

The magazine of The UK Wolf Conservation Trust, published quarterly

# WolfPrint

Issue 17 Autumn 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](mailto:ukwct@ukwolf.org)  
[www.ukwolf.org](http://www.ukwolf.org)

Editor  
Denise Taylor  
Tel: 024 7626 4326  
e-mail: [denisetaylor@ntlworld.com](mailto:denisetaylor@ntlworld.com)

Editorial Team  
Andrew Currie, Julia Ford, Suzi Garcia,  
Lee Houten, Andrew Matthews,  
Michael McCormack, Aleks Pluskowski,  
Gwynne Power, Chris Senior, Kezia Wilder.

Contributors to this issue:  
Gyorgy Pal Gado, John Linnell, Carol Porter,  
Sue Sefscik.

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

The UK Wolf Conservation Trust is a company  
limited by guarantee. Registered in England &  
Wales. Company No. 3686061

The opinions expressed in this magazine are not  
necessarily those of the publishers or The UK Wolf  
Conservation Trust.

All rights reserved through the world. Reproduction in any  
manner, in whole or in part, in English or other languages,  
prohibited. This work may not be photocopied or otherwise  
reproduced within the terms of any license granted by the  
Copyright Licensing Agency Ltd or the Publishers Licensing  
Society Ltd.

## 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).

# E ditorial



I think most of you will agree that the wolves on the cover of this issue are very striking in their appearance, and this particular photograph gives the impression that they haven't a care in the world. Of course, the reality is very different. This unique sub-species of wolf (*Canis simensis*), commonly known as the Ethiopian wolf, is in danger of becoming extinct, with less than 500 left in the world. It is the same old story – human activities have resulted in habitat loss and population fragmentation, and competition for land use and resources has led to persecution (although this is less of a problem for the Ethiopian wolf as it is for other gray wolves with shepherds demonstrating some tolerance). These particular wolves also have the added problems of hybridisation with local dogs as well as suffering a number of canid diseases. The picture is not all bleak, however. There are teams of dedicated people working to save the Ethiopian wolf and who are finding ways to overcome the problems they face through vaccination programmes, conservation education and ongoing research. Raising awareness of the plight of the Ethiopian wolf is also a key issue. The more people who know about the problems these wolves face, the more funding the projects will be able to attract. Members of the UK Wolf Conservation Trust and subscribers to Wolf Print have previously helped to fund some of the research work through donations that have been sent to WildCRU (Wildlife Conservation Research Unit at Oxford University). If you would like to know more about the Ethiopian wolf, an annual report is available on the UKWCT website at [www.ukwolf.org](http://www.ukwolf.org).

John Linnell is becoming a regular contributor to Wolf Print, and he has written an article about the ethics of human intervention when it comes to research and conservation work. Although this particular piece is about the lynx, the issues apply equally to research carried out with wolves and other predators. John's article certainly gives some food for thought about the moral dilemmas we face in 'tinkering with nature' in our attempts to conserve wildlife.

Wolves have only their teeth with which to kill their prey, and so when they bring down a large animal it is not a pretty sight. Death does not usually come quickly for the prey animal. Most of us only get to see scenes like this on televised wildlife programmes, and these are usually sanitised. Carol Porter, however, was one of the lucky few to witness a wolf kill in Yellowstone recently, and as you would expect it had an incredibly powerful impact on her. She shares this experience with us on page 10.

By the time you read this, I will have been to a wolf conference in Banff in Canada which is being attended by many of the top wolf biologists. Most of the world's wolf biologists and other canid specialists receive Wolf Print every quarter, and many regularly contribute articles and information. I am hoping to gain even more support for Wolf Print at Banff in order to continue with the supply of up-to-date and vibrant material for the magazine, which is ultimately for the benefit of wild wolves throughout the world.

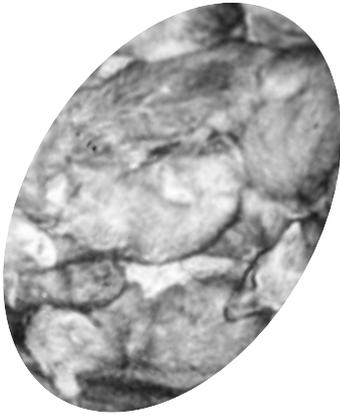
Your continued support is also important for the success of Wolf Print, and I hope you enjoy reading the articles and news in this issue.

*DTaylor*

PICTURE CREDIT: Front Cover - Martin Harvey



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



## Inside this issue...



Wolves of the World



Wolves in the Slovakian-Hungarian border region



A wolf kill in Yellowstone



Knowledge at what price?



A brief introduction to the Ethiopian Wolf



# Wolves of the World

## EUROPE

### Germany

#### Fight against German fears as wolf howls again

(Reuters)

OBERLAUSITZ, Germany

Who's afraid of the big bad wolf? Germans are. A century after hunters killed the last wolf in Germany, the creatures are stealing across the border from Poland, stoking long-dormant fear and fascination.

While the wolf is a potent symbol in many cultures, Germans have a particularly intense relationship with the grey predator that was revered for its hunting prowess by the Germanic tribes and later the Nazis, but is demonised in many popular legends.

Wolf is a common surname and dozens of German towns and villages have wolf in their names. One striking example is Wolfgang Wolf, the former trainer of VfL Wolfsburg soccer club.

Nature lovers who welcome the wolf's return have a hard job winning support in the densely-forested country which gave the world the tale of "Little Red

Riding Hood" and her encounter with the wicked wolf who disguises himself as her grandmother.

The Protection Society for German Game has declared 2003 "Year of the Wolf" and a concerted campaign is underway to educate hostile hunters and shepherds and protect livestock.

"There are some who unreservedly celebrate the return of the wolf and see it as enriching biodiversity, but there are also those who see it as damaging and a great danger," said Michael Gruschwitz of the Saxony Environment and Agriculture Ministry.

"There is a perception that the wolf is an animal that can be dangerous for people and pets. We want to get rid of this 'Little Red Riding Hood' syndrome so we have to deal seriously with the concerns and needs of the affected population."

"We are trying to present an objective picture of the wolf - how he really is, that he is very shy of people, that he avoids people and that there is no danger for anybody who goes walking in the woods with children or a dog," Gruschwitz said.

### Old fears revived

Germany's last wolf was shot near the town of Hoyerswerda in 1904 after a campaign of extermination lasting centuries. Wolves were also wiped out in most of the rest of northwestern Europe. Small populations survived in Spain and Italy.

A few crossed into East Germany in recent decades but were all killed or captured, the state declaring they had no place in a modern, industrial country. Since German unification in 1990, wolves have been protected, but several have still been shot.

Following an ancient migration route from Poland, a wolf settled in the Oberlausitz military training ground in Saxony in 1995, not far from Hoyerswerda. In 2000, its cubs were born there - the first on German soil for a century - and some of those offspring moved further west on reaching maturity.

That is when the trouble began. Last May, those wolves attacked a flock of sheep, killing or injuring 33 and sparking calls for the predators to be driven out of farmed areas.

The attack prompted the Saxony government to set up a project to track the newcomers, help shepherds safeguard their flocks and educate game hunters and the local population.

"It is important to talk about wolves so people get to know them. Much of the fear and resentment comes from the fact that they are foreign," said Gesa Kluth, a biologist researching the Saxony wolf population and leading the education drive.

There have been no attacks on sheep since last year and Kluth's "Lupus" project is slowly winning over nervous locals.

Ines Kowal, a 39-year-old mother who lives opposite Kluth's office in the village of Neustadt near the military training ground, welcomes the efforts to protect the wolves.

"There were always wolves in this region but I wouldn't like to be confronted by one myself," Kowal said. "We need to keep the balance so that people and animals can live together."





#### Places Referred To

1. Germany
2. Spain
3. Switzerland
4. Ontario, Canada
5. Alaska, USA
6. Idaho, USA
7. Minnesota
8. Montana, USA
9. Ohio, USA
10. S. Carolina, USA
11. Wisconsin, USA
12. Wyoming, USA
13. India

Map Stefania Balbo

#### Tourism bonus?

Kluth and fellow biologist Ilka Reinhardt scour forest paths for wolf tracks and droppings and imitate wolf howls to try to provoke a reply. They had to wait months to see the animals themselves and rely on foresters and hunters for much of their information.

A cameraman from German television spent 240 hours over several months at the military training ground before he captured the wolves on film. While visitors are lucky to see a paw print, let alone a live wolf, Saxony's Gruschwitz believes the Lausitz region can benefit from the return of the wolf.

"If wolves can live and reproduce, like they can in the Lausitz, it is a good sign for nature. This kind of unique environment can be used to promote tourism," Gruschwitz said.

A Neustadt resident who runs children's nature activity holidays has organised one with a wolf theme, the region is printing wolf postcards and a company in the Lausitz area is planning a new raspberry liqueur called "Wolf's Howl".

Kluth and Reinhardt's work erecting special fences to protect sheep as well as state guarantees of compensation for any livestock

lost to wolves have won over many shepherds.

With each wolf needing up to 1,500 kg (3,307 lb) of meat a year, the animals are serious rivals for the private hunters who pay big fees for rights to shoot deer and other game. But the Lupus project hopes they can learn to put up with the competition.

"We hunters in the affected region can live with the wolves," Siegfried Buchholz told the German Hunting Newspaper. "Game losses are not so serious yet where we are."

Reinhardt said Germany's nascent wolf population is at a critical stage. Left undisturbed, it will probably spread further, but the loss of just one female could mean its demise. The researchers believe two pairs produced cubs this spring.

"It is recognition that protects the wolves. Hunters who are critical know theirs is not the opinion of the majority," she said. "There is more than enough game for hunters and wolves."

Source:  
By Khaleej Times / Reuters  
[http://66.234.3.46/DisplayArticle.asp?xfile=data/todaysfeatures/2003/August/todaysfeatures\\_August51.xml&section=todaysfeatures](http://66.234.3.46/DisplayArticle.asp?xfile=data/todaysfeatures/2003/August/todaysfeatures_August51.xml&section=todaysfeatures)

#### Spain

##### Iberian Wolf Campaign a Success

The campaign by Ciconia and the reports by ANPBA of illegal wolf killing, has succeeded in persuading the EU Environment Commissioner, Margot Wallström, that the legal status of Iberian wolf South of the Duero River should not be changed.

Pedro Alcantara has written to Wolf Print on behalf of Ciconia to thank everyone who backed this campaign and says that it was the combined effort of individuals and organisations, with more than 13,000 emails being sent to the Minister, which has led to further persecution of the Iberian wolf now being avoided.

Source:  
By Pedro Alcántara Martín .  
[pedro.alcantara@signatus.org](mailto:pedro.alcantara@signatus.org)  
<http://www.signatus.org>

#### Switzerland

The wolf is to remain a protected species in Switzerland, after parliament rejected a proposal to allow hunting of the predator. The House of Representatives said it made no sense to suspend an international agreement, while neighbouring countries still protect wild wolves. However, the House called on the

government to help resolve a conflict with sheep farmers who argue that wolves threaten their livelihood. Under existing law, wolves can be hunted in Switzerland if they are known to have killed at least 25 sheep.

Source:  
<http://www.swissinfo.org/sen/Swissinfo.html?siteSect=113&sid=3897564>

#### NORTH AMERICA

##### Canada

###### Ontario

A moratorium on hunting and trapping wolves in 39 townships surrounding Algonquin Park will expire on June 30th 2004. Earthroots, a conservationist organisation, argues that the moratorium is too short and is demanding permanent protection for the species. Currently there are no limits on how many grey wolves may be killed yearly in Ontario.

##### USA

###### Alaska

The State Governor has signed a bill allowing wolves to be hunted and killed from aeroplanes, despite the fact that over the past seven years, Alaskans have twice voted in favour of revoking the



'land and shoot' method of hunting. The Alaskan Department of Fish and Game report that since 1998 7,500 wolves have been hunted and killed, but admit that the actual number may be double, since many killings may go unreported.

#### Idaho

The Central Idaho Anti-Wolf Coalition is attempting to raise \$100,000 to take the federal government to court. The coalition charges the government with violating Idaho's sovereignty when the U.S. Fish and Wildlife Service brought Canadian grey wolves to the state. The lawsuit will claim that Idaho's wildlife, in particular its elk population, is being decimated by wolf predation.

Federal agents are investigating what appears to be the shotgun killing of a wolf in an area 60 miles northeast of Boise. The wolf, known as B-131 was discovered after its radio collar transmitted a mortality signal. A \$5,000 reward has been offered for information leading to the arrest of the person responsible. The penalty for killing a federally protected animal is a year's imprisonment and a fine of \$100,000.

#### Minnesota

Seven Mexican grey wolves have been born in Apple Valley Zoo. Mexican grey wolves are the most endangered species of wolf in North America, with 250 individuals kept in captivity and approximately 20 living in the wild.

#### Montana

Wildlife researchers at Glacier Nation Park say that a litter of at least four grey wolf pups have been seen with the Whitefish pack, which comprises three adult wolves and two yearlings. The Whitefish pack is one of two wolf packs being monitored with radio collars. The second pack, the Kenilla pack, may also have cubs but researchers have as yet been able to obtain visual confirmation.

#### Ohio

A wolf found dead near the Ohio border in June, a victim of a vehicle strike, was originally captured as a pup in 2002, near Black River Falls in Jackson County. The wolf was fitted with a radio collar that failed in January this year. Between then and June the wolf travelled over 400 miles, and had to negotiate its way around the conurbations of Chicago and Gary.

#### South Carolina

Echo, a young female red wolf, was killed by a car near Charleston. Last autumn scientists released Echo on Bull's Island where they hoped that she would be accepted by an eight-year-old male. However, the male rejected her in favour of his first mate, whom the scientists regarded as too old to bear pups. In the wild, red wolves generally mate for life.

To travel the four miles from Bull's Island to the mainland, Echo is believed to have swum creeks and walked through shallows and oyster reefs.

#### Wisconsin

Researchers are conducting tests to see if wolves can be encouraged to keep away from farm and their livestock. A number of wolves have been fitted with collars which give them an electric shock if they go near a signal wire buried around the perimeter of a yard.

A grey wolf born to a Wisconsin pack was found dead earlier this year in Indiana. A wolf

specialist has stated that this migration is a sign of a healthy wolf population living in a suitable habitat. The grey wolf was reclassified from an endangered to a threatened species by the state in 1999, and by the U.S. Fish and Wildlife Service in April 2003.

According to a recent progress report the current estimates of the wolf population in Wisconsin vary between 327 and 347. Packs are mostly restricted to heavily forested areas and number between two and ten animals. The pack's territory may cover 20 - 120 square miles.

While wolves have not attacked humans, they have attacked sheep, calves, dogs, deer, chickens, turkeys and horses, resulting in \$23,000 of losses in 2001 and \$40,000 in 1992.

#### Wyoming

The state's developing wolf management plan is under vigorous attack from both conservationists and ranchers. Conservationists argue that the plan does not go far enough to guarantee the survival of the

species, ranchers maintain that the plan goes too far in protecting wolves.

About 660 wolves roam Idaho, Montana and Wyoming, sufficient for federal wildlife officers to declare their recovery a success and move towards taking wolves off the endangered species list in these states.

Earlier this year the Wyoming Legislature approved a bill classifying wolves in two ways. In areas surrounding Yellowstone and Grand Teton national parks, wolves would be managed as trophy game and be subject to regulated hunting. Elsewhere in the state wolves would be classified as predators, with few restrictions on their being shot.

On July 17th, federal wildlife officers destroyed a male wolf that had been confirmed as killing cattle on several occasions over the last two years. According to a U.S. Fish and Wildlife Service Report the Green River pack, consisting of a grey and black pair with pups, attacked a calf on a Bridger-Teton National Forest grazing allotment. Two other calves were confirmed as killed by wolves on July 14th. The radio-collared pair were involved in calf depredation in 1992.

## REST OF THE WORLD

### India

#### Wolves attack children

Wolf (*Canis lupus pallipes*) attacks on children in India are becoming more widespread.

Attacks in Uttar Pradesh (a state in north India) started in February 1996 in three districts: Jaunpur, Pratapgarh and Sultanpur. There were 80 attacks on children reported in these areas between 1997 and 1998. The attacks continued until almost all the wolves were shot.

The problem then started in another nearby district, Rae Bareilly, in 1997 and continued until September 2002 when several wolves were eliminated in this district.

Subsequently, wolf attacks also started in Bhadohi, Unnao, Fatehpur, Shravasti, Bahraich, and Balrampur districts in the state.

In May 2002, a wolf attacked three children on the outskirts of Unnao, a thickly populated town. Satish Kumar, a wolf biologist, along with the villagers, searched



Showing scars of wolf attack.

Photo: Satish Kumar



Wolf pups that were dug out from the den in May 2002 in Unnao and killed by people.

Photo: Satish Kumar

the entire area around the village where wolves had killed one of the three children and found an active wolf den 150 metres from a hamlet. The villagers burned the den immediately after seeing the dam emerging from it, and killed all seven pups.

The main problem is that there is no natural prey for wolves in these areas, and the children were attacked by a pack of three wolves which had been raising litters. This in itself is an unusual occurrence and perhaps the only record of the Indian wolf raising pups in summer.

In February 2003 in Bahraich district, Satish helped the State Forest Department to capture four wild wolves in the areas where four children had been attacked, two of whom had been killed by the wolves.

During July and August 2003, a further five children have been killed by wolves in another district (Balrampur) located adjacent to Bahraich.

It is very difficult and risky to visit these areas to collect information immediately after an incident because of the public unrest these events understandably arouse. However, Satish will be visiting the affected

areas in September and will help the Forest Department to capture the wolves and move them to zoos.

Satish has documented 210 wolf attacks on children between 1996 and 2003. Between 80 and 90% of these attacks have occurred along the catchment areas of the Ganges, Yamuna, Gomati, Sai, Varuna, Sarju, Ghaghara rivers and their tributaries. More than 75% of incidents of child lifting have occurred on the outskirts of the villages at night and most of the victims were in the 1-5 years age group. Several wolf packs were involved in this aberrant behaviour which covers more than 2000 sq km area.

Wolves were once distributed very widely in whole of Uttar Pradesh, except the areas falling in the Himalayan range, until the beginning of 20th Century. All these areas where wolves have attacked children fall in the Gangetic Plain, which is a very fertile Biogeographic Zone of India, supporting the highest human density in the state as well as the country. The entire Zone has extensive and intensive agricultural practices. Satish found it difficult to visit several

areas in the rainy season due to floods and 20-25 incidents of child lifting remain uninvestigated in the affected areas.

The Ganges and the Yamuna rivers have extensive patches of grassland and shrubland with heavy livestock where wolves still survive. The blackbuck (*Antelope cervicapra*), which was the major wild prey of wolves, has been hunted to extinction. This has led to the wolves entering human habitation, resulting in direct conflict.

Satish has been awarded a research project by the Wildlife Preservation Trust International (now Wildlife Trust), USA on the population status of wolves, their conservation problems in Uttar Pradesh. The wolf-human conflict is an important component of this study. Three sites have been identified in the state for further intensive studies on the *pallipes*: two located in high wolf-human conflict areas and the third in an area fulfilling optimum habitat requirements of the species.

**Editors Note: Satish Kumar will be writing a more in-depth article for the winter issue of Wolf Print.**

A group from India have been working on the molecular genetic analysis of Indian wolves, especially the Himalayan wolf, to understand their taxonomic status. Details of this study can be found in a paper titled: Ancient origin and evolution of the Indian wolf: evidence from mitochondrial DNA typing of wolves from Trans-Himalayan region and Pennisular India, which is online at: <http://genomebiology.com/2003/4/6/P6>

**Thank you to everyone who has contributed news and updates for Wolves of the World. Our special thanks to Pat Morris 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 in the Slovakian- Hungarian Border Region

by György Pál Gadó



Photo: UKWCT

WWF Hungary has launched a project this year under the heading: *Permeable Borders for Large Carnivores*, which focuses on the Slovakian-Hungarian border region. Although both countries will join the European Union in May 2004, the project does not deal with politics, but sets out to achieve real results in wolf and lynx conservation.

It is not easy to establish the exact numbers of wolves in the region, but it is estimated that there are between 300 to 450 wolves in Slovakia, and between 10 and 15 in Hungary. These numbers are similar for lynx. Hungarian researchers are keen to learn from their Slovakian neighbours, who are more experienced in wolf research. And to a large extent, the survival of wolf populations in Hungary depends on the results of wolf protection and management in Slovakia.

Until the end of the 19th century there was a stable wolf population in Hungary, which was an integral part of the Carpathian population. Drastic changes in land use patterns together with persecution from hunters and farmers resulted in the fast decline of the species. After the middle of the 20th century wolves became a rare sight in Hungary, with the occasional wolf being spotted wandering in from neighbouring countries. The National Nature Conservation Authority eventually declared the wolf (and also the lynx) extinct, but today researchers think that the wolf never really disappeared from Hungary.

Following new sightings in the 1970s and 1980s, there was a systematic review of hunters' journals, which provide evidence that there were wolf shootings practically every year throughout most of the 20th century.



Photo: UKWCT

After 1993, when wolves were declared a protected species, illegal killings were no longer recorded in the journals. The wolf was declared a protected species in order to support the resettlement process of the species.

The wolf returned to Hungary from two directions. The number of wolves arriving from the north from the direction of Slovakia is much bigger, but some regularly appeared from the south from Croatia and Serbia.

The first systematic research on wolf distribution in Hungary was carried out by the Wildlife Biology and Game Management Department of the Godollo Agriculture University. A questionnaire was mailed to several hundred hunters in 1987. Since then, the survey has been repeated every second year. In 2001, the European Union's LIFE Nature project gave new momentum to the research. The Godollo research team, directed by Laszlo Szemethy, launched a field monitoring project in the north-eastern part of Hungary (where wolves most frequently occur) to check the data received from the questionnaires. Monitoring is carried out by the rangers of the national park directorates, and the different sources of information are managed in a central database. Radio telemetry research was also initiated. As in other countries, one of the main problems facing researchers is trapping the animals.

The LIFE project improved co-operation between the stakeholders, and on 9 May 2001, a resolution was passed by the Minister of the Environment which reclassified the wolf as a strictly protected species.

The Permeable Borders for Large Carnivores project has a very practical approach. An initial workshop was organised in March 2003 with the aim of bringing together the potential partners in Nova Sedlica, Slovakia. As well as bringing colleagues together to make plans for sharing and disseminating valuable information, it was also an opportunity to observe wolf tracks in the snow.

Previously, when tracking wolves in the Aggtelek National Park, Hungary, research would be curtailed upon reaching the border with the Slovak Karst National Park. Researchers would then have to liaise with colleagues in Slovakia and request information on the territory of the pack over the border.

Until recently, the co-operation was not very direct between the rangers in Zemplén, Hungary and the neighbouring forested area in Slovakia. Initially, the Permeable Borders for Large Carnivores was mainly a communication program, but now a grant from the International Visegrad Fund (IVF), Slovakia has made it possible to publish a bilingual collection of studies from both sides of the border. These documents relate the legal situation of the wolf and lynx. The wolf enjoys legal protection in some territories near to Hungary and Czech Republic, but in other areas it can be hunted between October 31 and January 16. Robin Rigg from the Slovak Wildlife Society explains the importance of livestock guarding dogs in wolf conservation, and Gabor Firmanszky, a Hungarian ranger from the Zemplén Mountains, speaks about role of the Slovakian

wolf population and its impact on the wolf population in Hungary. Both publications will be presented at a series of lectures to be held in Slovakia and Hungary in October and November 2003.

Another aim of the project is to undertake the difficult task of strengthening contact between conservationists, farmers and hunters.

The International Visegrad Fund provided the initial grant to launch the project. A further grant of £3,000 from The UK Wolf Conservation Trust will help to further the project. The IVF grant will help to fund meetings and the publications, while the grant from the UKWCT will fund travel to the region several times in order to find the best partners and also to work on the follow-up in the border region. It will help with the work required on the maintenance of existing migration routes and the establishment of new ones, and also to educate hunters about the positive role of the wolf population in large herbivore management.

**Editors Note: Look out for further updates on the WWF Permeable Borders project in future issues of Wolf Print.**

WWF Magyarország/WWF Hungary  
H-1124 Budapest, Németvölgyi út 78/B  
tel./phone: +36 1 214 5554/107  
mobil: +36 30 987 1617  
fax: +36 1 212 9353  
e-mail: gyorgy.gado@wwf.hu  
honlap/website: www.wwf.hu



# A WOLF KILL IN YELLOWSTONE

by Carol Porter

Having become a member of The UK Wolf Conservation Trust in Reading, England, a few years ago, I became increasingly interested in all aspects of 'the wolf' and especially conservation of this majestic animal in the wild. The relocation of Canadian grey timber wolves into Yellowstone Park in 1995/96

inspired a dream to view them in the wild and, hence a long planned vacation with my husband to Yellowstone and surrounding Wyoming in June this year.

We hoped for a sight of at least one wolf but what we experienced was more than we could ever have dreamed of.

Just after 5am one morning, near the Soda Butte Creek in the beautiful misty Lamar Valley (north-east park entrance), 6 wolves from the Druid Peak pack chased a large bull Elk down from the northern uplands of the Druid Peak adjacent to their den site.



Photo: Doug Smith



Three of the 'lesser in hierarchy' wolves remained on the high ground on the north side (den side) of the road, spreading out to watch, wait and to cut off any retreat for the Elk. The other wolves chased the distraught animal across the sagebrush and dried grasses of the valley's southern rangeland and into the rivulets of the stream below us. Elsewhere buffalo grazed unruffled in the pastures against a background of exposed rocky mountain peaks towering above the lower backdrop of Aspen and Douglas Fir forest. It was here in this quiet and peaceful valley that the wolves attacked and injured their prey in a cacophony of hooves and paws splashing in the water.

The alpha female #42F (grey), the ageing 8 year old alpha male #21M (blue-grey back) and their 3 year old uncollared daughter, known as the Half Black, waited on the bank before swimming the stream and launching a second frenzied attack on the Elk. The wolves then climbed back up the small bank and proceeded to lie low in the grass to wait and stalk; i.e. the alphas behind and to the left side of the Elk floundering in the water and the Half Black to the front. Thus the animal was surrounded by the 'pack' team and could only stagger around in circles, baying and searching in vain for an escape route.

We were able to witness the scene through our binoculars and by now were joined by several other people, including the ranger Rick McIntyre. From our vantage point on the road, approximately half a mile away, we could see that the Elk was now clearly in distress faltering, confused and bleeding from his right rump and flank. The wolves were prepared to wait as their prey weakened.

After about fifteen minutes the two alphas moved slowly forward with silent caution and then, with a rush, leapt on to the flank of the Elk again. The animal went down splashing frantically but struggled back to its feet with the two wolves hanging on the hind flesh, feet off the ground. The Elk dragged the wolves a few yards up stream before it faltered and finally succumbed, dropping down on its fore legs. One of the wolves let go of the flank and leapt at the Elk's throat. As the animal plunged down into the water, the other wolf joined his mate tearing at the throat too. The final kill was over in a matter of seconds.

The third wolf, who had been crouching in the grass ahead, now joined her family and helped to drag the dead Elk to the side of the bank where they all started to gorge. As we watched the three noses dive in to the carcass, it became apparent that #21M had been slightly injured in the fray as he was limping. He eventually settled down on the grass in front of the carcass to 'mind' it. #42F tore out the liver and trotted off, eventually swimming the river and crossing the road to return to her den and the pups. She reminded me of an Alsatian with a football in its mouth! The Half Black, having fed, returned across the valley, presumably to feed the pups by regurgitation because, within 30 minutes, she was back gorging at the carcass again. I saw the rumen (stomach) tossed out and learnt that wolves rarely touch that part of the body.

Next the wolves that had waited on the northern slopes crossed the road, further down from us, and joined in the feed. #253M is a 2 year old, mostly black, and limping from a previous left hind injury sustained as a puppy. We were told that this wolf some time ago had left the pack and gone in search of a mate, he got as far as Salt Lake City before he was caught and returned to the pack. (They are only allowed one escape from the Park, the next time they are put down.) The small true grey yearling female and the #255F made up the remainder of the wolves who had originally chased the Elk but had stayed north of the road.

This pack had been named after the hill prominence called Druid Peak. The alpha #21M had been a puppy of the original wolves, alpha #9F and alpha #10M relocated from Canada into Yellowstone Park in 1995 and formerly of the Rose Creek Pack. #21M's future as the dominant alpha remains uncertain in the Druid Peak Pack as he is an ageing 8 year old, which is old by wild wolf standards. Our wolf identification, knowledge and clear sightings through his spotting scope had been provided by Rick McIntyre, who had also seen the 'kill'. He informed us that this year the Druid Peak were flourishing, real 'butterballs', as prey was abundant and consequently in April the pack had produced 2 litters with 7 pups in one and 6 in the other. #255F had mated with #302M, (the latter is often with the Leopold pack). Their dens to the right of the Druid Peak had been fenced off by the rangers against the public and for the pups privacy and safety. Rick had his radio apparatus and aerials with him so we could listen to the pups yipping at the den. Two days previously the alpha #42F had taken her pups outside the den to romp and it was estimated this litter was about 10 weeks old. Soon there will be more sightings as they play and learn to hunt with their peers and elders.

As the sun rose, a coyote was seen in the

vicinity of the carcass but could not get too close as #21M was guarding well. However a Bald Eagle and a Red Tailed Hawk, plus a few ravens, did manage to land on the kill and peck. Having been at this spot for nearly 5 hours, we were also hungry by now, so we left the scene and headed off for a late breakfast at the Roosevelt Lodge, a few miles west of the valley.

Around 5.30pm the same day we returned to the Lamar Valley and this time sighted the U Black F, nicknamed because of its two-toned coloration (grey and black), feeding at the carcass. Later we witnessed her cross the valley and road and on to the den. We left but returned 3 hours later and, in fading light, watched the limping #253M tear at the carcass then swim the stream and cross the road further down the valley.

Wow!! What a day of wolf sightings. Only a few experiences in life have a lasting effect and this was one of them. I felt incredibly lucky and privileged to witness a rarely seen wolf kill; to see nature at work in the wild. Wolves kill for food and especially to gratify their future generation needs. Usually at this time of the year predations occur on the higher mountain pasture grounds where ungulates spend the hot summer months. Perhaps the bull Elk had grazed too near to the dens – at least it is gratifying to know wolves usually chase the old, weakest and diseased animals and not just the young. Fitter animals can outrun the wolves.

To observe a wolf pack working in unison as a team, and see a life/death scene played out at dawn in one of the most beautiful peaceful valleys on earth, was just overwhelming. True, it was awesome, but so emotionally exciting that the experience will never be forgotten.

As Hank Fisher said, quote, "Yellowstone is a perfect place for wolves. They make the landscape sing. The Yellowstone wilderness cannot be truly wild without them".

**In the last issue (No. 16) of Wolf Print, Kirsty Peake wrote about her own experiences in Yellowstone, and at the UK Wolf Conservation Trust Spring Seminar this year also spoke of a similar incident with the Druid Pack in February 2001 when they numbered about 20 wolves. She described the scene as a 'black necklace following the elk down the hill'. Kirsty said, "It takes your breath away – half of you hopes the elk gets away the other half hopes the pack will get its meal. This is seeing wolves as they should be seen – wild in every sense of the word."**

**Kirsty and her husband, Alan, organise regular trips to Yellowstone. There are still spaces to join them on their Winter Wolf Discovery in February 2004 to watch the wolves of Yellowstone and explore the ecosystem. Contact Kirsty at [wwd@peakeservices.co.uk](mailto:wwd@peakeservices.co.uk) or Tel: 01364 621287 or Fax: 01364 621397**



# Knowledge... at what price?

by John D C Linnell

**M**any aspects of research on large carnivores, especially capture and radio-collaring, are controversial among the public. Yet where would we be without the knowledge that science brings? Would these animals have any future in our crowded world without knowledge? In this essay John Linnell looks at the issues for his main study animal, the Eurasian lynx, but the questions raised, and attempts at answers, are just as valid for wolves and other carnivores.

Some memories stay with us forever, burned onto our retinas. The first time I saw a wild large carnivore it was a distant speck moving across the snow on the far side of a valley. Through hastily grabbed binoculars it came into focus as a wolverine, jogging along on the trail of a herd of a wild reindeer herd that had passed here an hour before. It was late June in the Dovre mountains of central Norway, snow was still lying on the ground and the hill-tops were covered in mist – all in all an atmospheric background for a most unusual sighting of one of the rarest, and least understood carnivores in Europe. I came away from this with a feeling of having caught a rare glimpse of the inner-workings of nature that was oblivious to my presence. But it was only a glimpse, what happened when that wolverine crested the hill? Did it find a weak

reindeer calf to kill, or a dead animal to scavenge, was it a male or female, did it have offspring nearby to feed, did it live long? These questions will never be answered.

The next time I saw a large carnivore was under very different circumstances, and this time the animal was very much focused on my presence. The location was some hundred kilometres distant in the boreal forest of southeastern Norway. We had just started a research project on Eurasian lynx and had begun trying to capture animals to fit them with radio-collars. Luck was on our side, and within the first week of the project's start a kindergarten class on an excursion stumbled over a lynx-killed roe deer in the forest. They called us, we set up our specially designed snares around the kill, and sat back and waited for the lynx to come back and finish consuming its kill. Then around 7pm the alarm started beeping – a lynx had gone into the snare. Within minutes we were there, slowly peering over the cliff edge to see two eyes glowing back at us – the eyes were attached to a creature which there and then I would have sworn was as big as a tiger. One of the advantages of responsibility is that you can stand back and take pictures while ordering field assistants forward into the jaws of death. Luckily these guys knew what they were doing and the process went smoothly. The animal was held down, immobilizing drugs injected, it went to sleep, and we started to work on it. It turned out to be an adult male, 22 kg – by the time we were finished he was measured, we had taken blood samples, and equipped him with a shiny new radio-collar. Within an hour he was taken back into the forest to wake up – and signals soon showed he was moving away. The emotions rushing through the system on this occasion were very different and complex. *Elation*, because we had managed to get our study off to a flying start. *Fear*, because even though it is far smaller than a tiger, 22 kg of lynx is still a lot of cat and we had been looking him in the eye before the drugs took effect. *Anxiety*, because we were responsible for this animal's life and were desperate to avoid injuring him in any manner. *Awe*, because we had just been handling a truly beautiful animal, one of those mysterious, silent, invisible predators that dwells in the taiga.

Another thing that was very different is that this glimpse of the animal's life did not end here. This was an individual, we later named him Peer (or #101 for the purist), that

we would come to follow for the next 4 years. We would end up mapping his territory from year to year as it drifted southwards, we would find his kills, snow-track him to quantify his scent-marking activity (there is no privacy in field research), follow him during the mating season to document his promiscuity – in effect we came to know his life better than we know that of many of our own friends or family. We also learnt about his death – an instant death to a hunter's bullet - two years after his radio-collar stopped working.

This lynx project started in 1995, a time when lynx were little studied in northern Europe and most popular accounts of the species could simply recycle old folk tales and superstition – “lynx never eat frozen meat”, “lynx suck the blood out of their prey”, “lynx are wanton killers that massacre their prey”, and so on. The management of the species in Norway was also based on a similar absence of facts. Now eight years later this has all changed. Our team has gone on to add another 60 individuals to the list of lynx whose individual lives we have followed and described. As much is now known about lynx in Scandinavia as about almost any other large carnivore species, anywhere. Many of the myths have been blown away, and we can now serve our wildlife managers with volumes of facts and hard-data about most aspects of lynx ecology. We now know how large an area each animal needs, how many roe deer they kill each year, how many kittens they produce, how well they survive, what they die of, who gets to mate with whom, how many lynx there are in the population. We are in a position to make informed decisions about their management, and develop conservation plans that should secure their future. Yet at what price has this knowledge come?

It is fair to say that 99% of this knowledge has been gained through the use of radio-transmitters and could not have been gained in any other way. Radio-marking implies live-capturing an animal, restraining it, and releasing it with a radio around its neck, or implanted inside its body cavity. All these procedures impose a certain stress on the animal and have an associated risk. As *scientists* the data that we collect from an animal is useless to us if our marking influences their behaviour or lives in any significant way. As *people* we also care greatly about our animals' wellbeing. Therefore, we are very careful to analyse the impact of our



Photo: John Linnell

John Linnell with a radio-collared lynx.

actions on the animals that we study, and do everything that we can to minimise it. So far, it appears that carrying a radio-collar has no detectable effects on behaviour or reproduction for lynx, and that capture has at most a short term effect. Despite the most elaborate planning, and the use of state of the art equipment and drugs, things occasionally do go wrong and accidents happen. On three occasions we have accidentally killed, or been forced to euthanise, lynx during capture attempts. The memory of that sick feeling in our stomachs when this has happened will remain with all of us for all of our lives. Killing one of these beautiful animals in an accident seems like such a waste, especially in the case of one of these individuals that we had followed for years prior to the accident. Every time we drove through his former territory we kept on expecting to see tracks or hear his radio-signal before remembering that he was gone, because of our actions.

But some context is important. During our study period (1995-2003) during which we accidentally killed three lynx, hunters in Norway shot over 750 lynx during the annual hunt, and over 70 lynx were killed in traffic collisions. In this grand scheme of things our three animals fade into insignificance on a population level. And it is to the long term future of the populations of these species that we as conservationists have our greatest commitment. The only moral charge that can

be raised against us is the issue of suffering caused to the few individuals involved. The issue of whether this is too great an impact in terms of the gains is an issue of individual ethics. Although some welfare groups are vocal in their condemnation of “cold-hearted” scientists that “torture” their animals, the reality is that the pain sits deepest among those responsible, ourselves. While we do everything we can to minimise risks, there is no doubt that our knowledge has come at a price (paid by the animals and ourselves). Is it worth it?

The answer must be a clear yes! The famous astronomer Carl Sagan eloquently described “science as a candle in the dark” in a “demon-haunted world” where ignorance is the cloaking darkness. Without the new knowledge that our research has produced lynx would still be these mysterious, unknown, feared creatures roaming around the forest surrounded by myths and superstition. Without incorporating our data into management plans it is also likely that they would have been hunted into near local-extinction. The only effective way of increasing human understanding and tolerance of these controversial species is through knowledge. There is simply no way to integrate large carnivores back into the fabric of the human dominated European landscape without a solid scientific platform. The risks are things that we are aware of, and do everything to

minimise, but accidents will happen. After all, we are working under often extreme field conditions with wild animals. Even under the controlled conditions of a hospital surgical ward accidents happen, and people die or are injured.

What does the future hold? We have come far in recent years with the development of new non-invasive techniques such as DNA sampling from faeces and urine. Hopefully these methods will minimise the need to use hands-on methods. However, there are many questions that cannot be answered in any other way except through hands-on methods. As we gain experience and develop techniques we will continue to minimise the things that can go wrong, but no routine will ever be perfect. While we can lament this, it is unavoidable. We humans have used millennia to create a landscape to suit our material needs – while we go about trying to conserve large carnivores in order to satisfy our ascetic and spiritual needs we must realise the fact that restoring them often requires far greater effort than was expended to persecute them in the first place. The effort is expensive, both economically and morally. But, when you get to see a wild wolverine chasing reindeer, or a lynx track in the snow near your home, you realise that it is worthwhile. The process of restoration may be rather artificial, but at the end of the day it is possible to return some of the wild and free to our landscapes.



## WOLF PRINT MAGAZINE

**Wolf Print** is Britain's leading wolf conservation magazine, published quarterly by the UK Wolf Conservation Trust. As well as publishing **Wolf Print**, the UKWCT provides a wide range of educational activities in and around the Trust Centre in Reading, Berkshire.

The Trust's seven ambassadorial wolves (4 North American and 3 European) represent the Trust and their own species at many events held through the year. They help change the negative attitudes which many people still have towards these beautiful animals.

The Trust also raises funds to send to wild wolf conservation projects. In the past year we have helped a number of projects in Bulgaria, Poland, Romania, Italy, Slovakia and Ethiopia.

If you are interested in contributing towards wild wolf conservation, please complete the slip below and return it to: The UKWCT, Butlers Farm, Beenham, Reading, RG7 5NT. Tel: 0118 971 3330

<input type="checkbox"/>	Please send me further details about the UKWCT.
<input type="checkbox"/>	I wish to subscribe to Wolf Print and enclose a cheque/PO for £14.00 (inc P&P) made payable to 'The UK Wolf Conservation Trust'. (Please add an additional £4 P&P if you are not UK resident)
Name _____	
Address _____	
_____ Postcode _____	
Telephone _____	
E-mail _____	



# A brief introduction



# to the

# ETHIOPIAN WOLF

### **Geographic Range**

The current distribution of the Ethiopian wolf, *Canis simensis*, (also known as the Abyssinian wolf, Simien fox or Simien jackal) is confined to a few mountain ranges in Ethiopia at altitudes of 3,000 to 4,000 m. (9,800 to 13,000 feet). The largest population is found in the Bale Mountains National Park in the southeast of Ethiopia. Smaller populations also occur in the Simien Mountains, Mount Guna, North Wollo, South Wollo, Menz - all north of the Rift Valley - and in the Arsi Mountains to the south.

### **Physical characteristics**

The Ethiopian wolf is a medium sized canid with long legs and a long muzzle. It slightly resembles the coyote (*Canis latrans*) in conformation and size. Male wolves are 20% larger than females. Adult males average 14.2 to 19.3 kg. (31 to 42 pounds) and females 11.2 to 14.15 kg. (25 to 31 pounds). The adults have short, soft fur of a bright red color with dense white underfur. The coat is lighter in juveniles and turns to yellowish in females during the breeding season. The throat, chest, lower part of the neck, the underside and inside of the legs are white, with an outline between the red coat and the white markings sharp and well defined. The ears are pointed and broad, with the tips fringed with long, white hairs growing inward from the edge, presumably to protect the ears from the cold. The tail is a thick, black brush with the last third white underneath.

### **Natural History**

Typically, males do not disperse from their natal packs. Two-thirds of the females disperse at approximately two years and wander the narrow ranges between pack territories until a breeding vacancy becomes available. Within a pack, the alpha bitch is replaced after her death by a resident daughter. This system creates a high potential for in-breeding. It has been hypothesized that extra-pack copulations and thus multiple paternity may overcome potential in-breeding depression.

From the studies done with the wolves in Bale, the matings occur between August and November. The receptive period appears to be less than two weeks. Other males stand by

by Sue M. Sefscik

Photos: Martin Harvey





a copulating pair with no signs of aggression. Within a pack, the alpha bitch shows a preference towards the pack's alpha male; however, she is also receptive to any visiting male. Up to 70% of the matings involve males from outside her pack.

The bitch whelps between October and December. Only 60% of the dominant females breed successfully each year. As with most canids, gestation is 60 to 63 days, with pups born with their eyes closed and without teeth. The pups are born a charcoal gray color with lighter patches on the chest and groin areas. The litter can be from two to six pups.

Unlike most carnivores, the Ethiopian wolves hunt and feed alone on small prey, such as the giant mole rat, a rare root-rat endemic to the Bale Mountains and other endemic species such as grass rats and Starck's hare. Scat shows that rodents account for nearly 96% of all prey. Also unlike the majority of American wild canids, these wolves are most active during the day. Their hunting appears to be centered around the activity of their prey, the aforementioned rats. Digging prey out is most common and the favorite technique. This effort can be from a few scratches up to the total destruction of the burrow, with mounds of dirt left as

evidence. Kills are often cached and retrieved for later consumption.

Although the wolf is mostly a lone rodent hunter, packs can get together to chase and kill mountain nyala and reedbuck calves, lambs and hares.

The behavior of the Ethiopian wolf includes living in cohesive social packs that share and defend an exclusive territory. Within optimal habitat, packs consist of between 3 and 13 adults (the average being 6). These packs may consist of approximately 3 to 8 related adult males, 1 to 3 adult females, 1 to 6 juveniles and 1 to 6 pups. In an area with lower prey, wolves live in pairs or small groups, and the

adult ratio is 1:1 vs. 2.6 males to 1 female in larger groups.

They gather together for social greetings and to scent mark their territory at dawn, noon and evenings. Wolves sleep in the open, curled up, with their nose beneath the tail, much like the domestic dog. Several may sleep close together. They do not use dens to sleep, and during the breeding season, only pups and nursing females use the den. Where there is strong human interference, they may become more nocturnal.

The species' habitat is very localized and is restricted to Afro-alpine grasslands and highlands. Therefore, their numbers are limited due to the limited mountain habitat.

#### **Conservation status**

The Ethiopian wolf is probably the rarest canid in the world, all of whom live in the wild. It is listed as critically endangered by the IUCN, although they are in the process of being downlisted to endangered. (Claudio Sillero-Zubiri, pers. comm.) It is officially

protected in Ethiopia under the Wildlife Conservation Regulations of 1974. It is not listed by CITES because no poaching or legal trade seems to affect it. There are no captive animals anywhere in the world.

The Ethiopian Wolf Conservation Programme (EWCP) IS the recovery plan, and the future of the Ethiopian wolf is dependent on the success of its activities. The overall goal of the EWCP is to mutually and sustainably secure the conservation of the Ethiopian wolf and their Afroalpine habitat, and the social and economic well being of local human communities. This is done by 1) securing the conservation of areas of Afroalpine ecosystem, their biodiversity and ecological processes; 2) assessing, addressing and counteracting threats to the survival of Ethiopian wolves; and 3) promoting the need for a focus on the environment sector, and particularly conservation of biological diversity, within Ethiopia. The EWCP carries out a range of activities

to conserve the species and its Afroalpine ecosystem. This includes an education campaign among local human communities and a domestic dog vaccination campaign for dogs living within and surrounding wolf range. It also supports and strengthens protected areas, works to promote tourism to wolf ranges and lobbies the government on a number of issues. The EWCP is currently examining the possibility of directly vaccinating the wolf, using oral vaccines delivered through a baiting system. The EWCP works closely with the federal and regional governments within Ethiopia. As the only active wildlife conservation project in the country, it also acts as an ambassador for conservation and the environment sector in a country where it is too often overlooked. (Stuart Williams, pers. comm.)

Current research continues by scientists of the Wildlife Conservation Unit (WildCRU) of Oxford University.





### **Economic Importance**

As with any highly endangered species, the Ethiopian wolf could be a source of eco-tourism for Ethiopia. This would bring in tourist dollars to a dramatically poor country. The successful reintroduction of the American grey wolf (*Canis lupus*) into Yellowstone National Park has produced millions of dollars for the states of Wyoming and Idaho. The spiritual and somewhat mystical nature of the wolf could be perpetuated here which could, in turn, produce monetary rewards.

### **References**

- <http://www.wildcru.org/endangeredspecies/ethiopianwolf/ewcp.ewolf.htm>  
Lecture, personal interview and personal correspondence with Dr. Claudio Sillero-Zubiri.  
Personal correspondence with Stuart Williams, PhD, Co-ordinator, Ethiopian Wolf Conservation Programme.  
C. Sillero-Zubiri and D.W. Macdonald and the IUCN/SSC Canid Specialist Group, 1997. *The Ethiopian wolf - Status Survey and Conservation Action Plan*. IUCN, Gland, Switzerland. 123 pp.  
Sillero-Zubiri, C., and K. Laurenson. 2001. Interactions between carnivores and local communities: Conflict or co-existence? In J. Gittleman, R.K Wayne, J. Fuchs, D.W. Macdonald, eds, *Proceedings of a Carnivore Conservation Symposia*. Zoological Society of London, UK.  
Sillero-Zubiri, C. 2000. Ethiopian wolf (*Canis simensis*). Pp. 95-100 in R.P. Reading and B Miller, eds, *Endangered animals: a reference guide to conflicting issues*. Greenwood Press, Westport, CT, USA.

Limited Edition Prints by

*Andrew Hutchinson*

Wildlife artist

Individually signed and numbered prints by British artist,  
Andrew Hutchinson (all editions limited to 490)

Available from: Waxwing Fine Arts, Dulnain House, Marton,  
Sinnington, York YO62 6RD Tel. & Fax. 01751 430637  
Cheques payable to: Waxwing Fine Arts (plus £5.00 p+p)

20% of all sales will go to the U.K. Wolf Conservation Trust



↑ Wolf Portrait £50.00  
380mm x 440mm



← Wolf Family £60.00  
640mm x 440mm



↑ Lazy Days £60.00  
570mm x 320mm



**SUZE**  
FOR  
QUALITY  
DECORATED  
GARMENTS

SWEATSHIRTS AND T-SHIRTS DECORATED WITH DESIGNS  
CREATED BY AWARD WINNING ARTISTS



SEND FOR OUR FREE BROCHURE

From:-

SUZE,  
Rue Rocheuse Vinery, St. Peters,  
Guernsey, Channel Islands,  
GY7 9LQ  
Email: [suzelm@guernsey.net](mailto:suzelm@guernsey.net)

Please quote 'WOLFPRINT'  
with request



