns the 80,000-acre Letterewe estate in the Western Highlands, wants to reintroduce the wolf.

His logic is incontrovertible. "To people who say this is a ridiculous idea," he says, "I simply pose this question: if there were still wolves in the wild in Scotland, would you want them killed? It would be unthinkable." If Mr van Vlissingen has his way, the wolves would be protected by law and treated as national treasures, like Tommy Sheridan or Kirsty Wark.

The forces ranged against him, however, are formidable, including sheep farmers, who are said to be outraged at the proposal, and Scottish Natural Heritage, which howls: "Wolves aren't on our agenda at all!" Presumably because they don't exist in these parts. Be that as it may, Mr van Vlissingen is determined to pursue his dream. "We have to be more daring in our thinking," he says. "We can't keep depending on the Loch Ness monster for tourists." Which, when you come to think of it, makes a lot of sense.

Source:
Alan Taylor's Diary
http://www.sundayherald.com/36409

Finland

Predator Populations Growing Slowly

According to census estimates released on Wednesday, the number of wolves, wolverines and lynx increased in 2002. Meanwhile the bear population remained the same or slightly declined. The highest concentrations of bears were in eastern Finland as well as west of Lake Päijänne in central Finland.

The wolf population was also concentrated in the east, but there were also active dens in parts of central and southern Finland. The smaller wolverines are most common in the fells of Lapland, with a small breeding population in western Finland as well.

Last year there was a record number of sightings of large predators, 13,800 in total.

At the end of 2002, there were an estimated 870 lynx, 830 bears, 135 wolves and 125 wolverines in Finland. However many of these animals wander across national borders, so no precise figures are available.

Source:
http://ww2.yle.fi/pls/show/page?id=231086

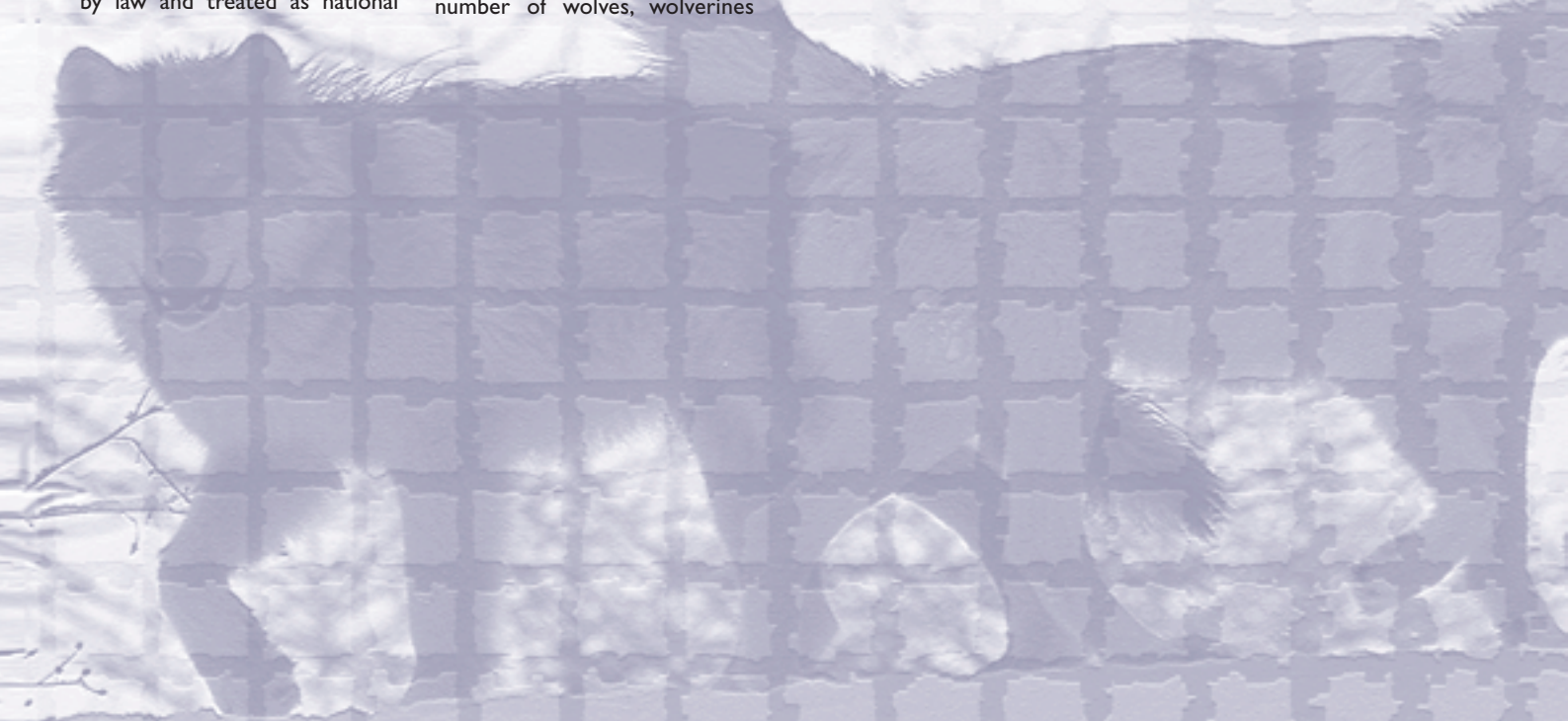
Pack of wolves appears in front of motorist near Russian border

Ministy of Agriculture and Forestry grants licence to kill one wolf

A large pack of wolves was seen on Tuesday night on a road near Tohmajärvi in Northern Karelia, not far from the Russian border and the border crossing point at Niirala. Local farmer Antero Nenonen met the pack shortly before seven while driving on the Huikkola road between Kitee and Tohmajärvi.

"I saw at least nine or ten well-nourished wolves. They scattered into the forest", says Nenonen. He notified the local Game Management Association as well as police, and local hunters went to identify the tracks. Nenonen met the wolves in a forested area some 2.5 km from the nearest village.

In and around Tohmajärvi a number of solitary wolves as well as groups of several animals have



Map Stefania Balbo

been seen recently. Last week wolves killed two calves and savaged a third. A number of dogs have been taken by wolves, too. "There are now too many wolves in this area. The packs have to be dispersed, because there are also bears in the forest. People don't dare to go picking lingonberries."

One of the local farms applied for licences to kill three wolves. The Ministry of Agriculture and Forestry granted one. "Three would have been better, but this is better than nothing", says Olavi Ehrukainen, Executive Manager of the Tohmajärvi Game Management Association. "Even though some people fear wolves, there is no hysteria in the air."

The elk hunting season will start on Saturday. The wolves moving in the area pose a threat to hunting dogs. "They have been seen to attack a dog even when the hunter is standing nearby. I won't set my own dog loose in an elk hunt until the situation has cooled down. Several of my friends agree," argues Ehrukainen.

Source:
http://www.helsinki-hs.net/news.asp?id=20030926IE6

Norway

New wolf pack roams eastern Norway

A group of men out hunting moose in the eastern Norwegian valley called Oesterdalen had a close encounter with a pack of wolves last Saturday. They snapped digital photos and experts now say the wolves constitute a new family.

Researcher Petter Wabakken, who specializes in tracking predators at a college in Hedmark, confirms the wolves seen last weekend are the offspring of a pair observed in the area last winter.

"This means we have a new flock on Norwegian soil," Wabakken told newspaper Aftenposten Friday. He has dubbed it "Julussaflokken," after the name of the area where they're roaming.

The hunters told newspaper Hamar Arbeiderblad that the wolves came so close that they fired warning shots to scare them off. They counted as many as six wolves as they took digital photos.

The area that they're believed to call home borders on that where the so-called Graafjellflokken" roams farther north in Oesterdalen. More puppies also have been spotted there this year.

Environmental officials have designated the area as a safe haven for the wolves, where they'll be allowed to establish themselves with no hunting allowed.

Meanwhile, another wolf pack that frequented the area east of Moss, south of Oslo, has disappeared. Authorities believe the male leader of the pack was shot in an illegal hunt.

Source:
http://www.aftenposten.no/english/local/article.jhtml?articleID=639309

NORTH AMERICA

United States

Hungry wolf shot after 600-mile trek

After a roughly 600-mile trek across rivers and woods, from Michigan's Upper Peninsula to Missouri's farmland, a wandering gray wolf was fatally shot with an arrow while peering into a farmer's sheep pen.

The wolf, an endangered species in Michigan, is otherwise extinct in Missouri. And the Grundy County farmer, who mistook the 80-pound canine for a coyote, didn't see the numbered ear tag and radio-tracking collar until the wolf was dead.

The hunter likely could have disposed of the wolf with little fear of discovery. Instead, he took the carcass to a Missouri conservation agent, who traced the wolf back to near Ironwood, Mich.

Records at the Michigan Department of Natural Resources show that the wolf killed Oct. 23 in Missouri was a juvenile weighing 22 pounds when it was initially caught in July 1999 in Michigan. That's when it was fitted with an ear tag and a radio collar.

Michigan officials followed the movements of Wolf No. 18 for nine months, then lost track of it. They had a hard time believing the news when informed of the animal's death in Missouri.

As the crow flies, the distance from Michigan to Missouri is roughly 450 miles. By the way a wolf travels, crossing the Mississippi River and countless highways, it's more like 600 miles. That ranks among the longest wolf journeys documented by the Michigan Department of Natural Resources.

Young wolves, especially males, are prone to leave their birth places to carve out their own territories.

"You have to wonder how many people saw this animal along the way and either kept it to themselves or told people and weren't believed," said Michigan DNR Biologist Dean Beyer.

The man who shot the wolf won't be prosecuted, since he was protecting his livestock and believed the animal was a coyote.

"For years, we have believed and told people that there were no wild wolves in Missouri," said Dave Hamilton, a wildlife research biologist for the Missouri Conservation Department. "We can't say that anymore, though the likelihood of seeing a genuine gray wolf here still is extremely small."

Gray wolves, also known as timber wolves, were killed off in Missouri by the end of the 19th century. Now the state lacks wilderness areas large enough to

Photo: Dominic Earl

sustain wolves without human conflicts, Hamilton said.

But Minnesota has retained a wild population, which grew gradually after the species was granted protection and now totals 2,445.

Wolves from Minnesota have dispersed into Michigan and Wisconsin, where they have established independent populations and are classified as endangered. Michigan's wolf population is estimated at 200. Wisconsin has an estimated 250 gray wolves.

Source:
http://www.kcstar.com/item/pages/local.pat,local/3acd1a7f.b01,.html

Yellowstone National Park

Not just a predator - Wolves bring a surprising ecological recovery to Yellowstone

LAMAR VALLEY, YELLOWSTONE NATIONAL PARK - It's a morning of freezing rain in the valley and a pack of wolves is roaming around Black Tail Creek. A few pups gnaw on an old elk carcass while some adults scout the nearby valleys for prey. Not far away, a few elk have sensed the impending danger and are dashing about. To the tourists in the park, the prospect of a wolf attacking an elk is riveting. To the biologists staring into their binoculars, the real action is taking place in Black Tail Creek itself.

There, a cluster of willow plants is flourishing along the creek bed – a small but crucial sign that wolves are boosting biological diversity and restoring balance to America's oldest national park.

According to numerous biologists and wolf-watchers, the willows have grown because the elk, worried about staying too long in open streambeds, no longer gorge on the nutritious plants. Since the reintroduction of wolves in 1995, the elk have been increasingly itinerant and drawn up out of the wetlands to high rocky areas where they eat more grass. As hunters, soldiers, and elk all know, streambeds and valleys are dangerous. Attackers can scout from up high and pounce.

This is just one of the biologically salutary effects that wolves may have brought to the park, restoring a centuries-old balance that was upset when humans exterminated Yellowstone's wolves in 1926. Though no peer-reviewed proof exists of their impact on the willows, wolves may well be demonstrating their role as a "keystone species," an animal whose presence in the area increases diversity and overall ecological health -- even as they spend much of their time lunging at other animals' throats.

"Wolves are to Yellowstone what water is to the everglades," said Doug Smith, the National Park Service's director of the Wolf Restoration Project.

Willows help the park's northern Lamar Valley, which was beggared of the plant before the wolves returned, in several ways. For one, they provide a decent nesting and migratory stopover site for many birds. According to Roger Pasquier, an ornithologist with Environmental Defense, several bird species that nest in the park could particularly benefit, including the yellow warbler, warbling vireo, and the tellingly named willow flycatcher.

Perhaps more important, beavers thrive on willows and those waddling creatures

have recently returned to the Lamar Valley after a long absence.

Wolves do eat beavers, but the beavers seem to be quite willing to exchange a small chance at ending up in a wolf's belly for a good chance at their own tasty willow lunches. There are now four beaver colonies in and around the valley. There were none before wolves returned. One colony even lives right near a wolf den.

Almost wherever they exist, beavers create biological diversity when they build pools of slow-moving water around their dams. These pools create habitat for otters, muskrats, insects, moose, and many bird species.

Wolves also appear to be helping other larger species. Rick McIntyre, another wolf biologist in the park who has tracked the animals by radio nearly every day for more than three years, notes that many scavenging species, such as ravens, magpies, and even grizzly bears, eat the leftovers from wolf kills.

A pack of wolves generally eats only about half of each of its kills, leaving plenty for other species to dine on.

A number of scientists caution that much is still unknown. "You can expect changes as a result of wolves being (introduced) in an ecosystem," said David Mech, a biologist with the US Geological Survey who has done wolf research in Yellowstone. "But I have been cautioning people not to jump to conclusions. It's early." Mech adds that wolves could also bring about potential unhelpful biological change, for example through the cascading effects of the reduction in the coyote population.

Smith acknowledges the large uncertainty over future effects and concedes that there isn't absolute scientific certainty either that the willows have regrown or that the wolves deserve credit. But, he said, "when I walk over to Black Tail Creek, I see willows that are over my head. Five years ago, they were barely at dirt level." Smith also has studied aspen trees, another key species for many animals that appears to be doing slightly better than before wolves were reintroduced.

When it comes to aspen and willows, changes in elk behavior seem to have much more effect than changes in the elk population. The National Park Service has tried several times to help plant species by killing elk, with little impact. In the mid-1960s, the Park Service tried killing elk hoping that would restore aspen growth. But it "didn't have any effect on the aspen," according to John Good, a now-retired Park Service employee who participated in the elk hunts.

Instead of simply killing them, the wolves - who hunt year-round and at night - keep the elk on their hooves all the time. According to Carl Swoboda, director of Safari Yellowstone, "The elk used to be relaxed. They'd go up to everyone and shake their hands and say `welcome to Yellowstone.' They even said that to the first wolves."

In 1995 and 1996, wolves from Canada were brought to Yellowstone and to central Idaho. Similar efforts by activist groups to restore wolves to theAdirondacks and northern Maine have not gone far. Currently, about 250 wolves live in Yellowstone and the surrounding area, a number unlikely to increase since wolves tend to kill each other off at higher population densities.

Local ranchers have long opposed wolf reintroduction, fearing livestock predation. Wolves, however, have killed far fewer livestock than even the biologists predicted, and coyotes killed 28 times more sheep and lambs in 2002 than wolves did, according to the Montana Agricultural Statistics Service.

Proponents of restoration noted the potential biological benefits, increased tourism, and a sense that there is something special about restoring a dangerous mammal that roamed across the continent before humans killed most of them off.

Source:
By Nicholas Thompson, Boston Globe
http://www.boston.com/news/globe/health_science/articles/2003/09/30/not_just_a_predator/

Canada

Slain wolf likely last male in pack

Death the third in the region in two months

A black wolf killed early December near Canmore was likely the last male member of the Bow Valley pack. The small Bow Valley pack, which consisted of a mother and son team, has most likely been reduced to a lone female.

A motorist struck a wolf on Highway 1A, 15 kilometres east of Canmore, at about 2 a.m. The driver alerted RCMP to the accident. Rod Jaeger, Alberta Fish and Wildlife conservation officer, said the wolf was found at 8 a.m., and his body was still warm.

"I don't know if he died right away," Jaeger said. Carolyn Callaghan of the Central Rockies Wolf Project said she believes the wolf is from the Bow Valley pack, which dens in Banff National Park. Genetic testing is being done on the carcass to verify which pack the wolf was from. There are 12 wolf packs in the central Rockies.

The death marks the third wolf mortality in the Bow Valley in the past two months. In early October, two individuals of the declining Fairholme pack were killed near the Stewart Creek turnoff, just east of Canmore.

"This area is protected for wolves. It is a wildland park - you can't rifle hunt in this area, Banff National Park is right next door and yet wolves are still at great risk of mortality by humans," Callaghan said. In November, the Fairholme pack, which dens in Banff National Park, sustained


Photo: Dominic Earl

another blow after a hunter in the Columbia Valley, south of Golden, B.C., shot a two-year-old female from the pack.

It is estimated that the Fairholme pack, which once boasted 17 members, is now down to about four wolves. However, Callaghan cannot verify how many are left until tracks are located this winter.

Wolves tend to travel great distances and cross several man-made boundaries. To ensure the safety of wolves outside of protected areas, Parks Canada and the governments of Alberta and British Columbia must co-operate, say conservationists and researchers.

"If we can't protect the wolves in protected areas, then the fate of wolves in these areas is in doubt," said Jim Pisott, director of Defenders of Wildlife Canada.

In September, hundreds of wolf researchers and conservationists met in Banff at the World Wolf Congress to share information on wolf ecology, behaviour and management.

Discussed at the conference was the need to enforce speed limits on the highways and to educate motorists about being cautious of wildlife on the roads.

"If vehicles travel slowly enough, you can respond to wildlife crossing in front of you, but you have to slow down to make that happen," Callaghan said.

Source:
Sonia Kuczaj - For The Calgary Herald
Friday, December 05, 2003
http://www.canada.com/calgary/story.asp?id=D7DDF69D-B769-4C7A-9082-9CB10B06F788

REST OF WORLD

India

Ancient wolf lineages in India

All previously obtained wolf (Canis lupus) and dog (Canis familiaris) mitochondrial (mt) DNA sequences fall within an intertwined and shallow clade (the 'wolf-dog' clade). We sequenced mtDNA of recent and historical samples from 45 wolves from throughout lowland peninsular India and 23 wolves from the Himalayas and Tibetan Plateau and compared these sequences with all available wolf and dog sequences. All 45 lowland Indian wolves have one of four closely related haplotypes that form a well-supported, divergent sister lineage to the wolf-dog clade. This unique lineage may have been independent for more than 400 000 years. Although seven Himalayan wolves from western and central Kashmir fall within the widespread wolf-dog clade, one from Ladakh in eastern Kashmir, nine from Himachal Pradesh, four from Nepal and two from Tibet form a very different basal clade. This lineage contains five related haplotypes that probably diverged from other canids more than 800 000 years ago, but we find no evidence of current barriers to admixture. Thus, the Indian subcontinent has three divergent, ancient and apparently parapatric mtDNA lineages within the morphologically delineated wolf.

No haplotypes of either novel lineage are found within a sample of 37 Indian (or other) dogs. Thus, we find no evidence that these two taxa played a part in the domestication of canids.

Source:
Dinesh K. Sharma1, Jesus E. Maldonado2, Yadrendradev V. Jhala1 and Robert C. Fleischer2,3*

1Wildlife Institute of India, Postbox 18, Dehradun 248001, India
2Genetics Program, Systematic Biology Department, National Museum of Natural History, Smithsonian Institution, 3001 Connecticut Avenue, NW, Washington, WA 20008-0551, USA
3Department of Biological Sciences, University of Durham, South Road, Durham DH1 3LE, UK
* Author for correspondence (fleischer.robert@nmnh.si.edu).

China

Wolf spotted at Inner Mongolia airport

HOHHOT November, 26 (Xinhuanet) - Passengers at an airport in northern China's Inner Mongolia had the good luck to see a wolf run quickly along the runway and then disappear into the grassland nearby.

The scene happened at Dongshan Airport of Hailar in Hulun Buir City, which is located on the fringe of grassland.

In the past, groups of wolves roamed the area and the local government encouraged residents to kill them because they attacked livestock, according to an old man who had worked in the city for many years and once killed four wolves in 40 minutes.

As a result, the number of wolves decreased sharply and the ecological chain was destroyed.

In recent years, the local government abolished the policy and took a series of measures to protect the wild animals, resulting in an increase in numbers.

Source:
http://news.xinhuanet.com/english/2003-11/26/content_1200077.htm
www.chinaview.cn

Thank you to everyone who has contributed news and updates for Wolves of the World. Our special thanks to Pat Morris (Wolfseeker) for the regular supply of wolf news from around the world, and to Andrew Matthews for his sub-editing work. Articles that are reprinted in full are appropriately credited with the author's name and details of where the article was first published.

Wolves, lynx and bears: a new project in the Baltics

by Zanete Andersone

In a previous issue of Wolf Print I wrote about the status of wolves in Latvia. In spring 2003, a new research project was launched – "*Large carnivores in the northern landscapes: an interdisciplinary approach to their regional conservation*". The project is funded by the Research Council of Norway and involves partners from Norway, Baltic States (Estonia, Latvia and Lithuania) and Poland. The UK Wolf Conservation Trust has also made a donation of 500 GBP, which enabled us to buy two wolf radio collars and two antennas.

The project is aimed at building scientific co-operation between Norway, Baltic countries and Poland and the transfer of knowledge from Norway and Poland to the Baltic States. At the same time, Baltic countries can share their experience of human – carnivore co-existence in the long term.

The project covers a wide variety of aspects, including human attitudes towards large carnivores (wolves, brown bears and lynx), damage and conflict levels, public information, updating information about the distribution of carnivores within the region with the subsequent GIS analysis in order to identify potential ecological corridors in the region. This will also be the first attempt to use radio-telemetry on large carnivores the Baltics. Within this project, Latvia will be the only Baltic country trying to radio-collar wolves. The second species to be captured in Latvia is lynx. Estonia, in its turn, aims at capturing brown bears and lynx.

Throughout the summer and autumn 2003, we worked on the preparations for the captures to be made in the winter season. The equipment was ordered, the necessary contacts made (with veterinarians, hunters, officials of the State Forest Service) and the required permits obtained (for radio-frequencies, capture of animals, etc.). Once everything was in place, all we had to do was sit and wait for the snow to come, which is a crucial factor in wolf captures. We had planned to try the Polish method used in the Bialowieza Forest by Dr. Henryk Okarma and Dr. Wlodzimierz Jedrzejewski, i.e., tracking down wolves by their tracks on the snow and encircling them with a line of flags (an ancient method known as 'fladry'). This is a very time- and resource-consuming method, and the success depends on the team as well as good co-operation with hunters. It is felt, however, that this is one of the least traumatic ways of capturing wolves and we felt we would like to try this method first before attempting to capture the wolves using leg-hold traps (which are ordinary traps that have been modified).

It is very early at this stage to say how the project will progress, especially when taking into account that this is a completely new project for Latvia. Also, leading up to Christmas, there has been very little snow in the study area in Kemeri National Park. In the age of global warming it is difficult to predict snow conditions in winter. However, the team hopes that snow conditions in January will allow them to start the practical work, which will hopefully provide obtain lots of new and interesting data on wolf home ranges and their movements within the mosaic of forested and agricultural lands.

We would like to thank the Research Council of Norway and the UK Wolf Conservation Trust for their support and look forward to further co-operation.

Photo: Dominic Earl

Profile of the DIRE WOLF *(CANIS DIRUS)*

by Sue M. Sefscik
Photos: Cameron Campbell http://www.naturalworlds.org

Taxonomy
Kingdom: • **Animalia**
Phylum: • **Chordates**
Class: • **Mammalia**
Order: • **Carnivora**
Family: • **Canidae**
Genus: • **Canis**
Species: • **Canis dirus (Extinct)**

Skull (cast replica) - Pleistocene, between 10,000-40,000 years old / Rancho La Brea Tar pits, Los Angeles, California.

EVOLUTION

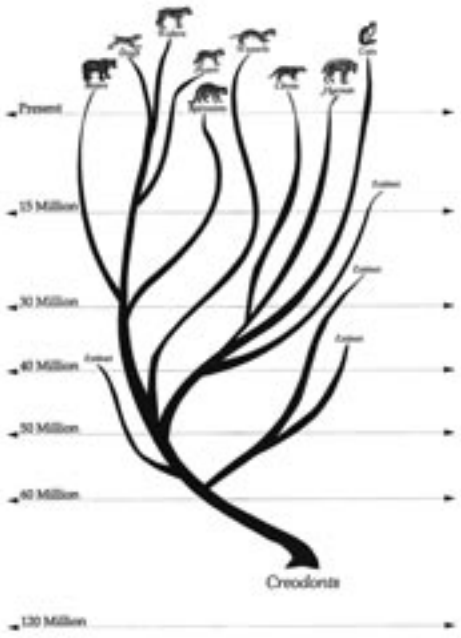
Some time between 100 million and 65 million years ago, depending upon the source, small, rat-like mammals began to evolve. Because of the decline of the dinosaurs, these animals had the opportunity to thrive and gradually became more specialized. All the world's mammals that exist today have a common ancestor called creodont. Descendants of the creodont, Carnivora, began to emerge approximately 40 million years later. They were distinguished by the development of "carnassials" which are teeth used for tearing flesh. This group of primitive carnivores were called miacids. The miacids were tree climbers with retractable claws. From the miacids evolved all dogs, bears, seals, cats, hyenas, weasels and civets. Then about 48 million years ago, the suborders of Feliforma (felid, cats) and Caniforma (canid, dogs) arose.

Canids are the most ancient group of carnivores. The family, Canidae (see above), had three co-existing lineages, represented by the subfamilies of Hesperocyoninae (ancient canids), Borophaginae (hyena-like canids), and Canidae (modern canids).

The subfamily Hesperocyoninae were an ancient group of canids that originated and remained in North America. They looked like a cross between a modern fox and a weasel. They become extinct about 15 million years ago. The Hesperocyonid line also diverged and from the Nothocyon line of that came Tomarctus which gave rise to the Borophaginae. (See chart.)

The Borophaginae existed about 34 million years ago. They also lived only in North America. They were much larger than the Hesperocyonids and looked like a cross between a modern hyena and a dog. Like the modern hyena, they had very large, powerful jaws. They became extinct about 2.5 million years ago.

The last group, Caninae, is the subfamily that evolved into today's modern canids. Although all three groups co-existed, the Caninae did not flourish until Borophaginae and Hesperocyoninae began to wane. This group also evolved only in North America until about seven million years ago when they crossed the land bridge into Asia. These canids continued to cross back and forth over the land bridge, migrating to and from Asia. Wild species of the Canidae (dog) family include foxes, coyotes, jackals, dholes and wolves. They currently live on all the continents except Antarctica.



It is hypothesized that the grey wolf (canis lupus) developed in Eurasia and migrated to North America about a half million years ago. The grey wolf would then co-exist with the coyote (canis latrans) and the dire wolf (canis dirus).

CHARACTERISTICS

In 1854, Francis Linck found a fragment of fossilized bone on the banks of the Ohio River near Evansville, Indiana. Following his death a year later, the fossil was forwarded to Joseph Leidy in Philadelphia, Pennsylvania. Leidy determined that it was a new species of wolf and named it Canis primaevus. He later discovered that name was already used, so he renamed it Canis dirus in 1858.

The dire wolf ranged from Mexico to the upper Mississippi Valley and from the east coast to the west coast of North America. During the last Ice Age, the dire wolf proved a formidable competitor for the grey wolf. It had a more massive skull than the grey, with a thicker and longer jaw. It also had a generally more robust build, averaging 110 pounds, although it could potentially have reached 200 pounds. It averaged five feet (1.5 meters) long.

Studies of fossil remains of the dire wolf from the Rancho La Brea Tarpits in the Los Angeles, California, United States area, show that the dire wolf was a close relation to the grey or timber wolf. Those fossils show the main difference between the dire and the grey

wolf is the size of their teeth. The dire wolf was also a bit shorter than the grey wolf. The dire had slightly larger teeth than the grey which suggests that the dire could crush bones more efficiently. Much as modern wolves are kicked or stepped on while chasing and capturing large prey such as moose, the fossils of dire wolves show similar types of injuries.

The dire wolf had a larger, broader head and shorter, more study legs than the modern wolf. The teeth were also much larger and more massive. The area within the skull which contained the brain was also smaller than the grey wolf. The lower part of the legs of the dire were proportionally shorter than those of the grey wolf. This would indicate that the dire was probably not as fast or efficient a runner as its modern cousin.

Paleontologists think that the dire wolf may have used its relatively large, massive teeth to crush bone. The teeth found in the Tarpits have large amounts of wear on their crowns. Some suggest that dire wolves may have survived in a way similar to modern hyenas, being scavengers as well as hunters.

Some biologists believe that the dire wolf was not a social animal. They believe it relied more on its physical attributes than it did on cooperative hunting. Because it was not required to hunt cooperatively like the present day wolf, those biologists feel it may have shown aggression towards its own kind. Being a large, strong scavenger also limited any necessity to be cooperative among its own.

However, studies of the La Brea Tarpits might indicate otherwise. Over 3,600 dire wolves have been recovered which is more than any other species of mammal. This large number strongly suggests that the dire wolf, much like the saber toothed cat (Smilodon fatalis), may have hunted in packs. To this writer, it seems that as a member of the very social canis taxon, the dire wolf would not be the exception to the cooperative hunting trait.

Canine tooth - Pleistocene, between 10-130 thousand years old / Withlacoochee River, Florida.

RELATIONSHIP WITH OTHER CANIDS

Both grey and dire wolves preyed on large herbivores and thus could not readily coexist. The grey wolf was relegated to the icy tundra, far north of the dire wolf's range. The coyote, however, was able to coexist with the dire wolf in the southern half of the continent. The coyote hunted small game and did not directly compete with the dire for food.

Although there may have been some interbreeding between dire wolves and grey wolves, this was not the norm.

The coyote, grey wolf and dire wolf have all been found in paleontological sites in the mid-western United States. Dire wolf fossils have also been found in Texas. The grey wolf and coyote of the Ice Age were probably very similar in look and behavior to their modern ancestors. Each of the three co-existed with each other; thus, none of the three species is the direct ancestor of the others.

HYPOTHESIS OF EXTINCTION

When the last Ice Age ended, approximately 10,000 years ago, the grey wolf began to migrate southward which coincided with the dire wolf's decline. The end of the Ice Age precipitated the decline of the Pleistocene (Ice Age) megafauna (mammoth, mastodon, giant bison, etc.), which were the main prey of the dire wolf. The grey wolf proved itself more adaptable to the rapidly changing landscape. With smaller limbs relative to its body size, the grey wolf was able to travel farther and faster than the dire. Thus, it could prey on the recently evolved smaller and swifter ungulates such as moose, caribou, musk ox and bison.

To survive in the harsh environment of North America's far north, the grey wolf had evolved into extremely cooperative family groups. These cooperative hunting skills allowed the grey wolf to move south into dire wolf territory and thrive while the dire wolf declined and eventually became extinct.

Metapodials (foot bones) - Pleistocene, between 10,000-1 million years old / Suwanne River, Suwanee Co., Florida.

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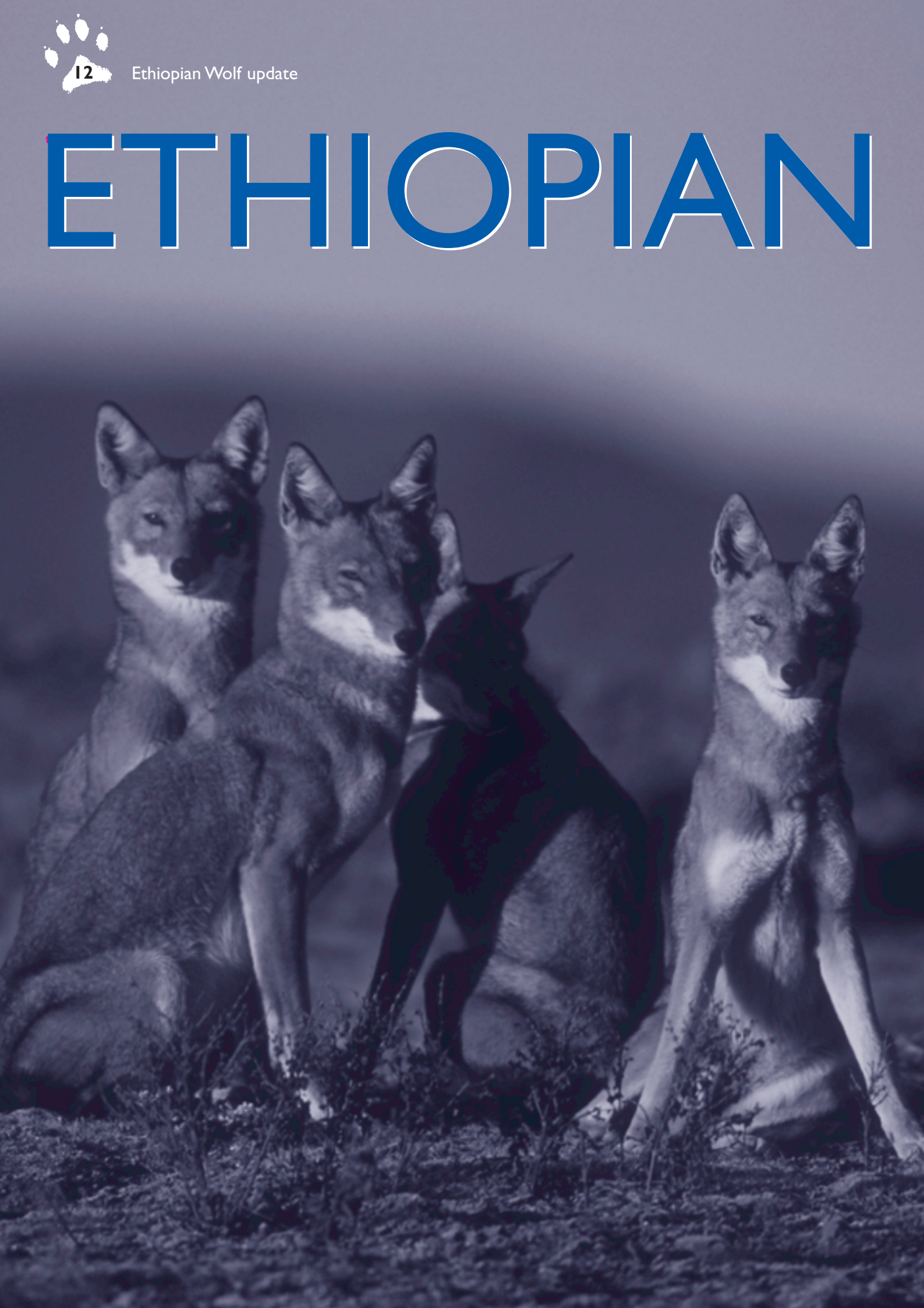

WOLF update

by Stuart Williams
Co-ordinator – Ethopian Wolf Conservation Programme
Photos: Martin Harvey

The following is a report from Stuart Williams which was sent to us just after publication of the last edition of Wolf Print which featured the Ethopian Wolf

The already fragile population of wolves in Ethopia is facing even further decline following an outbreak of disease. To date, between 65-75% of the Web valley population has been lost to rabies. The Ethiopian Wolf Recovery Programme team has recovered 35 dead animals and has received assertive reports of a further two dead animals that were eaten by dogs. In addition, it is estimated that between 15-25 animals are missing from the area, presumed dead.

It has been difficult to monitor the situation in the Web valley accurately because it is apparent that there is some mixing of survivors among the packs. Given that identifying the animals in the whole area is difficult (cf. when they are confined to their pack), it cannot be estimated how the re-shuffling is occurring. However, the team is hoping that they will be able to do this, post hoc, using the genetic identifications of the animals - before the outbreak, the majority of the Web valley population was known individually from genetic work carried out by Deborah Randall.

Contrary to initial expectations, five females are pregnant. It was previously believed that because the rabies outbreak coincided with the mating in the Web valley, adult females in oestrus should have come into contact with a high number of animals - thus, increasing the likelihood that they would catch the disease. ***(Editors note: at the time of going to press the pups should already have been born. We will bring you further news of this in the next issue.)***

Prior to this latest outbreak, a team had been out in the field catching and vaccinating the wolves in an attempt to contain the disease. The focus has been on the Morobawa area of the Bale Mountains: the disease has been spreading through the Web packs in this direction.

The team has consisted of the following people: Darryn Knobel - who has carried out most of the interventions to date; Dr Kifle Argaw – a veterinary officer from the Ethiopian Wildlife Conservation Organisation; Karen Laurenson - who replaced Darryn for ten days, focusing mainly on the recaptures to test for seroconversion and titre levels of antibodies - she also administered a second vaccination dose to all animals that she caught; Edriss Ebu - who has been responsible for many of the captures; Alo Hussein - assisting Edriss and taking over when Edriss got sick; and assistants. There is also a large team in the field to monitor the wolves following their capture.

By 9th December 2003, 34 wolves from 10 packs had been caught and vaccinated. There has been no mortality; only one wolf showed any sort of injury - with the skin being broken by the leg-hold trap (the recaptured wolves showed some bruising where they had been caught). The 34 wolves represent approximately 50% of the estimated 70 - 75 wolves that are found in the Morobawa area, which has been the focus of the intervention to date. There was a high proportion of wolves caught and vaccinated in the packs closest to the disease 'front'. During late December 2003, a further 16 wolves were caught, including 11 recaptures. The serum from the recaptures was collected and this has been sent to a laboratory in the UK to test from antibody titres.

The focus of the intervention is now shifting to the Sanetti plateau, which holds another core subpopulation of wolves.

The team has unprecedented data on a disease outbreak of this sort among any wildlife population. In general these pivot around the description of the outbreak, including transmission routes through the domestic dogs and then through the packs. There is information on the number, distribution and (genetic) identities of animals before the outbreak, and a certain amount of information on the interim period during the outbreak. Information will also be obtained on the number, distribution and (genetic) identity of all animals. Thus, it will be possible to see who died, when and where; who survived and how they re-assembled into packs, and where the packs form. The re-shuffling and spatial re-arrangement of the packs can be assessed relative to various environmental measures, including rodent abundance, etc. In addition to this, there is the information on the intervention: the capture data such as anaesthetic used, etc; the effect of vaccinating wolves (mortality among vaccinated vs. unvaccinated wolves, seroconversion and titre levels with different dosages).

A considerable amount of funding has been raised for the intervention – and the team is expressly grateful for those people who have come forward with funding at this time of need. The funding has been necessary for the following items:

1. the equipment needs (veterinary, radio-collars, spare parts for telemetry receivers and aerials, batteries, chargers, binoculars, GPS's, eartags, some camping equipment),
2. team salaries and per diems (vet team, camp assistants, monitoring team for pre-capture assessment and post-capture follow-up),
3. flights and visas (Darryn, Karen, two volunteers),
4. in-country travel (fuel, vehicle costs),
5. per diems for government officials visiting the area and capture (EWCO and Oromiya),
6. all drugs (anaesthetic, etc),
7. extra communication costs,
8. misc consumables,
9. shipping samples, and
10. processing samples at various labs.

The team has done an exceptional job to date and the Project Leaders are confident that the level of professionalism will continue as the situation for wolves in Ethiopia continues to be monitored.

Note from the Editor: We will bring you further updates as news becomes available from Stuart and his team. In the meantime, if you would like to donate any funds to the project, please contact Stuart (details below) or contact the UK Wolf Conservation Trust.

Stuart Williams, PhD
Co-ordinator, Ethiopian Wolf
Conservation Programme
P.O. Box 23400
Addis Ababa
Ethiopia
s.williams@telecom.net.et

BULGARIA INCREASES ITS BOUNTY ON WOLVES

by Elena Tsingarska

Once again, Government policy in Bulgaria is working against wild wolf conservation. The Hunting Council recently decided to increase the bounty on wolves to 100 Bulgarian leva (equivalent to 50 EUROS), which is half of the average salary. Previously, the bounty was set at 25 leva, which is the average salary. Clearly this significant increase provides a massive incentive for hunters.

At the start of every hunting season a media campaign is launched against the wolves, and this year is no different. Information with no scientific basis has been appearing in the media, and wolves are regularly blamed for the decrease in wild ungulate populations. To fuel the anti-wolf sentiment claims made about the size of the wolves killed by hunters are often exaggerated, with reports of animals weighing more than 70 kg. The media reports that the hunters are very brave for killing these 'beasts'. In reality, however, the wolves weigh only 45 kg on average. Attempts by the BALKANI Wildlife Society team to reach the national media and present a counter-viewpoint have been blocked by hunters, some of whom hold high positions of authority within the government and media. There has been some success with regional media, but not enough to influence government policy.

To try and counter the negative publicity, the Wolf Study and Conservation program of the BALKANI Wildlife Society intensified its own campaign to raise public awareness and undertake education activities. The group has also hand-raised a wolf puppy from a few days old in order to socialise him with humans. His first appearances in public have been very encouraging. He has been very friendly towards visitors, and this has provoked many questions from audiences.

BALKANI is planning to establish a Large Carnivore Information Center in the Pirin Mountains. Its function will be to accept school groups as well as adults and will offer realistic information about the wolf, the bear and the lynx. Experience of longer-term education and public awareness projects, already undertaken as part of the Wolf Study and Conservation Program, have demonstrated that these activities are indispensable.

Funding is still required to refurbish and equip the building which is being purchased, but the project team is doggedly persistent. They are determined that providing education and public awareness programmes is one of the most important and key factors in achieving long term and sustainable wolf conservation in Bulgaria.

For further details about the project, please contact:

Elena Tsingarska
BALKANI Wildlife Society
Dragan Tzankov Blvd. 8, 1164 Sofia
Phone:+359 2 9631470
elena_ts@mail.bg

Photo: Dominic Earl

"Living with the wolf" –

Segovia, Spain, November 2003

by John Linnell

Photo: Grupo Lobo

As the trend of many European wolf populations slowly turns towards recovery, a wide range of conflicts (with farmers, hunters and folks that are just afraid) have begun to reappear again. These conflicts challenge existing conservation legislation as they now have to adapt from a situation where the goal was to save wolf populations from the edge of extinction to a more long term goal of reintegrating wolves into our modern, and very crowded, landscapes.

Wolves have been expanding in northern Spain in recent decades – such that the present population is believed to be around 1,500 animals – with an additional isolated population in southern Spain (Sierra Morena) of around 100 animals. Under the EU's Habitat Directive these two wolf populations have different conservation statuses. The small southern population is strictly protected (Annex II and IV) while the larger northern population is open to more active management (Annex V) – usually in the form of limited lethal control in response to depredation on sheep. When Spain signed the Habitat Directive they used the Duero River as a convenient border between the two populations. However, the recent rapid expansion of the northern population has taken it across the Duero to the central mountains that surround Madrid. In this region, conflicts have been relatively high, largely because the local people have lost some of their adaptation to wolves. However, because these wolves are south of the Duero they are managed with the same strict protection as the isolated population in Sierra Morena (300 km further south), despite the fact that they are a part of a large continuous wolf population. In order to discuss this situation the regional government of Castilla y Leon organized an international meeting on "Living with the wolf" in cooperation with the European Commission.

The meeting was attended by representatives of most EU and candidate countries that currently have wolf populations, a range of international scientists, local representatives from Spanish hunting and farming organizations, and representatives from the various autonomous regions of Spain that have wolves and from the federal government. Data on wolf management practices and conflicts was presented from a range of diverse regions. In general there was a high degree of consensus about issues from the speakers, despite their diverse backgrounds. Each speaker emphasized that human tolerance in the face of conflicts was far more important than the actual ecological conditions. The conclusion of the meeting was that the EU were not willing, or able, to change the status (annex designation) of wolves south of the Duero. However, a set of nine points was presented by the European Commission representative with respect to the interpretation of the Habitat Directive's text. These points highlighted the need for clear action plans developed with public involvement, the need for good population monitoring, and an emphasis on the need to fund preventative measures to minimise conflicts between wolves and livestock. However, most importantly for the Spanish situation were statements to the effect that wolves should be managed on a population basis and that the Habitat Directive includes enough flexibility to allow carefully regulated lethal control or hunting where this fits into an overall management plan. In other words, this should provide some openings in Spain to manage the northern population in more or less similar ways on both sides of the Duero, although the Sierra Morena population will remain completely protected. Given the extent to which the northern population has expanded in the last 10-20 years while being exposed to low levels of lethal control, it should continue to do so in the future. Large areas of suitable habitat remain unoccupied – so the future looks good as long as the local population tolerate their presence.

The most important signals from this meeting are that the EU has shown flexibility to local conditions and have recognized that maintaining "favourable conservation status" of wolf populations can often be best achieved by not strictly protecting every individual. While many may regard any apparent weakening of wolf protection as a blow for conservation, there are many that believe that this type of locally adapted flexibility is going to be vital to allow wolves, and other large carnivores, to coexist with people in the long term throughout large areas of the European countryside. This is an important test case for many of the EU candidate countries as they prepare to enter the EU. Many of these countries have large carnivore populations and very different traditions to the founder EU countries. There is widespread acceptance among European experts that maintaining the possibility for carefully regulated hunting of carnivores is more or less a prerequisite for these countries to maintain these large populations and the degree of co-existence that they currently enjoy. For Spain the challenge will be to develop action plans for the 8 autonomous regions that currently have wolves (only Asturias has one in place) within a coordinated federal strategy, and to establish the required monitoring system that will ensure their management is compatible with wolf conservation. All in all it was a fascinating insight into the practicalities and complexity of wolf conservation in a country that contains the largest wolf population in western Europe.

World Wolf Congress 2003 – Banff, Alberta Canada

Bridging Science and Community

25 - 28 September 2003

by Denise Taylor

People Photos: Monty Sloan

Banff was the perfect setting for a wolf congress, bringing together 500 people from diverse interest groups at a World Heritage Site abundant with wildlife, and in a country which is home to a large wolf population, and where wolf-human conflicts prevail.

The conference was host to scientists, government agencies, aboriginal people, conservation groups, corporations, ranchers, herders, hunters, trappers, artists, writers, and the general public collectively. Many of the wolf biologists who attended from around the world are familiar names to Wolf Print readers and this group represented the best people working in wolf conservation today. There were biologists who were some of the earliest pioneers of wolf biology and conservation research, as well as many who are the "fresh blood" and our biologists of the future.

Like any other conference, one of the frustrations is that it is impossible to attend every presentation, especially when some are held simultaneously. But that is the nature of such gatherings. Here are some of the highlights from the ones I did manage to attend.

When they were arranging the conference, the organisers set the four primary objectives that would underpin the conference theme of "Bridging Science and Community":

- to provide a forum for disseminating current scientific information on wolf ecology, behaviour and management;
- to assess the role of science in wolf management and policy formation and identify needs for future research;
- to provide a forum for a diversity of people with varying values, attitudes, and expertise to interact and share viewpoints on coexisting with wolves; and
- to share viewpoints on wolves from a variety of alternative traditions including artistic and storytelling

These objectives were achieved, and the conference opened with a plenary session which set the scene:

- **How many wolves are enough?**
- **Should wolf populations be controlled to enhance prey populations?**

These two key questions cannot be answered without taking into account the ethical, moral and philosophical issues involved, and it was heartening to see how much of this was woven into the fabric of conference.

Luigi Boitani gave the keynote address which focused on the first question of: *How many wolves are enough?* After discussing value concepts and the economic carrying capacity versus the ecological carrying capacity, Luigi went on to propose the following:

Paul Pacquet

1. Abandon the old prejudice that wolves are denizens of the wilderness and that they need wilderness to survive.
2. Accept the concept that wolves and humans can live an integrated co-existence in the same area rather than having to be segregated in separate districts.
3. Changing the long-standing conservation paradigm i.e. measuring success in terms of wolf numbers towards new goals where success means expanding wolf rangers rather than numbers.
4. Make extra effort to keep objectivity of scientific data separate from emotional bond.
5. Methods of wolf management should be independent of society's wealth.
6. Wolves should be saved and managed as part of the whole context, not because they are singled out as a species.
7. Learn to be tolerant for a certain level of disturbance in our environment.

David Mech chaired the next session which focused on the complex issue of whether wolf populations should be controlled to enhance prey populations. The rise and decline of prey populations is subject to many different variables which were reflected in the presentations put forward by the different interest groups. There were those who felt that wolves directly affected prey populations to such an extent that wolf management and control was definitely called for. Others painted a different scenario in which prey populations were regulated by other factors such as food, the mean temperature, and competition for food. A lot of discussion during this session centred on the values and ethics of wolf management and control. Paul Pacquet ended the session by proposing that we should be "advocating for wolves as part of the landscape processes not in terms of their numbers".

Education was another key theme throughout the conference and a number of practical wolf conservation projects were presented. Kristin Gangas from Norway discussed her findings on a two year programme which had taken place in a rural community in southern Norway where the increase in wolf population had led to an increase in wolf-human conflicts. Initially, the wolf education programme was met with hostility, with parents threatening to remove their children from school, claiming it was another "manipulative project". However, the team persevered with the programme which was aimed at increasing knowledge through participating in outdoor activities. It was believed that fear was one of the main issues among children, and that one of the ways of dispelling this was to encourage self-experienced knowledge and a better understanding of how nature works. Some of the activities included tracking, looking at

Carol Callaghan - one of the Congress organisers

carcasses, exploring bear dens, radio-tracking and slideshows. The programme was positively accepted by the children who in turn generated enough interest from parents to take part themselves. Following the programme, local people became involved in wolf population estimation, fear was no longer an issue, people in general were requesting more information, and schools and parents requested further activities to take place.


Photo: Dominic Earl

A number of films were shown during the conference. One of the most striking was a film of livestock guarding dogs protecting sheep from wolves in France which was presented by Benoit Lequette. The film was taken using night-vision cameras, and showed two wolves attacking a flock of sheep. The six dogs protecting the flock worked tirelessly all night repelling the wolves. Two sheep were killed during the night. The first was fiercely guarded by the dogs even after it had died, and although the wolves were persistent in their efforts to gain control of the carcass, their attempts were unsuccessful. The second sheep was driven over a rocky precipice to its death, but even then the wolves were unsuccessful in their attempts to obtain the carcass.

I only managed to catch two of the other films shown, but each gave a fascinating insight into the world of the wolf and its fellow creatures. In presenting *The Good, the Bad and the Ugly of Filmmaking,* Lu Carbyn gave an amusing and entertaining account of film-making and his research on wolf-bison interactions in Wood Buffalo National Park in Canada. Bob Landis is well known for his films of wolves in Yellowstone, and his film *The Wolves of Yellowstone* was a sheer pleasure to watch. Bob was unable to attend the conference, and so the job of narrating it fell to Doug Smith. There were some astonishing sequences in the film including one of an eagle swooping down and stealing meat directly from a loping wolf's mouth. Again this was another amusing and entertaining presentation from someone who has worked on the Yellowstone wolf recovery project from the outset and who has been involved in the many trials and tribulations of the whole programme.

Trappers, ranchers and outfitters presented their views at the conference. And although opinions differed on prey densities and the causes of periodic increases and reductions in prey populations, and what measures of wolf control and management should be adopted, it was generally agreed that bringing different stakeholders together to discuss the issues involved was a welcome idea. There are organisations, such as Defenders of Wildlife, who are working with ranchers to reduce livestock depredation, and providing compensation where wolf kills occur. One rancher backed up Suzanne Stone's presentation on the work carried out by Defenders by openly stating that some of the measures are indeed successful, and there are signs of a change in attitude to one that is more tolerant of wolves. As well as compensation, there is a lot of experimentation taking place on non-lethal control methods such as Fladry (brightly coloured flags on lengths of rope), Radio Activated Guards (RAG), and livestock guarding dogs, all of which have some deterrent effect on wolves preying on livestock.

Sacred Connections was presented by Levi Holt, also known as Black Beaver of the Nez Perce tribe. He spoke of the traditional Native American/First Nations perspective relating to humans and other species, and our interconnectedness, which is often disregarded in favour of the values of a dominant society that is driven by industry. Black Beaver highlighted the parallels between wolves and the Nez Perce, and how both have historically been hated and feared. He told the audience that he was at the conference to speak *for* the wolf and not *on behalf* of the wolf, such is their long and close association. The Nez Perce have received their songs from the wolf, and they are proud of the fact that there are now 400 wolves in Nez Perce territory. Black Beaver ended his presentation with a haunting flute song which was a moving tribute in celebration of the wolf and the Congress. This was a refreshing change from talk of statistics and models and was a potent reminder to delegates that there is a spiritual dimension to wolf conservation.


Black Beaver

The conference wasn't all about wolves. Some delegates managed to squeeze in some recreation. Banff has a host of restaurants, pubs and clubs and Holly Jaycox from Wolf Park managed to twist the arms of a group of us to go to a country-music club. It was good to see the US Fish and Wildlife contingent and colleagues from Wolf Park letting their hair down with an energetic two-step that for some involved some very acrobatic dance moves.

For me the conference was motivating, inspiring and most of all hugely enjoyable. I was particularly pleased to see a significant part of the proceedings being given over to the ethics and philosophy of wolf conservation. The splendor of the Rockies was an unbeatable and well-chosen venue. Inside the National Park itself, wildlife conservation is a serious business with millions of dollars spent on various wildlife protection measures such as underpasses and bridges across treacherous stretches of highway for a variety of animals to use. These seem to have been successful in reducing the death toll of animals wishing to get from side of the highway to the other. Sadly, however, one of the remaining wolves in Banff was killed by a car a few weeks after the conference – see Wolves of the World – but at least the authorities are taking very serious measures to try and protect wildlife in the Park.

Finally, I would like to thank the organisers for such a memorable conference. The hard work put in obviously paid off, and let's hope that wild wolves throughout the world will benefit from this gathering.

Book Review

WOLVES

Behavior, Ecology, and Conservation

Edited by L. David Mech and Luigi Boitani
Chicago University Press.
ISBN: 0-226-63763-8
Illustrations: 32 color plates, 13 halftones, 63 line drawings

Reviewed by John Linnell

It was nine years in the making – but the wait was worthwhile. Twenty-two of the world's wolf experts bring together their total of 350 person-years of experience to present a state-of-the-art summary of our knowledge about wolves. Knowledge has grown enormously since David Mech wrote his first wolf book (The wolf: the ecology and behavior of an endangered species) in 1970. In the intervening 33 years research from all corners of the globe has helped demystify this animal, and this book tries to bring it all together. Chapters span everything from behaviour, physiology, and predator-prey relationships through genetics to the lists of parasites (several pages worth) that call a wolf's body home. However, most interesting for the conservationist are the last two chapters. "Wolves and humans" covers the complex wolf-human relationship in various cultures, before leading us through the various conflicts that occur with human activities like depredation on livestock, attacks on people, competition with hunters, and the way wolves end up being used as symbols in political conflicts between different groups of people. The final chapter on "Wolf conservation and recovery" by Luigi Boitani is the most thought provoking. He binds together the biology with the conflicts to address the issues of how to achieve coexistence between wolves and humans. By the time they get this far in the book, readers will hopefully have completely changed their view of wolves as a wilderness species, and realized that wolves can just about live anywhere if humans let them. Consequently, wolf conservation will require a wide range of locally adapted strategies. In some areas, strict protection may be most appropriate, while in other tolerance may be promoted by allowing some forms of control or even harvest. The central message is that wolves are tolerant and flexible – but can we be the same, both in our interactions with wolves and ourselves? This is not a coffee table book, although the two sets of colour plates do contain some of the great wolf pictures that have already inspired many. It is rather a solid, but highly readable, scientific text covering all aspects of wolf lore. If you are seriously interested in wolves, either as a professional or lay-person, this book is a "must have".

L. David Mech is senior research scientist with the Biological Resources Division, U.S. Geological Survey and adjunct professor in the Department of Fisheries, Wildlife, and Conservation Biology and the Department of Ecology and Behavioral Biology at the University of Minnesota. He is author of The Wolf: The Ecology and Behavior of an Endangered Species, The Way of the Wolf, and The Arctic Wolf, and coauthor of The Wolves of Denali.

Luigi Boitani is professor of vertebrate zoology and animal ecology at the University of Rome. He is author of Dalla parte del lupo, coauthor of Simon and Schuster's Guide to Mammals, and coeditor of Research Techniques in Animal Ecology.

For more information, please contact Stephanie Hlywak at 773-702-0376 or sxh@press.uchicago.edu

Advance praise for Wolves: Behavior, Ecology, and Conservation

"An indispensable compendium on all biological aspects of these endlessly absorbing carnivores. With great authority the authors have opened our minds to the richness of wolf behavior and adaptability. Once wolves were assaulted everywhere. A more tolerant public attitude-for which the ceaseless advocacy by several contributors to this volume was partly responsible-has helped the resurgence in number and range of the species in Europe and North America. Directly and indirectly Wolves offers a powerful statement about the moral obligation of everyone to help these symbols of wilderness endure."

George B. Schaller, Wildlife Conservation Society; author of The Serengeti Lion, The Last Panda, and Wildlife of the Tibetan Steppe

"Twenty-two world-class wolf experts assembled this book-a monument to their 350 person-years of experience and a tribute to the enthralling species that they both research and revere. The twentieth-century wolf seemed to be doomed, but this milestone text encapsulates the dedication of a generation that has offered the species a future. Mech and Boitani's marvelous book charts the course that has set the wolf on the road to recovery, and clearly identifies the challenges that lie ahead."

David W. Macdonald, Chair, IUCN/SSC Canid Specialist Group and Director, Wildlife Conservation Research Unit, University of Oxford; editor of The New Encyclopedia of Mammals

"Wolves provides a contemporary and unparalleled global overview of wolf ecology, behavior, and conservation. It is the most comprehensive and scholarly treatment of wolves ever assembled, impressive in content and contributors. The editors and chapter authors are the most renowned, productive, and accomplished scientists currently active in wolf research. In other words, this is the most important book on wolves ever."

Paul C. Paquet, coeditor of Wolves of the World: Perspectives of Behavior, Ecology, and Conservation.

"Wolves is the most comprehensive and up-to-date book ever compiled on these amazing, misunderstood, and maligned carnivores. Wolves are the poster children for animals worldwide, and the material in this book will be useful to a wide variety of researchers. But what is truly unique about this long-awaited volume is that it can be read by scientists and nonscientists alike. The fate of wolves does not rest with researchers alone."

Marc Bekoff,. University of Colorado, Boulder; editor of Coyotes: Biology, Behavior, and Management and coauthor (with Jane Goodall) of The Ten Trusts: What We Must Do to Care for the Animals We Love

Yellowstone Wolves in the Wild

by James C. Halfpenny
Paperback: 104 pages; Dimensions (in inches): 0.39 x 8.56 x 10.54
Publisher: Riverbend; (June 2003)
ISBN: 1931832269
http://www.riverbendpublishing.com/index_files/page0024.htm

Reviewed by Ralph Maughan

Halfpenny writes in detail interesting stories about the real Yellowstone wolves and uses the actual events to illustrate wolf behavior and wildlife ecology.

The more you already know about Yellowstone's wolves, the more you will like Halfpenny's text and the large number of good, clear, and interesting photos of real Yellowstone wolves in the wild. There isn't a photo of a captive wolf in the book. The Druids get a lot of attention; but the other packs are not ignored. There are rare photos of the Nez Perce Pack, Swan Lake Pack, Leopold and even of the alpha male of the unofficial Norris trio. My favorite is the winter photo of a gray Nez Perce wolf standing by White Dome Geyser.

I particularly liked Halfpenny's description of how a wolf "sees with its nose." If you already know the numbers of the northern range wolves, you will love this book, and you'll like the book if you have only general knowledge about wolves or Yellowstone.

The book has extensive appendicies giving information about wolf territories and the fate of the orginal reintroduced wolves.

There is also a hardbound limited edition. The front and back covers are stamped with the paw prints of the Druid alpha pair.

Copies of Yellowstone Wolves in the Wild are available from the UK Wolf Conservation Trust. Please contact the Trust on 0118 971 3330 or visit the website at www.ukwolf.org.