

Analyzing Scientific Writing: Wild Dog Populations of South Africa

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Summary

Written in January 2020, the authors of A 20-Year Review of the Status and Distribution of African Wild Dogs (*Lycaon pictus*) in South Africa, are Samantha K. Nicholson, David G. Marneweck, Peter A. Lindsey, Kelly Marneweck, and Harriet T. Davies-Mostert. These authors are connected to the Endangered Wildlife Trust South Africa, the Eugene Marais Chair of Wildlife Management, the Environmental Futures Research Institute, and the Department of Nature Conservation. These authors' fields of study are connected through the conservation of essential endangered wildlife and how to conserve and protect them. This journal's focus is on wild dog populations and their relation to the environment of South Africa as a whole. This journal itself fits into the specialty by presenting and explaining data, establishing the methods of how they collected that data, presenting references from other researchers, and providing visuals as well. A sizable portion of ecology and conservation (plus many other science-based work fields) relies on the use of logical writing and presenting data (including visuals) to support the information they wish to get across.

One of the most predominant claims is that conservation is needed to maintain and continue to stabilize wild dog populations for them to stay prosperous in the Kruger National Park area. The article states that “South Africa has a small (~500) but stable population of wild dogs, with the metapopulation contribution becoming increasingly important” (Nicholson, *BioOne*, 2020). This supports their main claim by using data to show that metapopulations must be monitored. They later state that “All packs in the metapopulation are radio-collared and intensively monitored, with monitoring teams aiming for at least monthly pack estimates” (Nicholson, *BioOne*, 2020), meaning they are already making efforts to supervise the monthly decrease or increase of the wild dogs. National populations, subpopulations, and metapopulations were all also monitored before their data-collecting time frames. Data was provided by Kruger between 1995 and 2014 that helped the scientists study the changes in populations prior to their own research, in which populations were much larger than they are today (due to deforestation, poaching, etc.).

Another claim that can be found in the article is the use of smaller fenced-in areas that would house the wild dogs and benefit the endangered species. In the discussion section of the article, they explain, “Combining metapopulation approaches with adequate fencing, expertise in wild dog management, and sufficient funding for translocations, should provide invaluable lessons for the conservation of similarly threatened carnivores” (Nicholson, *BioOne*, 2020). This means that fencing is beneficial for educating the public and “preserving” wild dogs. One of the benefits of fenced-in management of wild dogs is the opportunities for education. Education can help people outside of the conservation field learn the importance of conservation and promote a healthier ecosystem and global environment.

While using enclosed areas can be seen as only a claim by the biologists, by analyzing the journal it can likewise be viewed as their target argument. The use of more human-involved conservation is needed to maintain wild dog populations. For example, by leaving them to free roam, keeping them in one place for better medical care, and consistently documenting their numbers in a confined space. They can document the birth and death rates in one spot as a substitute for relying on collars and tracking them down in the wild. From the abstract paragraph, “Wild dog conservation in South Africa would benefit greatly from equal survey effort and standardized methods to accurately assess long-term population trends,” (Nicholson, *BioOne*, 2020) in which those methods that are described are more achievable in closed-off areas for the animals. Artificial fertilization versus natural rearing is only one of the many ways animal caretakers can preserve an essential animal in any ecosystem. Artificial fertilization is primarily done in captivity, which contributes to the need for wild dog sanctuaries and reservations.

Most scientists (and biologists and conservationists in this case) will use graphs and maps to support their claims—versus other fields that may primarily use quotes or other references. In this article, the conservationists use equations, population charts, and maps, with the help of summaries and conclusions from other researchers’ writing. It is simple to present these findings through pictures, attachments, or equations within any scientific article, journal, or textbook.

Analysis

One of the easiest ways to break down this article is through the rhetorical analysis method. This is the most useful method in this scenario because the writers, purpose, subject, etc. are easy to identify. First, all the writers that contributed to the article are involved with a few different conservation-oriented organizations. For example, Samantha K. Nicholson, David G.

Marneweck, Kelly Marneweck, and Harriet T. Davies-Mostert are all members of the Endangered Wildlife Trust in South Africa. To summarize the Endangered Wildlife Trust's mission, they aid threatened and endangered species through education, projects, and natural resource management, or that is a long way to say "conservation." Three out of the five writers also take part in the Eugene Marais Chair of Wildlife Management, a section of the Mammal Research Institute at the University of Pretoria. The institute is dedicated to biological resources and getting involved with biological industries (including wildlife management). Credibility is given to these authors heavily, considering their work with other wildlife in the past.

The target audience of this journal is a few distinct groups of people. The umbrella summary for these groups is conservationists or those interested in conservation. Other researchers can use the writers of this article's data to back up their own research or spark future research projects. Those that have basic level knowledge of wildlife conservation can use this to learn more about conservation or about South African wildlife conservation specifically. It is also possible that an English student in college who is writing an analysis of this article for their second essay is a small portion of the audience too.

The purpose of this article is to educate the reader on the current stance on African Wild Dogs. This very purpose is found in the title, "Review of the Status and Distribution of African Wild Dogs." Further down into the introduction paragraph of the article it also states, "In this study, we consolidate documentation of the entire South African wild dog population, and we present updated population estimates and growth rates from all three subpopulations between 1998 and 2017" (Nicholson, *BioOne*, 2020), which describes the quantity of their research. A secondary purpose of the article is to explain why conservation is important for wild dogs. In the discussion portion, it discloses, "Without the development and expansion of metapopulation, and

all the intensive and costly management that this involves... the South African national population [of African Wild Dogs] would be significantly smaller and more vulnerable.” (Nicholson, *BioOne*, 2020). This means without conservation the dogs' populations would degrade over time. They also list off the ways this species is progressing towards extinction, further stressing the need for them to be protected: “Threats to the species include loss of prey and habitat, direct persecution, such as conflict killing, ... indirect persecution, such as snaring and road kills, and ... utilization of body parts for traditional medicine.” (Nicholson, *BioOne*, 2020).

Simultaneously, these purposes and examples fall under the exigence and subject of the article, which is educating about conservation and its value to the environment. The subject is easily identifiable: it is focused on wild dogs, the importance of conservation, and the different applied forms of conservation (ex. Fenced-in monitoring). The introduction paragraph starts with “The African wild dog (*Lycaon pictus*) is globally listed as Endangered, with the latest available data suggesting a population of about 6600 individuals.” (Nicholson, *BioOne*, 2020), which is great for informing the audience on the quantity of wild dogs. This includes ‘African Wild Dog’ and ‘Endangered’ in the same sentence, pointing towards the threat of extinction being a main subject.

One of the main contexts of the article is the study of wild dog populations in Kruger National Park. A portion of the data that was collected was conducted within Kruger, while some was received from other areas in South Africa. The few institutions the authors were involved in played a key role in the contexts too. A considerable part of their knowledge of wildlife and wildlife research was formed within the institutions (or previous research), and this knowledge

was utilized in writing the article. Research articles fall under the academic genre. Academic genres use real-world information, and this material is used to educate and pass on knowledge. The real and research-proven information in the article can be transmitted to other conservationists, students, wild dog enthusiasts, or any others interested alike.

Response

I did personally enjoy this article. I was able to travel to South Africa a couple of years ago on a summer field trip. While there, we visited Kruger National Park. That was the main part of the article that caught my eye. We sadly did not see any wild dogs; they are closed off to the public to avoid poaching. There are some wild dog sanctuaries that can be visited in the area, but we did not make it to those parts. African Wild Dogs happen to be one of my favorite animals as well. I am a huge canine (or canine-related animal) fan. My major is ecology (falls under the biology major), and I am hoping to use my degree to work with endangered animals around the world. Any kind of research on endangered animals has always been something I am passionate about and the opportunity to analyze this article was something I found to be easy for me.

I do agree with the key claims of the journal. Conservation should be applied to endangered species (like African Wild Dogs), or any animal in general. All animal life is precious, and each life influences its individual ecosystem, which impacts the global ecosystem. It hurts to watch animals fall into extinction (and nowadays it is prominently the human race's fault), but the least we can do now is support helping wildlife and preserving the natural world for future generations (and, dramatically, to prevent us from dying too). Fenced-in monitoring and artificial fertilization is a strategy I agree with as well, in most contexts. Some zoos, sanctuaries, and research facilities fail to provide their animal tenants with the proper care they

need to survive. If these animals are placed in proper facilities, bred for the right genes to avoid harmful characteristics, and with the intention of repopulation or proper harmless education, I one-hundred percent support them.

Reflection

The specific skill I would like to receive from this article is the use of previous research. It heavily aids what the writers are trying to explain. Personally, I have a problem with accurately describing what I am trying to get across, so visual aids can help me a lot. Finding the right data and visual aids is especially important to scientific writing. In the future, I want to do more personal research (if applicable) and utilize other researchers' information. By this, I do not mean plagiarism, but instead referencing and using their information to pass on the knowledge and using that knowledge for my own writing.

This article influences how I see other scientists formatting their writing and explaining their own research. Staying factual and logical is very important. That is demonstrated in this journal. Emotions do not play a crucial role in presenting scientific data (unless it is something like studying emotions or psychology). Of course, there is a passion that drives people to learn more about science, but when it comes down to data it is more logic- than emotion-based. This may influence my future writing to remind myself to stay logical and reference the data available. A key takeaway I got for writing advice is to do research, whether that be your own or going on the internet and studying others' research and to stay logical. Science is all fact-based, and heavily balanced on studying the topic you wish to learn, so in conclusion, study, and research to achieve a better written scientific piece.

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Nicholson, Samantha. Marneweck, David. Lindsey, Peter. Marneweck, Kelly. Davies-Mostert, Harriet. 2020. "A 20-Year Review of the Status and Distribution of African Wild Dogs (*Lycaon pictus*) in South Africa" BioOne Complete.