

Reconnaissance visit to Alataash – Dinder Lion Conservation Unit,
Ethiopia – Sudan border.

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Mission Report 22-29 November 2015, Alataash National Park, Ethiopia

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Ethiopian Wildlife Conservation Authority (EWCA)

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Summary

The objective of this mission was to ascertain the occurrence of lion (Panthera leo) in the Alatash-Dinder Transboundary Ecosystem, in order to update and refine the lion distribution map of Africa. The area is composed of Alatash NP in Ethiopia and Dinder NP in Sudan. Alatash NP was marked as 'possible range' by IUCN, with considerable areas around the Park registered as possible connecting lion range. Dinder NP was not considered as lion range by IUCN. Lions are definitely present in Alatash NP and in Dinder NP; we present pictures of lion and lion tracks as evidence. Lions are regularly observed inside both parks and in the immediate surroundings, but rarely, if ever, further than 10 km from the park boundary.

Team

The team was composed of:

1. Hans Bauer (WildCRU)
2. Gebeyehu Rskay (EWCP)
3. Asmare (driver on main road)

Inside the Park, the following people joined the team:

4. Sisay (Park warden, EWCA)
5. Yeshitla (Park expert, EWCA)
6. Kediri (driver, EWCA)
7. Eight scouts (8 x EWCA)

Introduction

In 2006, the World Conservation Union (IUCN) convened workshops with representatives of all Sub-Saharan African countries where lion (*Panthera leo*) range was mapped and published in Lion Conservation Strategies (IUCN, 2006). These lion range maps were subsequently updated in National Lion Action Plans; the Ethiopia lion range map contained substantial 'possible range', range where lion presence was suspected but not confirmed (EWCA, 2012). The objective of this mission was to ascertain the occurrence of Lion in the Alatash-Dinder Transboundary Ecosystem, composed of Alatash NP (ANP) in Ethiopia and Dinder NP (DNP) in Sudan.

The lion is a charismatic species and there is considerable international interest in its status. Recent publications have highlighted declines of lion range and numbers across Africa, especially in West, Central and East Africa (Bauer, 2015a). The lion is listed as Vulnerable on the IUCN Red List of Endangered Species, which shows the most recent lion distribution map; the most relevant part of that map is displayed in Fig. 4 (Bauer et al, 2015b).

The mission reported here was undertaken with consent of the Ethiopian Wildlife Conservation Authority (EWCA); oral permission was obtained from Ato Kahsaye Gebretensae, Director of Research at EWCA. It was implemented in partnership with Wildlife Conservation Research Unit, University of Oxford (WildCRU) and Ethiopian Wolf Conservation Programme (EWCP) and the operational costs were partially covered by Born Free USA. Field equipment was private property and was provided by Hans Bauer.

Methods

We used the following methods:

1. Camera traps (6 x bushnell trophycam; these are cameras that are fixed to trees for as long as necessary, they automatically take a picture whenever their sensor detects movement in front of the camera)
2. Surveying for tracks and signs (walking transects looking for footprints in sand or clay substrate, or looking for scat)
3. Callup (using a Monacor 45 megaphone to play buffalo and pig sounds; these sounds have a high probability to attract large carnivores within audible range)
4. Interviews with park staff
5. Listening for roars during the night
6. Consulting an unpublished report by EWCA

Area description

The ANP is situated in western Ethiopia, Amhara regional State, on the boundary with Sudan (Fig. 1; Azanaw, 2015). The altitude is around 550 m *asl*, the vegetation is dry savannah. The size of the park is 2,666 km². There are many seasonal rivers, the only permanent river is in the south of the park and is called Ayma (Ethiopian name) or Dinder (Sudanese name). There is little surface water during the dry season, but there is abundant groundwater; the underground water table is very shallow.

The name of the park was derived from the name of the daughter of Emperor Tewodros, 'Alatash' which means 'be always with me'. In Sudan, the meaning is 'desert without water'. It was established 10 years ago, primarily to protect the habitat from desertification, the so called green belt to stop the Sahara. The park has never been visited by tourists; the tourism potential is very low, mainly due to remoteness, climate, occasional insecurity and low probability of observing flagship species of wildlife.

Wildlife is not abundant, probably due to the lack of available drinking water. We observed only three warthogs (Phacochoerus ethiops), park staff told us that they sometimes also observe greater Kudu (Tragelaphus strepsiceros). Visibility is low due to the vegetation, making it difficult to observe the other species that are present (Table 1). Lions are rarely observed but are often heard across the park; hyenas are also heard but mostly on the periphery of the park, near villages.

The main threat to the park is poaching, which is especially done by an ethnic group called 'Felata', who are pastoralists originally from West Africa but now with Sudanese nationality. They are armed with modern and traditional weapons and spend several months per year inside the park, with their livestock. Scouts do not encounter them frequently, and fortunately no scout has ever become the victim of shooting by the Felata.

The park is managed by EWCA, there is a chief warden, two wardens and 32 experts and scouts. There are two vehicles, one office, and several outposts each with a few buildings and a waterpump. Currently there are no scouts permanently posted at these outposts, due to the shortage of scouts (the number foreseen is 92, but these have not yet been recruited). There are several 'roads', which in some cases are visible car tracks, but in many areas these roads are little more than blotches of paint on trees that can guide cars through the tall grass. There are no bridges, crossing the seasonal rivers requires considerable effort and in many places it is practically impossible.

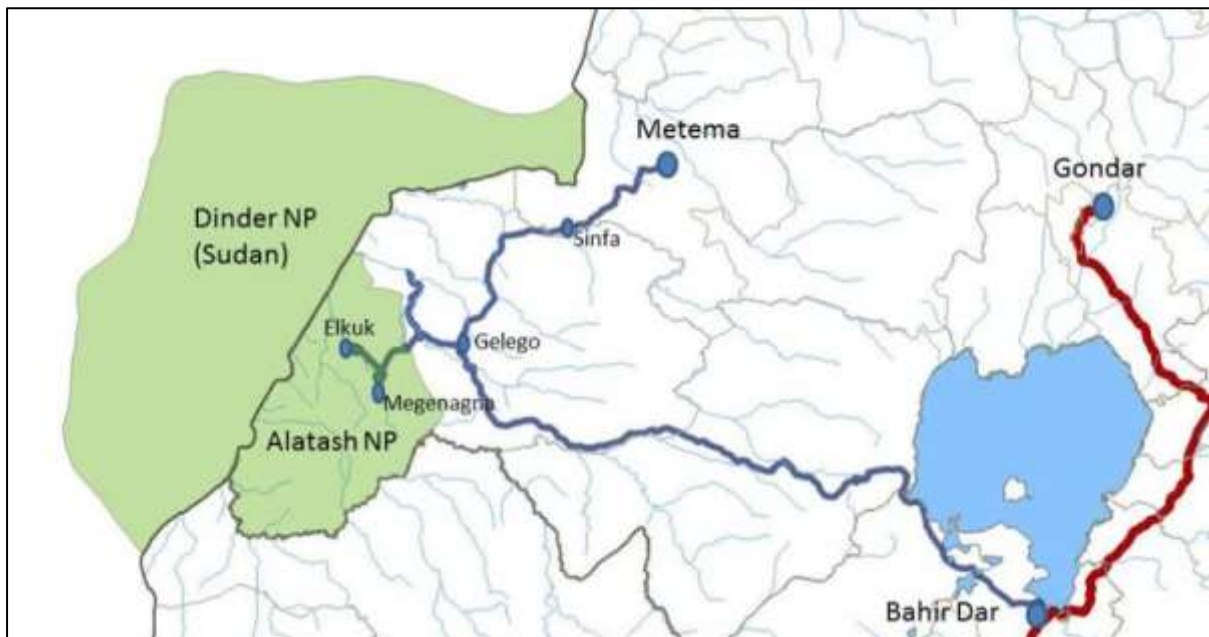


Figure 1: Map of Alatash NP in western Ethiopia, showing our GPS track

The park is contiguous with DNP (Fig. 1, polygon taken from WCMC database, 6,985 km²) in Sudan, the Sudanese side is said to be more intensively managed. We were informed that DNP has 200 scouts, with powerful military equipment, that it has more roads, more cars and even some artificial waterholes. Due to logistical constraints we were not able to cross the boundary into Sudan, but we have no doubt that the density of all species occurring in ANP is at least similar, if not higher, in DNP.

We camped one night at the river crossing around the outpost named Megenagna (12.196606° N, 35.656637° E), and one night in Elkuk (12.264440° N, 35.606304° E) (Fig. 1). In both cases we did not use the buildings but preferred to sleep on the riverbank.

Results

Figure 1 shows our way from Metema to Gelego with a GPS track, including our travel into the park and our two campsites, and then our way back to Bahir Dar (full itinerary in Annex 3).

Upon our arrival, the chief warden immediately confirmed the presence of lion in ANP, but no one had ever been able to take a picture, however as proof of presence he did show a piece of lion skin confiscated from poachers. Furthermore, we were informed that there are at least five locations in the park where lions are heard almost every night, suggesting they are resident there, with an inferred average group size of 3 to 4 lions. Cheetah (*Acinonyx jubatus*) and African wild dog (*Lycaon pictus*) have never been observed and must be considered locally extirpated.

On the first day, in Megenagna, we observed the first proof of lion presence, lion spoor (footprint) in the dry riverbed (Fig. 2). During the night, our camera traps took pictures of various animals (Annex 2), including lions (cover picture). There was no immediate reaction to our call-up, but later in the night, we heard the roars of at least one lion. On the second day, in Elkuk, our camera traps did not capture any new species, but we did find various lion tracks in the sand again (Fig. 3). There was no immediate reaction to our call-up, but later in the night, we heard the roars of at least one lion.

Apart from these indirect observations, our only direct observation of wild mammals was that of three warthogs. Table 1 gives a list of mammalian species reported for ANP, based on unpublished reports and our own observations.



Figure 2: Lion footprint at Megenagna



Figure 3: Lion footprint at Elkuk

Table 1: Mammal species of Alatash NP

English name	Scientific name	Source
Carnivores	Carnivora	
Lion	<i>Panthera leo</i>	Camera trap
Spotted hyaena	<i>Crocota crocuta</i>	Scout information
African wolf and/or golden jackal	<i>Canis lupus lupaster</i> (<i>Canis aureus</i>)	Scout information
Common Genet	<i>Genetta genetta</i>	Scout information
Striped hyena	<i>Hyaena hyaena</i>	Scout information
Leopard	<i>Panthera pardus</i>	Scout information
Civet	<i>Civettictis civetta</i>	Camera trap
Serval	<i>Felis serval</i>	Camera trap
Ratel	<i>Mellivora capensis</i>	
Slender mongoose	<i>Herpestes sanguinea</i>	Roadkill found near to park
Rodents	Rodentia	
Crested Porcupine	<i>Hystrix cristata</i>	Quill found
Ungulates, even-toed	Artiodactyla	
Warthog	<i>Phocochoerus aethiops</i>	Direct observation
Bushbuck	<i>Tragelaphus scriptus</i>	Scout information
Grey duiker	<i>Sylvicapra grimmia</i>	Scout information
Greater kudu	<i>Tragelaphus strepsiceros</i>	Scout information
Lesser kudu	<i>Tragelaphus imberbis</i>	Scout information
Reedbuck	<i>Redunca redunca</i>	Scout information
Oribi	<i>Ourebia ourebia</i>	Scout information
Afrotheria	Afrotheria	
Elephant	<i>Loxodonta africana</i>	Scout information: seasonally present
Aardvark	<i>Orycteropus afer</i>	Camera trap
Primates	Primates	
Olive baboon	<i>Papio anubis</i>	Camera trap
Patas	<i>Cercopithecus patas</i>	Scout information
Vervet	<i>Cercopithecus aethiops</i>	Camera trap

Discussion

We have presented original and undisputable evidence of lion presence in ANP. Lion presence in ANP has not previously been confirmed in meetings at national or international level. The knowledge was not reflected in EWCA reports and websites and was thus not available to the international community. However, lions have been present in ANP since historical times, and their presence was locally known. Gathering this evidence was easier than anticipated, thanks to the experience of scouts who regularly observe tracks and hear roars; it is locally common knowledge that lions are present.

Although the objective of this rapid survey was to establish the presence of lions, based on our findings we can speculate on the abundance of lions in this region. Considering the relative ease with which lion signs were observed, it is likely that they are resident throughout ANP and DNP. Due to limited surface water, prey densities are low, and lion densities are likely to be low, we may conservatively assume a density in the range of 1 - 2 lions per 100 km². On a total surface area of

about 10,000 km², this would mean a population of 100-200 lions for the entire ecosystem, of which 27 – 54 would be in ANP.

According to the scouts and wardens of ANP, lions are rarely observed outside the park, and human lion conflict is limited to the villages directly on the park boundary. On the lion distribution map of Ethiopia (National Lion Action Plan, EWCA 2012), there was a very large polygon of possible connecting lion range, all the way from ANP to Gambella NP and to the shores of Lake Tana. While it is not impossible that there may have been dispersal events over such long distances, this must be extremely rare and progressively more difficult as habitat is converted for agriculture. This polygon does not represent functional, substantial or resident lion populations and should be deleted. Fig. 4 shows the change in lion range map as a consequence of our results. The exact boundary of the lion population, and the status of Debus Valley Controlled Hunting Zone approximately 150 km south of ANP, could not be determined, but we suggest that the lion range map should follow PA boundaries and areas outside the PA's should be classified as 'extirpated range'.

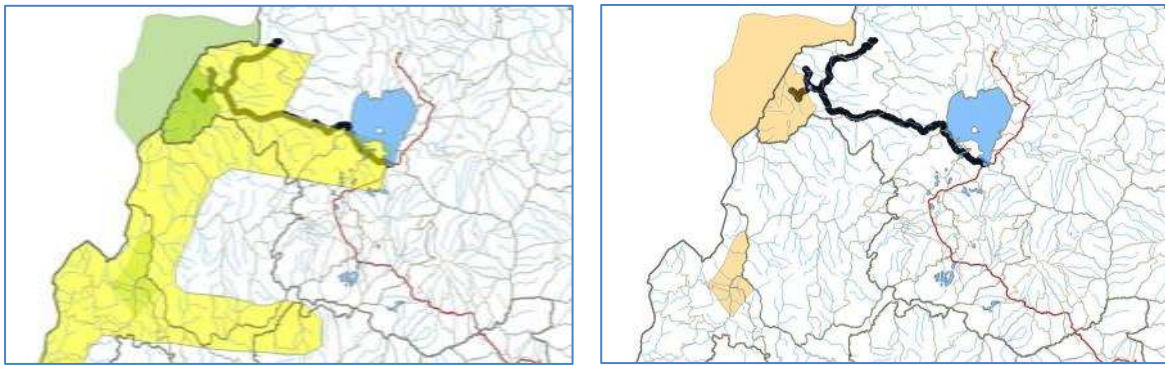


Figure 4: Change in lion range map, left panel shows original map with 'possible range' in yellow (EWCA, 2012), right panel shows new range map with 'known range' in orange.

On the lion distribution map of Africa, DNP did not show up as lion range, and after the cessation of Sudan and South Sudan (with lions confirmed present in the Boma ecosystem) this means that Sudan was not listed as a Lion Range State. This should be corrected, and DNP should be added as resident lion range.

Acknowledgements

Born Free USA kindly funded the operational cost of this mission (transport and lodging), we are grateful to Claudio Sillero-Zubiri and Adam Roberts. EWCA kindly provided a car for travel inside the park, we are grateful to chief warden Ato Semachew. EWCP provided logistical support, thanks to Eric Bedin and Fekadu Lema. This mission was a reconnaissance visit and was implemented as part of the regular cooperation between EWCP and EWCA, we thank Ato Kahsaye Gebretensae for his support and understanding. The results of this reconnaissance visit are not for publication in any other way than through the present report.

References

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EWCA (2012) National Lion Conservation Action Plan. EWCA, Addis Abeba, Ethiopia.

Annex 1: Pictures from Alatash NP



Figure 5: typical infrastructure of ANP outposts



Figure 6: confiscated parts in the store at ANP HQ



Figure 7: confiscated skins at ANP HQ



Figure 8: group picture during track survey



Figure 9: Group picture

Annex 2: Pictures from Camera Traps



Figure 6: Civet



Figure 7: Serval



Figure 8: Aardvark



Figure 9: Baboon



Figure 10: Guineafowl



Figure 11: Aardvark



Bushnell

11-25-2015 23:32:32

Figure 12: Lion, young male



Bushnell

11-25-2015 23:32:38

Figure 13: lion, probably same individual as previous picture



Bushnell

11-25-2015 23:47:30

Figure 14: lion, probably female



Bushnell

11-25-2015 23:47:36

Figure 15: lion, probably same individual as previous picture

Annex 3: Itinerary

22/11 Fly from Addis Abeba to Bahir Dar

23/11 Buying supplies, drive via Gondar and Metema, overnight in Shinsa

24/11 Arrival in at Park Headquarters, discussion with Ato Semachew, chief warden of Alatash NP, overnight in Gelego

25/11 Departure to the Park, camp around Megenagna

26/11 Move camp to Elkuk

27/11 Drive back to Gelego, debriefing with Warden, drive back, overnight in Alefa

28/11 Drive back to Bahir Dar, debriefing with EWCP