



EWCP

ETHIOPIAN WOLF CONSERVATION PROGRAMME

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The work of the wolf monitoring team unveils a slow but imminent recovery in packs affected by canine distemper last year. The vet team continues with their dedicated work to control wildlife diseases. The education campaign works to coordinate efforts with other incipient education initiatives in Bale, and holds another successful Wolf Day around the emerging Community Sport Grounds. EWCP consolidates its presence in the Arsi Mountains with some exciting work in secondary schools. EWCP contributes to designing a management plan for the Bale Mountains National Park, led by EWCP partners the Frankfurt Zoological Society.

Annual Report 2006-2007

**April 2007
By James Malcolm**

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Introduction

The Ethiopian wolf (*Canis simensis*) is found only in a handful of mountain enclaves in Ethiopia. With less than 500 adult wolves remaining, the species is considered one of the rarest carnivores in the world and listed as Endangered by the IUCN.

Like other high-altitude endemics, the wolves are ultimately limited by their shrinking habitat, due to overgrazing and expanding agriculture, and threatened by disease, persecution, and hybridization.

There is now a new problem on the horizon, namely climate change. Research by members of the EWCP (notably Jorgelina Marino and Dada Gottelli¹) has shown that the Ethiopian wolf moved into Africa from Europe perhaps 100,000 years ago at the peak of the last ice age. Its range was much larger in those cold times as its habitat, the Afroalpine heathlands, covered an area ten times larger than they do today. Now the warming trend is being dramatically accelerated by humans and the heathlands will shrink even faster. The EWCP is already thinking about the problem and it will consider imaginative and perhaps radical solutions to deal with it. The role of the EWCP promises to become more important in the coming years to assist in securing a future for Ethiopia's highland wildlife.

The EWCP was established in 1995 by Claudio Sillero, after working for several



Pack members greeting

years on the behaviour and ecology of these wolves. The Programme is implemented by the Wildlife and Conservation Research Unit (WildCRU) of the University of Oxford, in collaboration with its Ethiopian counterparts the Wildlife Conservation Department and the Regional Government of Oromia. The Programme is chiefly funded by the Born Free Foundation (www.bornfree.org.uk) and the Wildlife Conservation Network (www.wildnet.org).

The overall goal of the EWCP is the conservation of the Ethiopian wolf and its Afroalpine habitat. A closely linked aspiration of the EWCP is to promote the protection of Afroalpine natural resources that are central to the social and economic well being of local communities.

The EWCP headquarters are in Dinsho in the Bale Mountains of SE Ethiopia, a range of volcanic mountains to the East of the Great Rift Valley. Bale sustains an extraordinary array of rare and endemic animals and has recently been recognised

as part of a global 'hotspot' for biodiversity². More species of mammal would probably go extinct in the Bale Mountains were obliterated than in other area of comparable size on earth.

As many of these unique species are restricted to high altitudes, the Ethiopian wolf stands as a flagship species for the Afroalpine ecosystem in which it lives. If its habitat can be conserved, a range of other unique plants and animals will also be saved.

The EWCP has played an active role in dealing with the major threats to the wolves. The vaccination of domestic dogs in and around the wolf's range has controlled the spread of diseases, notably rabies, from affecting the wolves. The monitoring activities helped to understand the dynamics of wolf populations and the damaging effect of human encroachments on their habitat. The education campaign has been effective in altering attitudes in the local communities towards the biological riches in the mountains.

For its first ten years the EWCP, and its associates, were the only wildlife conservation projects operating in the range of the Ethiopian wolf (and the only long-term conservation programme in Ethiopia). Mainly as a result of the EWCP championing the cause, the Bale Mountains have now attracted the attention of others. The Frankfurt Zoological Society (FZS), a long-term EWCP partner, works directly

with the Bale Mountains National Park (BMNP) and has created an ambitious Management Plan for the park. They have employed their own staff of ecological monitors. At the same time a consortium of European nations has provided a grant of US\$6,000,000 to work with communities around the park to promote sustainable development. The EWCP looks forward to working as an integral part of the larger conservation effort in Bale (plans for this discussed in the Prospects section below).



Bale Mountains National Park

An important event occurred last November when the BBC came to Bale together with the British celebrity Graham Norton to produce a half hour television programme on the wolves and the support they receive from the Born Free Foundation (BFF). This is part of Saving Planet Earth, a major BBC wildlife funding initiative. The Ethiopian wolves were chosen as one of nine conservation projects worldwide that highlighted the plight of endangered species. Over two weeks in June 2007, the BBC will air these programmes and on 6th July there will be a culminating celebration and appeal for donations. There are high

hopes that EWCP will receive a major financial boost from this initiative, although the funds that BFF will raise are now known, as this is the first event of its kind focussed on conservation.

EWCP's Strategic Plan³ lists five areas of activity: Capacity Building, Monitoring, Disease Control, Education and Research. Activities in these five areas from April 2006 to March 2007 will be described. This year has also seen the consolidation of the expansion of the programme to the Arsi Mountains lying to the North of the Bale Mountains.

Capacity building of Ethiopian institutions and people

Objective: To increase the capacity of Ethiopia in the field of ecology, biodiversity conservation and protected area management.

Ethiopia chronically lacks skilled people in all areas of conservation. Building the capacity of Ethiopian nationals through training and work experience remains the most important outcome of the activities of EWCP. The Vision 2020 adopted by EWCP foresees an eventual handing over of the programme to a new generation of Ethiopian conservationists.

Employment and staff training

This year EWCP has a workforce of 25 people, with 22 in the Bale Mountains and 3 in the Arsi Mountains. In addition there is a

team of wolf monitors operating in North Ethiopia under a partnership with FZS. All these staff have been hired locally and all receive training in their jobs.

Individuals in the technical areas of monitoring, veterinary intervention and education receive continuous upgrading of their skills. This year the monitoring team were introduced to the important technique of Distance Sampling while the vet team were involved in the testing of oral vaccination (discussed below). We provide continuous building of skills in English, report writing and computer competence. Former members of our staff have gone on to take responsible jobs in other organizations.



Wolf Day in Dinsho: (right to left) EWCP Education Officer, Project Manager and Director

Partnerships with international, national and local institutions

On the local level, the most important partnerships are with the Bale Mountains National Park, and the Bale Mountains Conservation Project of FZS (see Prospects).

The BMNP was assigned a new Warden in 2006, Berhanu Jilcha. His Berhanu's background is in forestry and he is developing a good knowledge of wildlife conservation through interactions with FZS and EWCP personnel. In an important step, a BMNP counterpart was assigned to EWCP. Mohammednur Jemaal is one of the park experts with a degree in forestry and has worked in the park for five years. When the field coordinator is in Dinsho, he meets at least weekly with the counterpart and explains in detail the activities of the project while learning about park developments. This liaison was particularly effective during the distemper outbreak when it was possible to discuss options and actions with the park staff.

EWCP regularly assists BMNP with transport and logistics and has regularly offered to include park scouts in our monitoring activities. To date the offer has not been taken up as the park is short staffed. However plans for the rejuvenation of the Park under the new General Management Plan may change this.

A local administrative district or *woreda* was re-established in Dinsho in 2006 with a targeted population of 100,000 people. Their jurisdiction includes parts of the BMNP and their decisions influence patterns of settlement and human use. EWCP has established close connections with the upper level administrators and tried to provide background about the programme

inviting them to a meal. They express enthusiasm and support for EWCP but there are some tensions between their mandate and the objectives of the park.



Field monitor from Dinsho, Bale

EWCP has also cooperated with Nyala Guides Association in Dinsho and with the *zone* (the administrative unit above the *woreda*). We have worked with the zonal vets in Disease Control activities.

At a national level we work very closely with two agencies, The Federal Wildlife Conservation Department and the Regional Bureau of Agriculture and Rural Development for Oromia Region. The supervision of EWCP is shared between these two organisations. We share our results with them and were involved in extensive discussions about veterinary intervention with the Wildlife Conservation Department. We have also attempted to support projects by members of the staff of the two organisations and have been able to provide technical advice.

We have also worked with the Ethiopian Wildlife and Natural History Society who has helped with setting up administrative procedures in Dinsho, and with Melka Mehabir, an environmental education NGO operating in Bale.

Student training

EWCP currently funds two members of its staff to complete their BA degrees, Leta Idea (Vet Officer) and Dejene Deme (Education Officer in Arsi). They are both enrolled in Wildlife Management degrees at the Wondo Genet College of Forestry and Natural Resources. The program is designed for working adults and runs over four or five summers (with some correspondence courses during the year). Talking to both students they have clearly think about wildlife issues in sophisticated ways as well as getting training in computers and statistics.

In 2006 Woldemedhin Zebene completed his BSc at Wondo Genet College, funded by EWCP. He is now a senior member of staff in North Ethiopia FZS project.

EWCP also sponsored Tariku Mohammed and Mohammed Yaba to complete Masters Degrees from the University of Addis Ababa. Both students came from the Oromia region where we operate and we hope they will build the capacity for wildlife research and management in the region. Tariku Mohammed studied Starck's hare, a little known Ethiopian endemic that is common in the Bale Mountains. Mohammed

Yaba looked at the diet of the giant molerat (*Tachyoryctes macrocephalus*) which is restricted to the Afroalpine grasslands of the Bale Mountains. Both species are important prey for Ethiopian wolves, and knowledge of the herbivore community is important for understanding the population biology of wolves.



Giant molerat, the wolves' main prey in Bale

Tariku and Mohammed are in the process of completing their theses after doing field work in Bale for three months. Both have produced some interesting results. Giant mole rats appear to be completely unselective foragers taking any vegetation around their hole. In contrast hares are specialist grass eaters.

In March Zegeye Kebrit, EWCP Education Officer in Bale, was awarded a Sydney Byers Scholarship from the Wildlife Conservation Network for training on environmental education. EWCP is currently looking for a suitable training package for Zegeye.

In addition, we attempt to support efforts at continuing education, via correspondence -based courses, by members of the staff

many of who are trying to raise their skills from third or fourth grade education.

Transfer of knowledge

Zegeye Kibrit, EWCP Education Officer, has produced four quarterly newsletters this year. Each is 6-8 pages with news of the project together with games and conservation activities. There is a section at the end in the local Oromo language.

Although it is aimed at schoolchildren, the magazine has become an important tool for promoting EWCP and teaching people about the programme (It is submitted together with the quarterly reports sent to the government agencies.)

We worked with the National Press in Ethiopia during the distemper outbreak to increase public awareness of the plight of the Ethiopian wolf and the papers ran a story which explained the role of increasing numbers of domestic dogs carrying disease to the wolves.



Zegeye Kibrit, EWCP Education Officer

In February we received television coverage for Wolf Day from Ethiopian Television and written media.

Our web site www.ethiopianwolf.org is ably managed by EWCP Ecologist Jorgelina Marino. It has continued to expand and provides good up-to date information on the programme activities.



EWCP website www.ethiopianwolf.org

Monitoring wolf populations, habitats and human activities

Objective: Monitor and assess wolf demographic trends with a focus on Bale and other selected critical populations, measuring levels of livestock (dogs and grazing stock), persecution and habitat loss affecting wolf status.

Effective species conservation depends on reliable information on the population status and threats to the threatened species concerned. Collecting this information for the Ethiopian wolf has been a core part of EWCP's activities. Over the years, the programme has built one of the

most complete databases on any threatened carnivore. The heart of the monitoring activities is focussed on the wolves. However, EWCP also collects information on the other wildlife in the Afroalpine habitat and on human impacts. These data have provided the baseline information for the management of the National Park for the last ten years.

Wolf monitoring in Bale and other populations

Bale

For most of 2006, EWCP had five monitors working in the Bale Mountains although one of them also spent time in the Arsi Mountains (EWCP Wolf Monitoring Team: Allo Hussein, Mustefa Dule, Sultan Washo, Ibrahim Mohammed, and Berhanu Tesfeye). Monitors aim to spend 20 days a month in the field and the remainder of their time at the headquarters in Dinsho entering their data.

This year the team collected data for 37 packs, but more intensively for the 19 focal packs distributed in three core areas (Table 1). Observations during the dry season concentrated on 18 focal packs. This intensive monitoring was led by Nick Jacobsen, an excellent volunteer who joined us from Texas. A full report on the demography of focal packs is available at www.ethiopianwolf.org. Only the important points are included here.

Monitoring in the early part of the year was concentrated on the Sanetti Plateau, to follow the course of the distemper epidemic. The small and fragmented packs seldom congregated and were difficult to find. By August the team had a good understanding of pack composition, which revealed 55% mortality, the majority of which is attributable to the disease. In comparison with incidents of distemper affecting wildlife



Nick Jacobsen and Mustefa Dule,
EWCP Monitoring Team

elsewhere this is an unusually high mortality rate, suggesting it involved a virulent strain of the virus.

Two of the decimated packs on the Sanetti Plateau coalesced to form a single breeding unit. Of the eight remaining packs only three were seen with pups. If the ten pups that survived to three months are recruited, the population will be back to 60% of its pre-distemper numbers.

Sparsely information from packs in the Worgona Valley, the other area affected by distemper, also indicates a modest recovery (with the addition of a fifth small pack to the area and pups born in three packs).

The population in the Web Valley is still recovering from the 70% mortality of a rabies epidemic in 2003/4. Five of the seven packs there were seen with pups and if, as seems likely, most of these 24 pups are recruited into the population, population numbers will be close to 75% of its pre-rabies size.

Morebowa is the most distant study population and information is less complete. We know that five of the six focal packs produced a total of 19 pups. The Morebowa population seems to be stable but details of the ten packs in the western part of the area are unclear. All three areas are showing signs of population increase, although the number of packs to breed in Sanetti was lower than hoped for in light of the distemper epidemic.

Overall this was a challenging season for our monitors. A prolonged and heavy wet season made wolf observations difficult. When visiting remote areas it may take several days to get a reliable count of a pack's numbers; as a result several monitoring trips yielded only fragmentary information. Long stays in the field under challenging conditions took their toll, and four of the five monitors took time off to treat low-level but persistent ailments.

Their job is physically demanding and we try to provide full medical care for our staff.

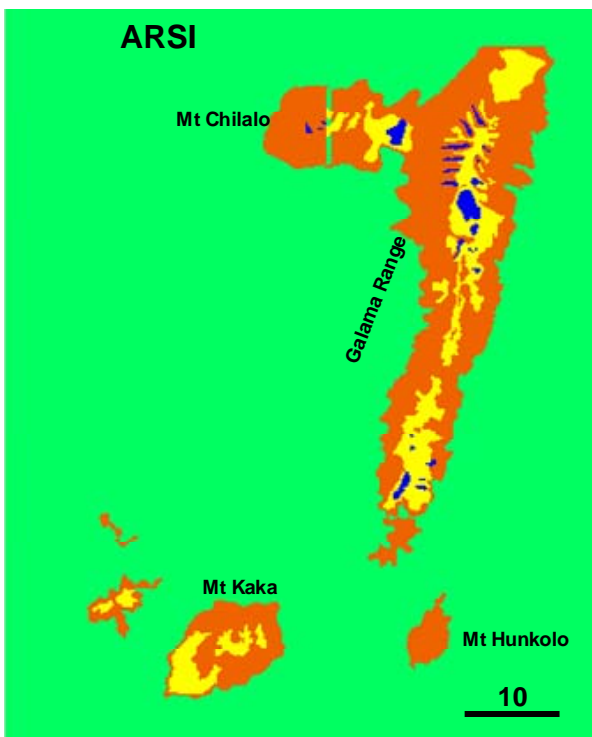
Table I. Wolf packs (focal packs in bold)

Area	Pack	Dec-05	Breeding season 2006-2007
SANETTI			
	Badagasa	12	3
	Batu	9	4
	BBC	12	5
	Bilisa	4	3
	Gurba Gura	8	5
	Nyala	8	3
	Quarry	8	7
	Sulula	4	3
	TOTAL	65	33
CENTRAL PEAKS			
	Saliti		2
	Kurumsa		3
	Shiya		2
	Worgona		2
	Wasama		4
	TOTAL		13
GAYSAY			
	Gaysay		4
MORABAWA			
	Burra		5
	Chokisa		4
	Duna		6
	Foturu		4
	Fulbana		5
	Genale		4
	Huke		7
	Osole		6
	Weshema		3
	TOTAL		44
WEB VALLEY			
	Alando		9
	Darkeena		7
	Doda		0
	Kotera		3
	Megity		7
	Mulamu		3
	Sodota		7
	Tarura		10
	TOTAL		46

Arsi

Three and a half months were spent by our monitors in the Chilalo-Galama ridge, the largest area of wolf habitat in the Arsi Mountains. Two wet season trips provided information on the presence of wildlife and found large numbers of livestock. A more recent survey reported six wolf packs.

A member of the monitoring team has been assigned full time to Arsi, to collect more complete information from Chilalo-Galama and outlying areas such as Mt Kaka.



Map of wolf habitat in the Arsi Mountains
(blue: optimal; yellow: good; orange: marginal)

Other monitoring

The monitors record all wildlife seen during their field surveys. Observations of mountain nyala in the Afroalpine of Sanetti are becoming increasingly rare, probably

because of increasing cattle grazing in the area (Nyala tend to avoid cattle).

Information is also systematically collected for other rare Afroalpine wildlife, such as the homey badger and the wattled crane, but due to the low levels of encounter population trends are hard to identify.

EWCP also undertakes monthly counts of the livestock, dogs and people in the Web Valley and on the Sanetti Plateau. A large amount of data from previous years was entered into the database.

There are more and more permanent houses on the Sanetti Plateau, even at 4,000m a.s.l., reflecting increasing population pressure from lower elevations.

This year farmers again tried to plough parts of the Web Valley. Although Ethiopian wolves can coexist with livestock, the habitat is permanently degraded by agriculture. Potatoes have become a very popular crop over the last ten years and can be planted at elevations higher than that of Web Valley.



Sheep flocks in the Web Valley

The humble potato may be a serious threat to Ethiopian wolves. However, there is a cautious level of optimism that binding management by the National Park under the new management plan will establish core areas devoted solely to wildlife and control human activities elsewhere.

Disease monitoring

Wolf monitoring must always be understood in the context of monitoring disease, as the best way to detect a disease outbreak is to intensely monitor the population under threat. The Sanetti population was monitored this year with the goal of understanding the effects of last year's distemper outbreak, as well as looking for signs of recovery.

Currently, the EWCP team is working on a manuscript concerning the disease outbreak and its effect on the Ethiopian wolves. Once completed, this paper will be submitted for publication in a peer-reviewed journal.

Disease control and prevention

Objectives: multi-pronged approach to reduce the threat that diseases pose to the survival of the Ethiopian wolf, with the following objectives: i) assess prevalence and threat of canid pathogens to wolves, ii) gathering information in health status, diseases and causes of mortality; iii) investigate a vaccination scheme to protect Ethiopian wolves in Bale; iv) prevent disease transmission from

domestic dogs; and v) improve disease monitoring practices in Ethiopia.

The EWCP disease control activities are progressing on two fronts. The team continues inoculating domestic dogs living in and around the wolf range, to create a barrier of resistant dogs through which a new rabies virus can not penetrate into wolf populations.

At the same time, attempts to inoculate the wolves directly using edible vaccines are progressing, in collaboration with a team led by EWCP Epidemiologist Karen Laurenson from FZS, and executed by Darryn Knobel, a PhD student from Glasgow.

Domestic dog inoculations

The EWCP veterinary team consists of a Veterinary Officer, a Recorder, a Dog Catcher, a Community Officer who explains the activities to the local population and a person to look after the camp. Leta Idea, the Vet Officer, and his team have been together for three years and operate efficiently and fairly independently. The Community Officer, Kassim Biftu, has been off work for the last six months due to injuries sustained in a traffic accident. The heavy rains in the summer slowed work this year.

As the number of people in Bale increase, so does the population of dogs. There are now almost double the numbers of dogs living within ranging distance of Ethiopian wolves than when the inoculation campaign

began nine years ago. Discussions with the EWCP Coordination Group in Oxford last year concluded that the team should focus more tightly on villages in or very close to the wolf range, thus reducing the total number of dogs to vaccinate. Dog owners in towns still bring their dogs to our team.



Vaccinating dogs in villages around the Web Valley

A total of 2069 dogs were vaccinated in 2006. Considering that the vaccine lasts three years, there are now about 7000 domestic dogs resistant to rabies in the area. Still rabies appears to remain endemic in the area, as indicated by reports of four cases of rabid dogs over 12 months.

Oral vaccination

Darryn Knobel worked with the monitoring team in April and May 2006 and further bait trials were performed in February 2007.

The first trials (in April 2006) performed were bait preference tests. Several different types of baits were offered to the wolves, various store-bought baits as well as dead rodents with a biomarker inserted. This test was designed to establish which

bait would be most effective for delivering oral vaccines.

In February 2007, trials were performed (using lab-produced baits) to determine the level of coverage that would be achieved using oral vaccines. Baits were placed around the dens of three packs, containing a harmless biomarker. Blood tests will be performed following trapping in May, which will determine the percentage of animals who did indeed eat the baits. Once the results of these trials are known, the feasibility of an effective oral vaccination program will be much clearer.

Education and outreach

Objective: The EWCP education campaign seeks to involve local communities in the protection of Afroalpine natural resources; continue with the development of a conservation education and extension campaign at school and community levels in Bale and other critical wolf areas.

Education at the school level

EWCP's education campaign in the Bale Mountains is in its tenth year under the energetic and enterprising leadership of Education Officer Zegeye Kibrit. Zegeye is based at the headquarters in Dinsho and works primarily with the elementary schools in the area. This year, however, he also worked in the secondary school and the local Nature Clubs in Dinsho, in the neighbouring town of Goba, the Teacher

Training College in Robe, and made a trip to the elementary school in Rira, in the forested southern part of the park, to address the problems of conservation in the forest.

The education campaign also reached to the adult population, during field trips, explaining the role of EWCP and its dog vaccination activities.



Vet Officer explaining about the risk of rabies during a dog vaccination campaign

With his excellent English, Zegeye fulfils many roles. He guides visiting groups from schools and colleges around the headquarters area, often helps with visitors, is in close communication with members of the park staff and helps out with computer problems and training.

Coordinating efforts with new initiatives

Three other organizations are now interested in environmental education in the Bale Mountains National Park namely the park itself, a local NGO called Melka Mehabir and the Frankfurt Zoological Programme (although the last is concentrating its efforts in other areas for

the time being). There is an excellent opportunity to create a coordinated and comprehensive education project in the Bale Mountains. Representatives of all four groups met in Addis Ababa for an initial meeting instigated by EWCP. This was followed by planning meetings in Dinsho. Each of the four groups have some distinctive goals: the park works in the schools providing information on the whole ecosystem, EWCP focuses on the wolves as a vehicle for habitat conservation and sound natural resource use, while Melca Mehabir takes students into the park as well as doing some work in the schools.

The joint plan makes sure that schools are visited in a coordinated way and that Zegeye can provide follow-up meetings after students come back from their field trips. The plans were partially implemented but the National Park's education officer was seconded to another project for half the year. We have hopes that the joint project will be hallmark and model for the rest of the country.

Community support: new classrooms for Dinsho

EWCP is implementing two important community projects. Kuoni Travel (UK) as part of its centenary celebrations and through its association with the Born Free Foundation provided US\$10,000 for Dinsho Primary School. Over 1300 students attend the school using a morning and an afternoon shift and as many as 60 pupils have to use a single classroom. The school

therefore requested that the donation be used to build two new classrooms. This building is nearing completion and the desks were ordered recently.

Community Sports Centre

In an even larger project a private donor to the Born Free Foundation provided a grant to the community of Dinsho to build the "Wolf Stadium", as a response to an aspiration of the local community for a sports facility.

In consultation with the town authorities, EWCP has undertaken to build a sport's centre. The facility, which will include a club house, toilets, picnic area, football pitch, volleyball courts and running track, is being built under EWCP's direction but will

operate as a community resource with local control and maintenance. The club house includes a Meeting Hall that will accommodate 60 people. An area of 200m x 270m at the northern end of the town had already been designated for recreation in the town's master plan. Construction there began at the end of the rainy season and the clubhouse is now rising from the ground and trees are ready to be planted around the perimeter of the new Wolf Stadium.

The Wolf Day

The football pitch was graded and laid out first, in time for the ninth annual celebration of Wolf Day. About 2500 people gathered to watch the football tournament between local schools and club teams



EWCP Field Coordinator James Malcolm, Nick Jacobsen and Claudio Sillero at the Wolf Day, on the site of the Community Sport Grounds

together with volleyball and running. Leaders of the community were present and voiced their strong support. Next year will be the new Millennium for Ethiopia and the tenth celebration of Wolf Day using the completed new sport's ground.

Education campaign in Arsi

The EWCP education campaign in Arsi started last year and is led by Dejene Deme, a former secondary school principal. Considerable progress has been made in the last 12 months, with a focus on secondary schools in areas bordering the wolf's range (15 secondary schools and three colleges over an area of several thousand square kilometres).

The Arsi Education Officer has succeeded in setting up or invigorating Environmental Education Clubs in all the schools and colleges. Each club has one or two teachers as sponsors and club members number about 50 in most schools. The ultimate objective for these clubs is to act a wedge through which sustainable development projects can be infiltrated into the communities. For instance if a club can adopt fuel efficient stoves and show that they work, it is possible that adults will be influenced (and the students when they graduate).

So far most of the clubs have initiated tree planting projects. Tree planting is often

seen as the beginning and the end of conservation projects. The challenge now is to engage the clubs in a wider range of possibilities. Possible projects could include new crops (such as apples or pumpkins) erosion control methods or any alternative energy possibilities.

Following in the footsteps of the Bale programme, most of the schools have set up Wolf Team football clubs and we plan an Arsi Wolf Day in the future. Another aspiration is to take students on camping trips into the wolf range. For most of the schools, the wolf habitat is within 10-15km but most of the pupils have very little information on the Afroalpine and its conservation.

Dejene has contacted community leaders in the 60 small administrative units called *kebeles* that border the wolf range and is working with the adult members of the community. We have very strong support from the higher administrative level, the *zone*, and the zonal education bureau has provided us with an office room in their building and is encouraging us to extend the programme.

A combined visit to the mountains with the EWCP's senior wolf monitor was a first opportunity to integrate monitoring with the education programme in Arsi.

Research

Objective: the EWCP relies on strong science to inform and develop conservation actions towards the completion of its main objective: to assess, address and counteract threats to the survival of Ethiopian wolves and their Afro-alpine ecosystem.

Two PhD students from the University of Oxford, have now submitted their dissertations. These students were closely associated to the EWCP, but raised their own funds. Deborah Randall's thesis on the genetics of Ethiopian wolves provides important information on family structure, inbreeding and migration. Lucy Tallents' very detailed work on the prey base of the wolves in relation to their breeding success will also guide future management decisions.

As mentioned under Capacity Building, we directly supported two Masters students from the University of Addis Ababa and provided help to two other students working in Bale. The new work by the Ethiopian graduate students on Starck's hares and giant molerats in Bale is part of a long-term project to understand the herbivore dynamics of the Afroalpine ecosystem. This has clear management implications as we need to know if the increasing livestock populations are taking food away from the rodents and hares which the wolves depend on for food.

The doctoral work of Darryn Knobel, from Edinburgh University, progresses in testing different vaccines and means of delivery, and evaluating the feasibility of oral vaccines as a preventive management tool.

Two new doctoral students have submitted proposals to work in the Bale Mountains, in close association with the EWCP. Flavie Vial, of Glasgow University will study grazing dynamics and the impact of livestock on rodent communities, while Freya van Kesteren of University of Oxford will study the wolf reproductive physiology.

Project administration

In May 2007 the EWCP welcomed a new in-country Field Coordinator. Dr Graham Hemson is taking over from James Malcolm, who returns to his professorship at Redlands University in California after two years in Ethiopia. Graham will be joined in a few months by his wife Vanessa and by their first child due in June. Graham has previously studied carnivore-human conflict in Botswana for his D.Phil. at Oxford University, and joins EWCP from Earthwatch Australia, where he has been managing their science program. While Ness's more recent background is in television production both Graham and Ness worked in tourism in Botswana where they lived for 7 years. Graham is looking forward to the challenges of Bale and wolf conservation and Ness is looking forward to

her own challenge caring for junior in the wild mountains of Ethiopia.

The EWCP Coordinating Group met in Tubney house, Oxford on 23 April 2007 to review the progress here reported, and to welcome the new field coordinator.

Representatives of the two major donors and other partners were present.

Prospects

There are two important ways in which the role of EWCP may change in the next year. First, there are now two large projects running in the Bale Mountains. Both projects arose from EWCP. One of them is funded by a grant raised by Stuart Williams, EWCP former Field Coordinator. This project is run by FARM Africa, and operates outside the borders of the Bale Mountains National Park but a primary goal is to involve the communities around the park in development projects with binding agreements to restrict their activities inside the National Park.

The most immediate impact on EWCP comes from the Bale Mountains Conservation Project funded by the Frankfurt Zoological Society (FZS) and run until now by Alastair Nelson who had previously worked for EWCP for three years. FZS has made a ten year commitment to help run and fund BMNP. In April FZS completed a comprehensive Management Plan which, if implemented,

would create a functioning national park worthy of the extraordinary biodiversity and tourist attractions of the Bale Mountains (and to help maintain the catchments areas on which over 10 million people in Eastern Ethiopia and Somalia depend for much of their water supplies). EWCP Field Coordinator was also involved in the drafting of the Management Plan.

EWCP and FZS have worked in close and mutually supportive cooperation (and signed a MoU a year ago specifying the exact roles of the two organisations). There are several places where EWCP will play a significant role. Our education campaign is an important part of the Outreach element of the plan. Our disease control and prevention campaign is one of the important conservation interventions now in place and the field camps that EWCP built in two key parts of the Ethiopian wolf habitat are now available to park scouts and visitors and an important step in promoting tourism in BMNP.

In the most important area of overlap, the Management Plan calls for ecological monitoring throughout the Park, and FZS has employed two people from Dinsho as wildlife monitors to begin to collect data. EWCP would like to play an integral part in the monitoring programme in the Afroalpine zone of BMNP, coordinating data collection and patrols with those of the park. Our monitoring staff are fully committed and in the next few months the details of the cooperative effort will be put in place. The

prospect is exciting. If human settlement, the presence of dogs, and ecological degradation in BMNP can be brought under control the plight of the Ethiopian wolf would improve dramatically.

EWCP's recent extension to the Arsi Mountains also opens important opportunities in the future. The Arsi Mountains are second only to Bale in the size of the wolf population and the area of suitable habitat. They also support a small number of mountain nyala and several of the endemic mammals also found in Bale. In comparison, there is less permanent human settlement in the Afroalpine areas of Arsi and a strong administrative structure committed to conservation (although with almost no funding at the moment).



Spot the wolf...

The Arsi Mountains are only three hours from Addis Ababa on a paved road so there are opportunities for tourism. The monitoring and education activities that we have set up in Arsi have made a strong start and the regional government has expressed great interest conserving the area.

References

¹ Ethiopian Wolf Conservation Programme, Review of activities and achievements, 2000-2004 and work that remains to be completed, October 2004 (www.ethiopianwolf.org/publications).

² Sillero-Zubiri, C. and D.W. Macdonald (Eds.). 1997. The Ethiopian wolf: status survey and conservation action plan. IUCN Canid Specialist Group, Gland, Switzerland and Cambridge, UK. (www.canids.org/PUBLICAT/EWACTPLN/ewaptoc.htm)

³ Randall, D.A., J. Marino, D.T. Haydon, C. Sillero-Zubiri, D.L. Knobel, L.A. Tallents, D.W. Macdonald, and M.K. Laurenson 2006. Disease management strategy for the control of rabies in Ethiopian wolves. *Biological Conservation* 131:325-337.

⁴ Haydon, D.T., D.A. Randall, L. Matthews, D.L. Knobel, L.A. Tallents, M.B. Gravenor, S.D. Williams, J.P. Pollinger, S. Cleaveland, M.E.L. Woolhouse, C. Sillero-Zubiri, J. Marino, D.W. Macdonald, and M.K. Laurenson. 2006. Low-coverage vaccination strategies for the conservation of endangered species. *Nature* 443:692-695 (12 Oct 2006).

Partner Organisations

The Ethiopian Wolf Conservation Programme (EWCP), formally established in 1995, operates as a partnership between Oxford University's Wildlife Conservation Research Unit (WildCRU) and Born Free Foundation, which provides an ideal platform from which to address wildlife conservation: WildCRU has been working chiefly on how animal populations tick, and on ways how to ensure their survival, Born Free has traditionally been more concerned with the welfare of individual animals. The EWCP has the auspices of the IUCN/SSC Canid Specialist Group.

The EWCP operates in Ethiopia under an agreement with the Ethiopian Wildlife Conservation Department (WCD) at a federal level and with the Agricultural Bureaux of the Council of the Regional State of Oromia at a regional level. In North Ethiopia we operate in partnership with the Frankfurt Zoological Society and the Amhara National Regional Government. EWCP has long established and excellent working relationships with these organisations. In addition, the Programme seeks the support and cooperation of local authorities for all field activities in all areas.

EWCP collaborates with Addis Ababa University, Edinburgh University, Glasgow University, University of California Los Angeles, Oslo University, and the Zoological Society of London, among others.

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EWCP Ethiopia Team

Field Coordinator
WCD EWCP Counterpart
Project manager, Bale
Field Officer, North Ethiopia
Project Assistant, Addis Ababa
Education Officer, Bale
Education Officer, Arsi
Community Relations Officer, Bale
Veterinary Officer, Bale
Veterinary Assistant, Bale
Field Assistant, Bale x 4
Field Assistant, Arsi x 1
Field Assistant, North Ethiopia x 4 (with FZS)
Museum Keeper & RB Cleaner, Dinsho
Research Building Store Keeper, Dinsho
Research Building Guards x 2
Research Camp Guards x 4
Horse Guards x 2
Up to 20 Part-time and casual staff

EWCP Coordination Group

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