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Field Report

Expansion of Ethiopian wolf conservation to northern Ethiopia

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The Ethiopian wolf (*Canis simensis*) is listed as Critically Endangered (CR) by the IUCN, and is one of a number of Ethiopian endemic species. It occupies a specialist niche, living only in Afroalpine habitats, generally above 3,200m above sea level (asl), and feeding mainly on a diet of rodents, many of which are also endemic to the Ethiopian highlands. Ethiopian wolves have been the subject of a long-term study in Bale Mountains National Park (BMNP), in southern Ethiopia, and have recently been studied in the Menz area of central Ethiopia, as part of a larger sustainable use programme of the Zoological Society of London. Away from in these two locations, the species has not received a great deal of academic or conservation attention.

In 1997 the IUCN Canid Specialist Group published an Action Plan for the conservation of the Ethiopian wolf, aiming to move forward with the conservation of the species across the country (Sillero-Zubiri and Macdonald 1997). Recommendations in the Ethiopian Wolf Action Plan included that further surveys be conducted in northern Ethiopia, in order to assess the global status of the species. In 1998 and

1999, the Ethiopian Wolf Conservation Programme (EWCP), a WildCRU undertaking supported by the Born Free Foundation (a UK based NGO), conducted preliminary surveys in all suitable Afroalpine habitats in the Amhara Region, northwest of the Rift Valley, leading to an increase of the estimated global population of *C. simensis* from around 400 individuals to between 500 and 550 individuals. The most important results were from the Wollo Administrative Zone, where wolf presence was not widely known, and was confirmed in a number of habitat areas during the EWCP surveys, leading to an estimate of around 80 wolves in the zone (Marino et al. 1999).

The findings of the EWCP surveys were subsequently reported to the Ethiopian Wolf Conservation Strategy Workshop, held in Bale Mountains National Park in November 1999. Workshop participants recognised the need to expand the work of EWCP to cover these recently discovered northern populations, and to survey all remaining patches of Afroalpine habitat in Ethiopia (Sillero-Zubiri et al. 2000). In July 2000, with funding secured from the Born Free Foundation, an EWCP base was es-

tablished in Woldia, north Wollo, thereby allowing the work of EWCP to cover the entire distribution of the Ethiopian wolf.

Initial work of the EWCP team in Amhara Region has focused on wolf biogeography in the north, conducting further surveys in order to establish the complete distribution of wolves in the Region. Standard transect survey methodologies were used, to assess both population distribution and habitat condition. Interview surveys were also useful in determining the attitudes of local people towards the wolves, trends in population numbers, and the importance of the various threats in different areas.

Fieldwork undertaken in northern Ethiopia by EWCP has produced a complete picture of wolf distribution in the country, and has resulted in a number of findings. Insularisation in northern Ethiopia has resulted at least in five isolated extant populations, and possibly more (further work is required on the metapopulation dynamics of Ethiopian wolves in Amhara Region). These populations have been found to be smaller and more fragmented than the populations southeast of the Rift Valley (Marino 2000). The habitats in which northern populations are found may also be subject to greater land use pressures due to higher human population densities in the northern highlands than in the south, and there may be associated increased threats to the remaining wolf populations. Indeed wolves have recently become extirpated from at least two areas of Afroalpine habitat in the Region (Marino 2000; Ash 2000).

The actual area of habitat available to wolves in Ethiopia has been found from fieldwork to be less than was predicted from previous examination of topographical maps, and as such population estimates may have to be revised to the lower end of previous estimated ranges. Northern populations are likely to number from as few as 20 to no more than 50 individuals in any discrete population (Marino et al. 1999), and so are intrinsically threatened due to their smallness. Persecution of wolves in the region, due to the concern over predation of livestock, also has the potential to be a significant threat to some of the remaining populations, and has likely been the cause of decline in those two areas where wolves have recently disappeared (Marino 1999; Ash 2000).

Wolf populations in the Amhara Region survive in such fragmented and small areas of habitat that short-term as well as long-term conservation strategies are needed for their safeguard. Moreover, the loss of only a small number of individuals in, or even short term unsuccessful breeding attempts, may have disastrous effects on the viability of these isolated populations. However, the fragmented distribution of wolves in the north may well reduce the likelihood of overall species extinction in the short term. Threats to individual populations in the north are less likely to have consequences for large numbers of individuals, and therefore to the species as a whole.

An assessment of the threats facing each of the northern populations will allow a long-term conservation strategy for the species in these areas to be developed under an agreement with the Amhara Regional State Government. Of the areas in Amhara Region where wolves are currently found, one is partially and nominally protected within the Simien Mountains National Park and two further ranges are partially managed as community natural resource areas. The remaining populations are found in areas that possess no effective legislative form of protection whatsoever.

Work has begun on a conservation education campaign both in schools and with local people living in and around wolf ranges, and as part of the developing programme in Amhara Region, a wolf-monitoring network will be established, employing local people around each of the wolf populations. The network will allow greater protection for the remaining areas and more continuous monitoring of the populations. Importantly, this will also allow for a more rapid response to disease outbreaks and other emerging threats due to demographic and environmental stochasticity in these small populations.

Future work on behavioural ecology in the region will allow for comparative studies with the relatively well-studied population in BMNP. The vegetation assemblages in the north are different to those found in the south, and one the chief prey species of the wolves in Bale, the giant molerat (*Tachyoryctes macrocephalus*), is absent from the mountains north of the Rift Valley (Marino et al. 1999). Genetic studies are also a priority to determine the genetic variation between populations, and the extent of inbreeding within the isolates. Further work

on dispersal between habitat areas will determine whether individuals are mixing between the various populations, and will allow an assessment of whether populations are further isolated. Findings from studies such as these will allow more effective implementation of conservation action for Ethiopian wolves.

The expansion of EWCP activities to the Amhara Region is a big step forward for wolf conservation in Ethiopia, and allows the entire population to be covered by the programme. Sustained conservation effort, including both short and long-term strategies to halt further population decline, will be essential for the survival of wolves in northern Ethiopia, where threats are magnified by the smallness of populations, and greatness of land use conflicts. The challenge will be to maintain Afroalpine habitats and wolf populations as land use pressures increase with a burgeoning human population.

Further information is available from the EWCP Coordinator, Dr Stuart Williams, P.O. Box 215, Robe, Bale, Ethiopia.

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Neville Ash was the Field Officer responsible for establishing EWCP in northern Ethiopia in 2000. He has previously researched the status of Asian bear species, and worked on the conservation and epidemiology of wildfowl. More recently, he has been working for the IUCN Wildlife Trade Programme, and the Species Programme in Gland, Switzerland. His interests include the interface of conservation policy and implementation.