

Can There Be Sustainable Lion Hunting In Africa?

By now the arguments for both sides are well known. Trophy hunting provides important revenue for African landowners, and without that income, they might be persuaded to convert land currently managed for wildlife into farms and mines. Sacrificing a few older, non-reproductive lions—it is argued—allows the entire ecosystem to be preserved. On the other hand, pervasive corruption and unscrupulous practices that contravene the established scientific guidelines for sustainable hunting have led to overharvesting, especially for the charismatic king of the jungle. Can anything be done to make hunting practices more sustainable?

That's what Montana State University the Zambia Carnivore Programme's Scott Creel wanted to know. The common wisdom for sustainable hunting is known as "age-restricted harvesting," and it holds that only male lions above a certain age ought to be removed from the population. The problem, the researchers realized, is that those guidelines were developed based on a well protected, growing lion population. They set out to determine whether there could be sustainable lion hunting for the more typical challenged populations.

Using mathematical models informed by real-world population estimates, Creel and his team projected population dynamics for African lions 25 years into the future—both without hunting and under a range of hunting scenarios. Those scenarios included quotas for hunting blocks, age restriction, and hunting periods punctuated by recovery periods with no hunting. They assumed that the hunting blocks were located adjacent to protected areas like national parks, as is so often the case in the real world, with lions moving frequently between protected and unprotected landscapes.

They discovered that most hunting scenarios resulted in a long-term decline in trophy-sized males, which is both detrimental to lion populations and undesirable for hunters. The best strategy, therefore, was a mosaic one. "This decrease in the availability of prime-aged males is minimized," the researchers conclude, "by the combination of a block quota of one, a 3 on/3 off cycle of hunting and recovery, and a minimum hunted age of 7 or 8 years." In other words, hunting blocks can sustainably be allocated one trophy hunt per year of a lion at least 7 years old, for three consecutive years, followed by three years for recovery. They also recommend that trophy fees be increased to account for the reduced quota. Still, such a scenario would still include a long-term decline in lion populations, especially if poaching or habitat degradation worsen.

Trophy hunting by itself might be sustainable, but not given a background of poaching, habitat loss, and retaliatory killings. "If other negative effects on lions are not controlled, it is unlikely that trophy hunting at any level will be sustainable," they conclude. It's a dire warning, and one that they say likely applies to other African megafauna as well, especially leopards.

Source: Creel, S., M'soka, J., Dröge, E., Rosenblatt, E., Becker, M., Matandiko, W., & Simpamba, T.

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