

134 Why are some species more popular with wildlife tourists: Insights from South Africa.

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Introduction

Wildlife tourism is popular in many countries and often takes place in protected areas including in developing countries (Higginbottom and Tribe, 2004). Income generated from this type of tourism can contribute to the economy and provide employment in rural areas, including in South Africa (Naidoo et al. 2011). Considering its potential benefits, it is important for those providing wildlife tourism opportunities to know which species are attractive to tourists and why. A common way to obtain this information is by surveying visitors in parks, and this has been done in a range of parks in South Africa, but how do the studies compare, and what species were most popular overall and why?

To assess tourists' preferences for wildlife tourism in South Africa, we examined data from multiple published surveys in several parks and private game reserves to: 1) examine consistency in species popularity among locations and visitors, and 2) identify species traits that may account for differences in popularity.

Methods

To determine the relative popularity of wildlife, we conducted a systematic search for academic papers containing visitor survey data from South Africa about tourists' species preferences using the guidelines for Preferred Reporting Items for Systematic Review Recommendations (PRISMA) (Moher et al., 2009). This involved searching for publications on Scopus, Google Scholar and Web of Science using the terms 'wildlife AND preferences AND tourists AND "South Africa"' in the topic, abstract or keywords up to September 2020. Eleven papers from the searches were downloaded and six of them representing seven surveys retained after removing duplicates and irrelevant studies. They often had different methods including who was surveyed and what they were asked, but all provide information about visitor species preferences. To determine which traits may contribute to species popularity, we collected data about 13 biological

traits known to influence people's reactions to wildlife.

To assess consistence among the surveys, Spearman's rank correlation coefficients were used. We then assessed overall popularity of species using weighted averages among surveys. To identify traits for species associated with species popularity, we used ordination in non-metric dimensional scaling (nMDS) and conducted Generalized Linear Models.

Results

The surveys covered seven parks in South Africa (Table 1) with a total of 2,224 people surveyed. Although options were not limited to mammals, only mammals were listed by those surveyed. Across the 11 species listed in four or more surveys, the most consistently popular were elephant (48% of the 2,224 people, in all surveys), black and white rhinos (36%, 7 surveys), lion (36%, 7 surveys), cheetah (35%, 5 surveys) and giraffe (34%, 7 surveys). Species that were moderately popular were leopard (28%, 6 surveys), wild dog (26%, 4 surveys) and buffalo (26%, 6 surveys) while, zebra (16%, 6 surveys), kudu (15%, 5 surveys) and impala (12%, 6 surveys) were less popular. In preliminary results of ordinations and modelling, it appears that tourists' preferences for wildlife were mainly based on measures of visibility (size, colouration and behaviour) and cuteness (fluffiness), but further analysis of the data and additional measures of popularity other than surveys are still to be assessed.

Discussion

The combined results of park visitor surveys show that people want to see a relatively small subset of animals, and mammals, with just 11 out the 299 species of mammals in South Africa commonly listed as the desirable wildlife by tourists. This included large mammals with distinctive markings and coloration, species often found in open habitat, some that were fluffy, many that are easy to see including elephant, rhinos, giraffe, lion, leopard and cheetah. The popularity of these species could be a

function of familiarity and those involved in wildlife tourism and conservation may want to further diversify the species used to promote wildlife tourism and conservation, including less attractive or renowned taxa that are ecologically important to create awareness and clear misconceptions about them. Campaigns such as the little five (elephant shrew, ant lion, rhinoceros beetle, buffalo weaver and leopard tortoise) have been used among others to get people to engage with other wildlife, and the popularity of programs such as Meerkat Manner and others can foster interest in broader range of species. Expanding the range of species attracting and attractive to tourists can have benefit in terms of providing more wildlife viewing opportunities, but also promoting conservation of less iconic species and parks.

Publication details	Location(s) of surveys	Visitors surveyed
Lindsey, P.A., Alexander, R., Mills, M.G.L., Romañach, S. and Woodroffe, R., 2007. Wildlife viewing preferences of visitors to protected areas in South Africa: implications for the role of ecotourism in conservation. <i>Journal of Ecotourism</i> , 6(1)19-33.	Pilanesberg and Kruger National Parks, Djuma and Ngala private reserves	627
Di Minin, E., Fraser, I., Slotow, R. and MacMillan, D.C. (2013). Understanding heterogeneous preference of tourists for big game species: implications for conservation and management. <i>Animal Conservation</i> , 16(3)249-258.	Hluhluwe-Umfolozi Park and iSimangaliso Wetland Parks	429
Maciejewski, K. and Kerley, G.I. (2014). Understanding tourists' preference for mammal species in private protected areas: is there a case for extralimital species for ecotourism? <i>PLoS One</i> , 9(2)e88192.	Shamwari private Reserve	90
Grünwald, C., Schleunig, M. and Böhning-Gaese, K. (2016). Biodiversity, scenery and infrastructure: Factors driving wildlife tourism in an African savannah national park. <i>Biological conservation</i> , (201)60-68.	Kruger National Park	196
Arbieu, U., Grünwald, C., Martín-López, B., Schleunig, M. and Böhning-Gaese, K. (2017). Mismatches between supply and demand in wildlife tourism: Insights for assessing cultural ecosystem services. <i>Ecological Indicators</i> , (78)282-291.	Hluhluwe-Umfolozi Park and Kruger NP	136 204
Hausmann, A., Toivonen, T., Slotow, R., Tenkanen, H., Moilanen, A., Heikinheimo, V. and Di Minin, E. (2018). Social media data can be used to understand tourists' preferences for nature-based experiences in protected areas. <i>Conservation Letters</i> , 11(1)e12343.	Kruger NP	563

Table 1. Details of the papers and surveys used to assess species popularity for wildlife tourism in South Africa (see enclosure)

References

- Arbieu, U. et al. 2017. <https://doi.org/10.1016/j.ecolind.2017.03.035>. Di Minin, E et al. 2013 <https://doi.org/10.1111/j.1469-1795.2012.00595.x>. Grünwald, C. et al. 2016. <https://doi.org/10.1016/j.biocon.2016.05.036>. Hausmann, A. et al. 2018. <https://doi.org/10.1111/conl.12343>
- Higginbottom, K. & Tribe, A. 2004. Contributions of wildlife tourism to conservation, in: K. Higginbottom (Ed.) *Wildlife Tourism: Impacts, Management and Planning*. Common Ground Publishing, CRC for Sustainable Tourism, Gold Coast, 99-123. Maciejewski, K. & Kerley, G.I. 2014. <https://doi.org/10.1371/journal.pone.0088192>. Moher, D. et al. 2009. <https://doi.org/10.1371/journal.pmed.1000097>. Naidoo, R. et al. 2011. <https://doi.org/10.1007/s10640-010-9412-3>. Lindsey, P.A. et al. 2007. <https://doi.org/10.2167/joe133.0>.