Trophy Lion Hunting in West Africa

2 authors:

Lucas N Joppa
Microsoft
85 PUBLICATIONS 4,814 CITATIONS

Jon M. Hutton
Luc Hoffmann Institute
39 PUBLICATIONS 2,779 CITATIONS

All content following this page was uploaded by Lucas N Joppa on 23 June 2016.
This article appeared in a journal published by Elsevier. The attached copy is furnished to the author for internal non-commercial research and education use, including for instruction at the authors institution and sharing with colleagues.

Other uses, including reproduction and distribution, or selling or licensing copies, or posting to personal, institutional or third party websites are prohibited.

In most cases authors are permitted to post their version of the article (e.g. in Word or Tex form) to their personal website or institutional repository. Authors requiring further information regarding Elsevier’s archiving and manuscript policies are encouraged to visit:

http://www.elsevier.com/copyright
Trophy hunting of lions in West Africa

Trophy hunting, particularly of big cats, is hugely contentious. By harvesting a few individuals per year, the practice can bring rare financial resources to conservation areas. Yet it must be monitored to avoid harvesting too many individuals such that conservation efforts are hindered. In their recent paper Croes et al. (2011) claim to uncover just this problem in the Bénoué Complex in northern Cameroon, a regionally critical area for large mammal conservation where strictly protected areas adjoin zones with allotted quotes for lion harvesting.

Croes et al. surveyed both protected areas and hunting zones, finding that lions occur at significantly lower densities in hunting zones than in neighboring national parks. They worry that by harvesting lions outside protected areas, hunting zones serve as a population ‘sink’, drawing lions from the protected ‘source’ population, thereby deterring from ongoing conservation efforts. They claim proof of this by using prey-biomass equations to estimate expected lion numbers inside protected areas and hunting zones, finding their survey counts to fall significantly below theoretical expectation. Based on this, they call for a government regulated five-year moratorium on hunting in the Bénoué Complex.

We feel such recommendations are drastic relative to the strength of Croes et al.’s study, and even contradictory to their own interpretations of their findings. That lion density is lower in hunting zones than in protected areas is not surprising. Populations decline when they are exploited for a sustainable off-take, even when harvesting occurs well below maximum sustainable yield. That populations are below prey-biomass expectation is not enough to induce extreme policy measures. Such prey-biomass predictions are highly sensitive to spatial and temporal variation in prey abundance. One can easily imagine a scenario where seasonal effects such as nutrient availability drive prey species inside a park, artificially increasing their biomass relative to more stable lion home ranges. Croes et al. show preferred lion prey species exist at significantly higher densities inside protected areas. Whether this is a spatially or temporally stable result is unknown. Such possibilities are impossible to dismiss without methodical monitoring over multiple years, unlike the dataset analyzed by Croes et al., which monitored very few sites in a nonrandom and often spatially correlated manner.

Indeed, the authors themselves seem to question their own recommendation for a moratorium on lion hunting. Croes et al. report Bénoué Complex has 26 villages with around 25,000 inhabitants, growing at roughly 5.1% annually, inducing significant pressures on natural resources from local residents. The authors claim national parks are “notoriously understaffed and underfunded, mostly due to a general lack of government funds which constrains regular anti-poaching efforts” and state that anti-poaching effort is higher in the hunting zones because the economic incentives associated with trophy hunting “maximize anti-poaching efforts in hunting zones”.

Recognizing the socio-economic realities of the area, and the incentives (apparently) created by trophy hunting, Croes et al. recommend a strategy in part based on incentives to be provided by the “intensification” of local projects supported by trophy hunting revenues. They recommend increasing lion trophy fees to support this strategy and reintroducing trophy hunting of elephants and leopards “for the full value of wildlife in the hunting blocks to be harnessed”.

That these incentives are delivered by private business is highly relevant. It is unknown whether a moratorium on the hunting of lions would end up being a ‘nurturing’ measure that would help strengthen the sustainability of trophy hunting businesses. There is considerable experience to the effect that moratoria, even those adopted voluntarily, are hard to reverse and the introduction of uncertainty about potential earnings is hardly a business-friendly strategy.

It is easy to believe that unregulated trophy hunting can lead to overharvesting and detrimental conservation outcomes. Yet, Croes et al. fail to supply convincing evidence that this is indeed happening in the Bénoué Complex, and from the evidence presented we cannot see any validity in their call for ending what might instead be a working example of trophy hunting, conservation, and private enterprise helping to balance the many competing interests in the region.

Reference


Lucas N. Joppa
Computational Ecology and Environmental Sciences, Microsoft Research, Cambridge, United Kingdom

Jon Hutton
UNEP-World Conservation Monitoring Centre, 217 Huntingdon Road, Cambridge CB3 0DL, United Kingdom

Available online 27 March 2012