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AN treated compared to the control. Histomorphometry of seminiferous tubules indicated marked increase in lumen size and significant reduction in size of germinal epithelium layer. Histologically, seminiferous tubules indicated extensively loosened germinal epithelium, intraepithelial vacuolation, giant cells formation and halted spermatogenesis in the AN and AL treated compared to the control. The study indicates that, crude extracts from AN and AL may cause suppression of fertility in male *M. natalensis*.

(ORAL PRESENTATION)

### **Small mammal wild game in the periphery of the Rubi-Tele Hunting Estate (Bas-Uélé, DRC)**

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The imbalance in the supply of large and medium-sized game mammals in local markets over the past two decades is leading to a rush to exploit small mammals. Previously, small mammals, considered in most of them to be the object of food taboos reserved for certain age categories (the elderly) or social categories (the chiefs), have now become the potential target for human consumption and for marketing.

A huge quantity of small mammals (746, 19 Kg) is collected by Rubi Tele residents not only for subsistence but also for financial gain. The small mammal hunt mainly concerns the group of rodents (Gambia rats, porcupines and squirrels) at 94.5% and the group of small carnivores (genets, mongooses, palm killer civet and Congo otter) at 5.5%. The markets for these small game hunted in Rubi Tele Wildlife Reserve are growing and expanding in communities farthest from it, and the survey shows that it is the gold and diamond mining centers in Banalia territory in the neighboring Tshopo Province that are the main takers/consumers of Rubi Tele wildlife, including Mangi (76.5%), Bongoza (8.42%) and Kole (6.62%). Thus, the important part of this consumption is on the left bank of the Aruwimi River (91.54%) and the little (8.46%) that remains serves the right bank with Banalia (5.1%), Kisangani (2.8%) and Belgika (0.56) as consumption locations.

From this research, it is clear that markets for small mammalian game are more in small rural areas and not in large urban centers such as Kisangani, which leaves out information on the specific wealth and quantity of game sold in urban markets considered by researchers to be ideal

reference sites for this type of research, given their regional representativeness. It also suggests that particular attention should be paid to small mammals, a group of over-exploited game animals that are "anonymously" overexploited and could suffer the same fate as large mammal species, which are becoming increasingly rare in the region.

(POSTER)

**Brain size responses to high altitude living in North American (Cricetidae) and African (Muridae) rodents revealed by 3D morphometric analysis of micro-CT scanned images: preliminary results**

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In order to better understand functional morphological adaptations to high elevation life in both North American and African montane-associated rodents, we used a 3D morphometric approach to acquire 3D images of the endocranial (brain) volumes of 51 crania of low-elevation and high-elevation populations of North American deer-mice (*Peromyscus*) as well as low-medium elevation (*Praomys hartwigi* and *Stenocephalemys albipes*) and high elevation (*S. albicaudatus*, *S. griseicaudata*) species of African rodents of the Tribe Praomyini (Murinae) as well as populations of Sloggett's Ice Rat (*Otomys sloggetti*) from medium and high elevations in South Africa. Micro-Computed Tomography (CT) scanning at 15-23  $\mu\text{m}$  resolution was conducted to build 3D composite images and further analysis was done with AVISO, ENDEX and R-studio software. We expected brain volume to scale with skull size to the mammalian constant allometric slope of 0.75, and to be greater in high elevation populations in deer-mice to compensate for brain-swelling associated with altitude sickness at high elevations. Our results showed that brain volume and skull length were not significantly different between highland and lowland *Peromyscus* populations but the allometric slope of brain volume with skull length in highlanders was half that of lowlanders (slope =0.37 cf 0.70 respectively). The former is close to intraspecific values obtained for myomorph rodents while the latter is close to the hypothesized power constant for all mammals proposed for all taxonomical levels. On the other hand, we found no allometric response of brain volume to cranial size but a strong positive correlation between brain volume and elevation in *O. sloggetti* from the Drakensberg Range of South Africa.

(ORAL PRESENTATION)