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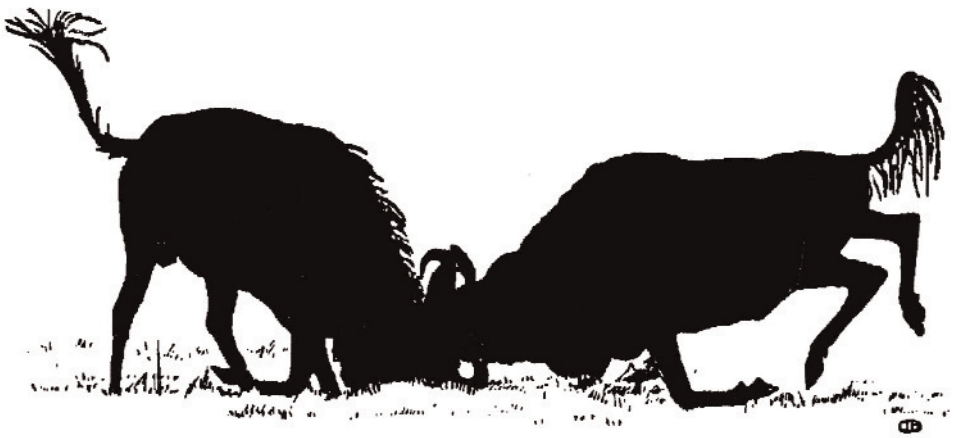

GNUSLETTER

FROM THE EDITOR...

I am pleased to present the next edition of the Antelope Specialist Group GNUSLETTER. I hope you will enjoy the format changes and antelope information. Published GNUSLETTER's should soon be available in electronic format through the ASG website, www.asg-antelope.org. If you would be interested to contribute articles for future GNUSLETTER editions please let me know.

Please excuse the mistaken listing of the last published GNUSLETTER (in error as Vol 27, #2) when in fact it should have been Vol 26, #1. With this publication, Vol 26, #2, we are back on track.

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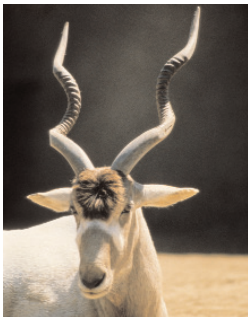
Hot News From the Sahara! Dama Gazelles in Niger

Thanks to Sahara Conservation Fund CEO John Newby, and particularly to Thomas Rabeil for sending this recent photograph of a herd of dama gazelles taken in the Termit Massif in Niger. SCF is working in this important region which is home to critical antelope populations of addax and dama gazelle. A report on the recent SCF aerial survey in Termit will appear in the next edition of GNUSLETTER.

Antelope Specialist Group News

Reintroduction of zoo-born Addax *(Addax nasomaculatus)* and Scimitar-horned Oryx *(Oryx dammah)* into Dhghoumes and Djebil National Parks in Tunisia, in cooperation with the Direction Général des Forêts (DGF)

[We] would like to offer a brief report on the successful conclusion of our project.



After several years of preparation, we finally set off on 5th and 6th December 2007 for the Tunisian national parks with 22 antelope. On 7th December our charter plane landed at Tozeur airport where the animals werer cleared through customs and veterinary checks, and then loaded onto trucks. The convoy split into two - one to transport 9 Scimitar-horned Oryxto Dghoumes National Park situated by the great salt lake of Tschod el Jerid, and the other to transport 13 Addax to Djebil National Park at the edge of the Gran Erg Oriental.

After a six-hour drive we arrived at the park during the night. The animals remained in their crates until dawn the following morning when they could be released into the acclimatisation enclosure. Before release each animal was given a veterinary assessment. All animals had survived the jouney without ill effects and were visibly eager to get out of their transport crates.

After the crates had been set up in a long row, the word was given to open all crate doors at once. The addax ran out into their new enclosure. They immediately discovered through a double fence the Addax in an adjacent enclosure that had been brought to the park from Bou Hedma National Park six months earlier. After their long confinement the animals were at first very active, running around a great deal, and after they had quieted down somewhat, the socialisation processes began. Female animals initially associated in loose groups, while the males sparred to establish dominance. Only then were they interested in food and water, which was provided in the acclimatisation enclosure.

The reintroduction area is on the northern margins of the 150,000 hectare park, in a fenced 8,500 hectare territory where all human activity and use is prohibited, under the supervision of the DGF. This fenced area is currently being extended so the animals will soon be able to roam around 18,500 hectares.

Since it had rained in November, the area was covered with sparse vegetation and so the animals found good conditions in the Park.

On the second day there were signs of the social situation stablisation, two groups of female animals had formed, with the males on the periphery.

Medical equipment, including a dart gun and a blow pipe, had also been brought to Tunisia to intervene in case of conflicts between animals.

Intially the animals from America and Europe will remain in their acclimatisation enclosure under the protection of National Park Director Fahem Ezzedine and his guards to ensure they adjust to the chanllenges of the desert habitat.

The animals from Bou Hedma have already produced two offspring. in the next few days these animals will be released from their acclimatisation enclosure to roam the 8m500 hectare fenced area.

Terry Correll
Interational Studbook Keeper
Addax nasomasculatus

Bill Houston
SSP Coordinator
Addax nasomasculatus

Heiner Engel
EEP Coordinator
Addax nasomasculatus

The Djebil facility

Meeting Bou Hedma males.

Regional Rundown

Preliminary status assessment survey on the critcally endangered Tora hartebeest *(Alcelaphus buselaphus tora)* and further wild ungulates in North-western Ethiopia

A report to the IUCN/SSC/Antelope Specialist Group
Survey date 16.04.2007 to 01.05.2007
Project executants:

Jens-Ove Heckel[1], Friedrich Wilelmi[1], Hassan Yusuf Kaariye[1] & Gizachew Gegebeyeu[2]
[1]IUCN/SSC/Antelope Specialist Grou, North-east Arican Subgroup
[2]General Manager, Alatish National Park

Introduction

Within the network of the IUCN/SSC/Antelope Specialist Group the Northeast African Subgroup also assists with the assessment of the status of antelope species at the Horn of Africa (Sudan, Eritrea, Ethiopia, Djibouti, Somali). The region is well known for its wide species diversity and the high level of endemism of its fauna and flora. However, continuous political turmoil in several parts of the region as well as limited financial and technical resources made it difficult in past decades to pertain a clear picture on the status and distribution of several antelope species or subspecies.

With regard to the current red list re-assessment for antelopes, a survey was conducted by members of the Antelope Specialist Group partly assisted by local Ethiopian conservationists to collect preliminary information on the status of antelope species in North-western Ethiopia, with special focus on the critically endangered Tora hartebeest (Alcelaphus buselaphus tora).

The survey was carried out in April/May 2007 (18.04. - 01.05.2007) and covered areas within the subspecies' historic distribution range in North-western Ethiopia along the Sudanese-Ethiopian-Eritrean borders. Due to limited access to remote terrain even with a 4x4 vehicle for direct observations, the survey also included a significant number of interviews of local herdsmen and community elders for large parts of the investigated area.

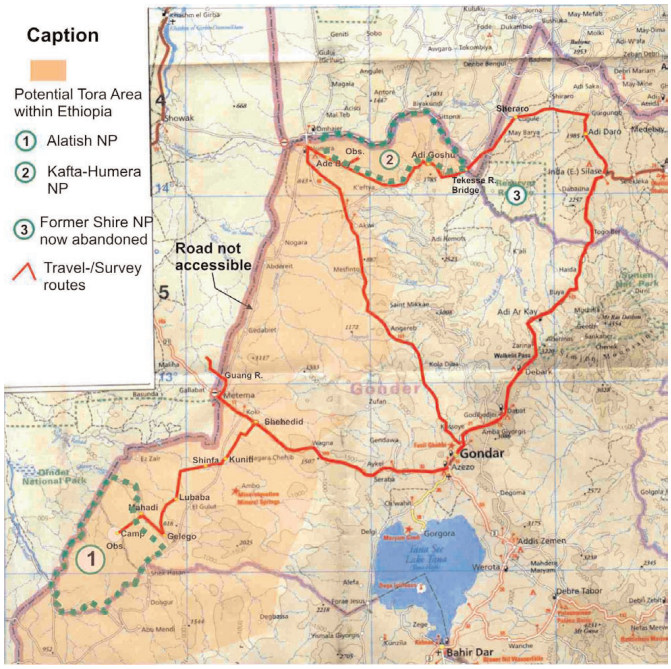
General Information on the surveyed areas and expected ungulate species

The survey area is located in the Ethiopian zone of Gondar (Amhara and Tigray national regional states) north and west of the Lake Tana approximately demarcated by the latitudes N14°25', N12°10', and longitudes E37°55' and E35°35'.

The recently established "Alatish National Park", partly forming a new trans-boundary conservation area with the Sudanese Dinder National Park, the formerly known and now abandoned "Shire Wildlife Reserve" and the newly established "Kafta-Humera conservation area" along the Ethiopian-Eritrean border were visited. Travel routes, field observation points and camps sites are shown in figure 1.

Where not severely devastated, dominant habitat types of the survey area are Acacia savannah and dry bush-land of the Sudan-Guinea biome. Parts of the south-western and western survey areas can be characterized as woodland or open grassy plains.
Cited literature revealed the possible occurrence of the following ungulate species in the surveyed area:

African elephant *(Loxodonta africana)*, Savannah buffalo *(Syncerus caffer brachyceros)*, Nubian giraffe *(Giraffa camelopardalis camelopardalis)*, Tora hartebest *(Alcelaphus buselaphus tora)*, Roan antilope *(Hippotragus equinus)*, Beisa oryx *(Oryx beisa)*, Greater kudu *(Tragelaphus strepticeros)*, Defassa waterbuck *(Kobus ellipsiprymnus defassa)*, Bohor reedbuck *(Redunca redunca)*, Decula bushbuck *(Tragelphus scriptus decula)*, Red-fronted gazelle *(Gazella rufifrons tilonura)*, Oribi *(Ourebia ourebi)*, Common duiker *(Sylvicapra grimmia)*, Wart hog *(Phacochoerus aethiopicus)*, Aardvark *(Orycteropus afer)*.



Travel routes (red) within the historic distribution range of Tora in North-western Ethiopia (orange).

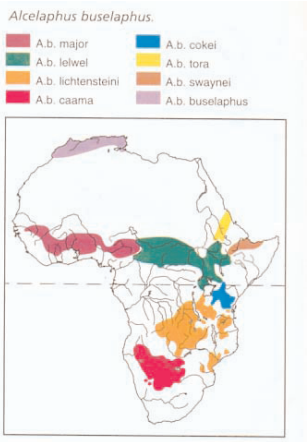
General information on the Tora Hartebeest and further hatebeest subspecies

The Tora hartebeest *(Alcelaphus buselaphus tora* Gray,1873*)* is one of eight subspecies that are distinguished today according to KINGDON, 1997. The so-called Bubal *(A. b. buselaphus)* of Northern Africa was exterminated in 1925. The subspecies Tora (A. b. tora) [figure 2] with a historic distribution embracing Eastern Sudan, North-western Ethiopia and Northern Eritrea [figures 1+3] as well as the Korkay or Swayne's hartebeest *(A. b. swaynei)* formally occurring all along the Northern Rift valley (Northern Somalia, Djibouti and North-eastern to Central Ethiopia) are now considered critically endangered. The Swayne's hartebeest is extinct in Djibouti and Somalia where it was once present in vast herds.

Further subspecies such as the Kongoni (A. b. cokei, Southern Kenya and Northern Tanzania), the Khama (A. b. caama, Cape provinces, Kalahari), the

Kanki *(A. b. major*, Western Africa*)*, the Lelwel *(A. b. lelwel*, Lake Chad to Lake. Turkana*)*, and the Nkonzi (*A. b. lichtensteinii*, Central and South-east Africa*)* are currently not considered threatened according to IUCN criteria. Hybridization between subspecies is likely in overlapping areas, causative for a number of previously described but now rejected subspecies.

Tora hartebeest (KINGDON, 1997)



Hartebeest distribution (KINGDON,1997)

Hartebeests are characterized as large, high-shouldered, deep-chested antelopes with long legs, a short neck, and a very long, narrow face. The horns are carried on hollow bases or 'pedicels' and show considerable individual and regional length variation (45-83cm). The horns of the Tora differ markedly from other hartebeest subspecies by being significantly thinner and spreading more widely and sideways from the top of the skull (below).

The coloration of hartebeests also shows considerable regional and individual variation, with the overall body color ranging in most subspecies from yellowish to red or dark brown. The blotches of black on the shoulders and knees vary in shape and extent in the Korkay and Khama. The Tora's appearance is generally somewhat pale red-brown over most of the head, neck, front, and upper parts of the rump and the front legs. Hind legs and belly are whitish to yellowish, the tail tuft is black.

Various authors mention substantial regional differences in habitat requirements. However, hartebeests are consistent everywhere in being non-selective grazers, occurring along boundaries between open grass plains or glades and mosaic like bush and woodland. They depend on regular access to open water, although they may go without drinking for quite long periods. In the dry season they follow drainage lines for forage and water and shift during the rains to better drained, sparsely grassed woodlands. According to KINGDON (1997) certain grass species are avoided, particularly Cynodon that is readily grazed by other herbivores. All studies revealed that broad-leafed foliage accounts for less than 5% of the diet.

With the exception of the Nkonzi, *A. b. lichtensteinii* (which could be regarded as an incipient species) all subspecies have been recorded in very large, dense herds at various times in the past as it was true for the Bubal in the 1830s and 1840s in Souf, Algeria. Populations may crash to very low levels during droughts, epidemic diseases or under sustained competitive pressure from cattle. Happily, they are usually able to recover quite rapidly when conditions improve. This capacity to locally build up their numbers is fuelled by a normally super-abundant resource. Their social versatility enables them to find the best pastures at all density levels and to adjust the size and distribution of their territories accordingly. None the less, the extinction of the Bubal should serve as a warning about the vulnerability of these species. Apart from being easy to hunt and having very tasty meat, these antelopes decline wherever there is competition from intensive cattle-keeping (KINGDON, 1997).

Preliminary access track to Alatish NP

Campsite (above) at the dry Alatish river (below)

Olive baboons close to the river

Poacher's camp

Landscape and vegetation around Kafta-Humera

Severe land degradation in North-western Ethiopia

Resume and recommedations

The survey revealed no reliable indications on the existence of Tora hartebeest in the surveyed areas of Western and North-western Ethiopia.

Due to restriction in time, technical and financial means and inaccessibility of remote potential habitats of Tora hartebeest, these results remain preliminary.

However, lack of any direct signs and of utilizable recent first hand observation reports on the current distribution range and status of Tora hartebeest in Ethiopia suggests that the species is extremely rare or exterminated in the country.

An intensive governmental settlement and development program for the Western regions in Ethiopia, resulting in excessive devastation and exploitation of natural habitat and high un-sustainable hunting pressure, contribute to a general alarming trend in the decline of larger wildlife in Western Ethiopia. Due to the intensity of the settlement program there is reason to worry that major parts of still existing woodland and most of the wildlife in the region will be lost in less than 10 years.

Bohor reedbuck

The two newly established conservation areas (Alatish and Kafta-Shiraro) have to be regarded a most timely measure to protect at least fragments of potential habitats and populations of the Tora hartebeest and many other species of wildlife and flora in drastic decline.

Very substantial contributions by Ethiopian governmental and national regional state authorities are needed if this goal is to be reached in time.

The international conservation community should offer its technical assistance where ever needed to support the establishment of self-sustaining management and control principles for newly established conservation areas.

In due time, further extended surveys are needed in Western Ethiopia, Eastern Sudan and Eritrea to gather a full overview on the current status and on additional effective protection measures for the Tora hartebeest and other wildlife species in decline.

Acknowledgements

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Zoological Society for the Conservation of Species and Populations (ZGAP), Germany
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Al Wabra Wildlife Preservation (AWWP), Qatar
Zoo Landau in der Pfalz, Germany

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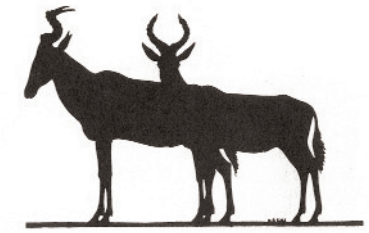
We are very thankful to Mr. Brooke Kassa (Ephrem car hire service), who as our prudent driver and technical assistant enabled us to visit rather remote terrain in safe manner.

Many thanks also to the many other people including several local scouts (i.e. Mr. Ali, Mr. Haile Alaye, Mr. Addi Hilu), which provided assistance in the field and contributed valuable information.



Interest Groups

IGWG

The **International Giraffe Working Group** published its newsletter Giraffa, Vol. 1, Issue 2, in September 2007. Contents include:

•GiD: development of the Giraffe Database and species status report.
•Giraffe Taxonomy: Patterns of Sub-Species Diversity in the Giraffe.
•The Niger giraffe *(G.c.peralta)*: an overview
•Giraffe of Niger - 2006 census
•Notes
•Recently published research

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Antelope in the News

Black-Faced Impala

The Black-faced Impala in Namibia by Tammie K Matson
Published in *African Indaba* – Newsletter, Vol. 5. #5 2007
editor Gerhard Damm

The author discusses the historic and current status, and suggested strategies for the management of the black-faced impala *(Aepyceros melampus petersi)* (estimated current population of less than 4000) endemic to Namibia. She relates current threats including hybridization with common impala being introduced to Namibia on private lands, and the response by the Community-Based Natural Resource Management program in Namibia to develop a national management strategy for black-faced impala.

Topi

Reversed Sexual Conflict in a Promiscuous Antelope
Jakob Bro-Jorgensen, Department of Biological and Environmental Science, Univ. of Jyvaskyla, Finland, Institute of Zoology, Zoological Society of London
Published in *Current Biology* Vol 17, Issue 24, Dec 2007

Summary (as written in *Current Biology*)
A general tenet of sexual conflict theory is that males have higher optimum rates than do females and therefore should be more persistent when it comes to mating. However, in promiscuous species females might benefit from high mating rates as a result of increased conception probability with favored males, whereas favored males benefit from mating selectively because of sperm depletion. When this results in higher optimum rates for females than for males, there is potential for reversed sexual conflicts between persistent females and resistant males. Here I report the evidence of such a reversed sexual conflict in a promiscuous antelope like the topi. Rather than mating randomly, favored males prefer to balance mating investment equally between females as predicted by strategic sperm allocation theory. Females, however enhance their probability of mating with favored males through aggression toward mating pairs. Supporting the idea that aggressive females thereby harass males to mate at a rate than is suboptimal from the male' perspective, males become increasingly likely to counterattack aggressive females with whom they have already mated disproportionately, and such male counterattacks are associated with refusal to mate with aggressive females. This study points to reversed sexual conflict as a more significant evolutionary force in promiscuous mammals than previously thought; however, such conflicts probably often go unnoticed because males, in contrast to females, can avoid mating without conspicuous resistance.

Ader's Duiker

First Sighting of Ader's Duiker in Arabuko-Sokoke forest
Reported in *Current Biology*, Vol. 17, No. 5

The report describes Amy Plowman and the Paignton Zoo's work with the Ader's duiker, *(Cephalophus adersi)*, in the Arabuko-Sokoke coastal forest in Kenya and includes a "first ever" photograph of the species in this region. The team also works with the critically endangered (IUCN) Ader's duiker on Zanzibar.

Giant Sable

Giant Sable Follow-Up Report
Pedro vaz Pinto in *African Indaba*, Vol 6, #1, Jan 2008
Editor Gerhard Damm

Camera traps on one site took 333 photos of a sable herd on Oct 22 between 05h40 and 05h48! These photos provided new details and allowed better identification of individuals. The photos confirmed the hybridization problem. In total 10 animals were identified of which half are mature pure females with the remaining 5 being hybrids. This included two individuals never recorded before, one of which is a very young calf. It is interesting to observe the behavior, as only one of the adult females used the Salina with 4 young hybrids, while the remaining 4 mature females and the newborn watched from a distance. There was no sign of the 4 pure adult females. This herd may have split into several groups, considered normal seasonal social behavior.

Recent Publications and Reports

Three highly divergent genetic lineages elucidate the intraspecific taxonomy of Grant's gazelles

By Eline Lorenzen, University of Copenhagen

The following is a short resume of a study published in ***Conservation Genetics****. If you would like a copy of the original manuscript, please email* edlorenzen@bi.ku.dk

The intraspecific taxonomy of Grant's gazelles is not straightforward. Kingdon (1982) recognised four subspecies; *Nanger granti brighti* (Uganda and western Kenya), *N. g. robertsi* (Lake Victoria area), *N. g. granti* (Tanzania and southern Kenya) and *N. g. petersii* (northeastern Kenya). However, based on genetic and morphometric analyses, Grubb (2005) did not include *N. g. granti*, although the latter was recognised as one of four subspecies in earlier studies. Rather, the author included *N. g. notata*, disregarding previous mention that it had possibly gone extinct.

Variations among populations at the mitochondrial DNA control region are informative for defining boundaries between species and subspecies. A previous study of 44 Kenyan Grant's gazelles based on this locus revealed three highly divergent genetic clusters (Arctander et al. 1996). In the present study, we analysed a further 133 individuals from 17 populations covering the majority of the species distribution range in Kenya and Tanzania.

Our data supported the presence of three genetically distinct lineages (Fig A). One lineage encompassed individuals from the northern populations and included the location of the *notata* type specimen and the *brighti* samples previously analysed by Grubb. The second lineage included the southwestern populations, corresponding to *robertsi* and *granti*. The third genetic lineage comprised the eastern Kenyan populations. Prioritising subspecies names by seniority and geographic affiliation, the names *notata*, *granti* and *petersii* were used to refer to the northern, southwestern and eastern genetic lineages, respectively.

The *petersii* lineage differed from the other two lineages by 12%—similar to that separating Grant's gazelles from the closely related Soemmering's gazelle (*N. soemmerringii*). The genetic distinctiveness of the eastern Kenyan populations was further reflected in their distinct form, colour and coat pattern.

The *notata* and *granti* lineages differed by 8%, suggesting they shared a more recent common ancestor. Although Grant's gazelles to the north (*notata*) are believed to be smaller, there is no published information on size differences, and northern and southern populations cannot be distinguished by coat colouring or horn shape and size. However, although neighbouring populations of *notata* and *granti* are proximate—Aberdare and Nakuru are ~60 kms apart—no evidence was found of gene flow between lineages, suggesting reproductive isolation.

On the basis of the morphological, genetic and geographical differentiation of the three lineages, we suggest Grant's gazelles be raised to the superspecies *Nanger* (*granti*) comprising three taxonomic units. Due to its restricted geographic distribution, unique genetic composition and morphological distinction, we suggest the *petersii* lineage be raised to a distinct species *Nanger* (*granti*) *petersii*. We further suggest that *notata* and *granti* be recognised as evolutionary significant units.

When a single species is split into many, the conservation stakes are necessarily raised, as the overall number of individuals in each taxonomic unit is lower than the original amalgamation of the

species. The total population size of Grant's gazelles is estimated at 141,000, but population estimates differ among the three lineages. With its northwest distribution, the *notata* lineage is probably also found in Uganda, extending across the very arid regions of southern Sudan and southwest Ethiopia, and numbers around 70,000. The *granti* lineage is distributed from central Tanzania to southern Kenya and numbers over 76,000. *N. g. petersii* is confined to eastern Kenya and has the smallest population size of the three lineages of about 5,000.

Although we are cautious of defining distinct units for taxonomic inference from one type of genetic marker alone, the signal in our data was strong. The deep genetic split of the three Grant's gazelles lineages, their non-overlapping geographic distributions and discrete morphologies (in the case of *petersii*) reflected independent evolutionary histories. The differences may express local adaptations, which could be important in maintaining the evolutionary potential of the populations. To preserve this, we suggest they be managed separately.

References

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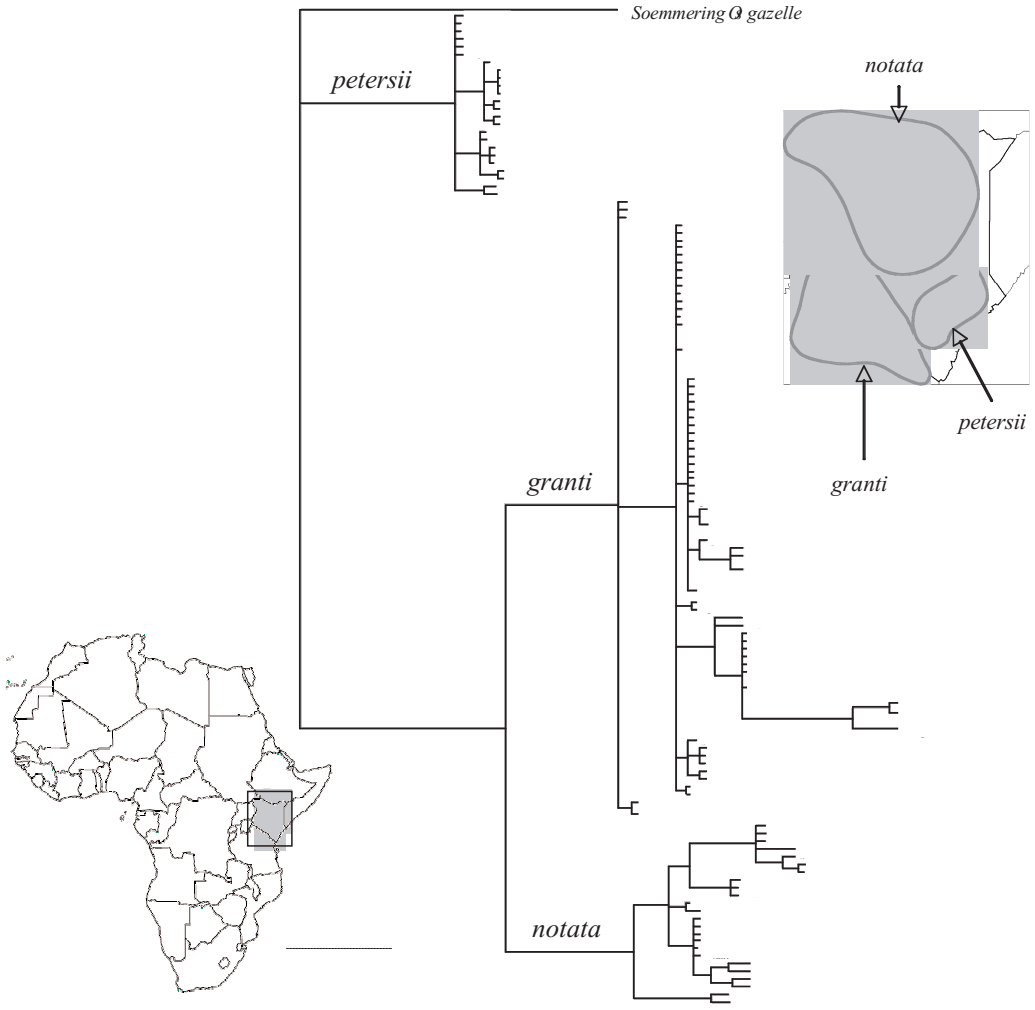

Distribution of Grant's Gazelles in East Africa. The tree visualises the genetic distances among the three lineages and their relation to Soemmering's gazelle. Insert map shows the location of the 17 populations sampled in Kenya and Tanzania, and the presumed geographic distribution of the notata, granti and petersii lineages.