

Are Domestic Cats Wiping Out Wildlife?



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Some people assert that cats are exterminating wildlife. What truth is there to this claim?

Nature has made domestic cats superbly adapted predators of small animals like rodents and birds. Predators, being at the top of the food web, are normally rare; they cannot be more numerous than the prey they feed on or they would die off. However, domestic cats are unlike any other mammal predator (domestic dogs excepted): humans have made cats super-abundant and spread them all over the globe. Domestic cats are now counted in their millions.

Given that domestic cats are such passionate and abundant predators, scientists are exploring their predatory behaviour to understand how they affect wildlife. This has led some researchers to claim that cats are exterminating species. It is important to understand this claim because many people are now demanding that cats are eliminated or severely controlled. So what is the basis for this claim?

Do Cats Exterminate Species?

A much publicised and often repeated assertion about domestic cats is that:

"Feral cats are responsible for the extinction of at least 33 bird species."

This quote is from Nogales and colleagues, a group of scientists reviewing the effectiveness of eradicating feral cats (Nogales et al 2004). The claim has been repeated so often that many people accept it as fact:

"Domestic cats have tremendous impacts on wildlife and are responsible for the extinction of numerous mammals, reptiles, and at least 33 bird species globally." The Wildlife Society (2011)

The claim that domestic cats exterminate species drums up public hate for cats, to which professional and supposedly unbiased researchers are not immune. Nico Dauphiné, a bird researcher who worked at the National Zoo, Washington DC, announced at a bird conference:

"Historically, cats have been specifically implicated in at least 33 bird extinctions, making them one of the most important causes of bird extinctions worldwide" And added that, "...feral animal removal should become a permanent, regular feature of wildlife management." Dauphiné et al (2009)

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'Removal' in wildlife conservation is usually a euphemism for killing. Dauphiné came to hate cats, tried to poison them in her neighbourhood and was given a suspended sentence in 2011 for attempted cruelty to animals (Cratty 2011).

So where does this claim that cats exterminate species originate and how true is it?

Claim Source 1

Nogales and his colleagues state that their claim about cats exterminating "at least 33 bird species" comes from Lever (1994).

Claim Source 2

Lever (1994) is a book, *Naturalized Animals: the ecology of successfully introduced species*, in which Lever states that:

"According to Jackson (1977), naturalised predators have collectively been responsible for the extermination throughout the world of no fewer than 61 avian taxa, the principal culprits being feral domestic Cats which have caused 33 extinctions..." page 91

Claim Source 3

So where did Jackson get his information? It comes from a talk he gave at a symposium about endangered birds. His talk was published a year later in the book *Endangered Birds* (see Jackson 1978) in which he presents a bar graph showing that cats have exterminated 33 species of birds and that the "data are summarized from Ziswiler (1967)."

Claim Source 4

So where did Ziswiler get his information? Ziswiler lists several extinct species in the Appendix of his book, *Extinct and Vanishing Animals* (Ziswiler 1967), an early work on species extinction. Next to each species he marks the reasons for their extinction, such as through destruction of the forest or through introduced species. Ziswiler states that he bases his bird extinction information on a book by JC Greenway (1958), *Extinct and Vanishing Birds of the World*, itself based on information gleaned from yet earlier works, and on *IUCN Bulletins for 1964*, which are brief announcements, so cannot provide detailed information.

Although Ziswiler states that he got his information from elsewhere, his Appendix is the most compact source of information on

bird species that cats are reputed to have exterminated. I reappraised his list in light of up to date data, mainly from IUCN (www.iucnredlist.org) and Bird Life (www.birdlife.org). I found that:

1. Ziswiler does not actually list 33 species purportedly exterminated by cats but only 26 species, of which 18 are bird species and eight are mammal species. I list the 18 bird species in the Appendix, below. Of these 18 bird species:
 2. Two species are still extant (numbers 5 and 16).
 3. Four species (numbers 2, 7, 13, 18) are sub-species and one (number 1) is a sibling species. These do not count as exterminated species because the claim is for cats exterminating whole species, not sub-varieties of species.
 4. Number 14 is not recognised today as a species.
 5. Number 17 consists of many related species. Apparently, some of these are extinct, but to keep things uncomplicated I list them here as a single extinct species.

Thus, ten bird species listed by Ziswiler might be extinct, not 33 species as claimed. But were any of these ten species, even including the sibling species and sub-species, really exterminated by cats?

Degraded Ecosystems

All the birds in Ziswiler's Appendix (except the extant Eyrean Grass-wren of central Australia) lived in tiny populations on small remote islands. This predisposed the birds to the dangers of going extinct because a tiny population on a small island cannot evade heavy predation by colonising remoter regions.

Cats did not originally exist on any of these islands, but people introduced them. People made many changes to these islands and introducing cats was only a single factor in a complex web of damaging relationships. For example, in their species factsheet for the Samoa Wood Rail, *Pareudiastes pacificus*, (number 6) Bird Life state:

"Cats, rats, pigs and dogs have no doubt contributed to its disappearance, and hunting may

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also have been a factor as it was formerly a favoured food of the human... Slash-and-burn cultivation threatens remaining areas of upland forest... Wild cattle and pigs have browsed the understorey and ground-cover along the main range..."

Unreliable Evidence

Too many people place too much emphasis on anecdote and indirect evidence solely to implicate cats in extinctions. For example, Europeans discovered the sub-Antarctic Macquarie Island in 1810. According to Taylor (1979), even though people introduced cats and other predators there, the Macquarie Island Parakeet (or Kakariki) (number 10) stuck around for the next 70 years. Then in 1879 people introduced rabbits. He conjectures this increased the cat population, leading to greater predation on the Parakeets until the birds died out. So cats seem not to have killed them off by themselves. A mixture of humans, cats, rabbits and a small bird population with nowhere else to colonise are implicated; or was this coincidental to something else that really killed off the birds? The real reason for the disappearance of this species has not been established.

Loose Language

Badly chosen terminology by researchers in their publications can prompt people to believe that cats have exterminated species.

Exterminate means make extinct: no individuals of that species live anywhere in the world. Extirpate means a species is killed off in a region, like an island or part of a continent, but the species survives elsewhere. Woods et al (2003) provide an extinction-vs-extirpation mix-up:

"...the Socorro dove Zenaida graysoni has also been driven to extinction primarily by cats..."

The Socorro Dove lived only on Socorro Island, west of Mexico. As well as introducing themselves, people introduced cats, rodents and sheep. However, although no longer living on the island today, about 200 doves survive in captivity. So the Socorro dove was extirpated on Socorro, not exterminated.

Sloppiness

Another quote by Nogales and colleagues:

"Feral cats are directly responsible for a large percentage of global

extinctions, particularly on islands."
Nogales et al (2004).

The 33 bird species purportedly exterminated by cats have now jumped to "a large percentage of global extinctions". This is a vague and sweeping assertion, made by supposedly meticulous and objective scientists. An unfortunate fact is that researchers do not always fully scrutinise the research papers published in their field. So at times they are tempted to rely on the presumed veracity of authors' statements and simply repeat what they say in their own reports. In this way some researchers may pass on a claim that is completely without foundation. Nogales and colleagues repeated a claim by Lever, who repeated a claim by Jackson, who repeated a claim by Ziswiler, who got his information from an even earlier claim... Shoddy research leads to sloppy conclusions.

Ziswiler's Extinct Mammals

What of the eight mammal species in Ziswiler's Appendix that he lists cats exterminated? The same carelessness and muddle of extinction applies to them as it does to the birds.

Conclusion

The claim that cats exterminate species arose from provisional research decades ago that has never been verified or proven in any way. All statements that cats exterminate species are false because there is no scientific evidence that cats have exterminated any species. If there were evidence it would be cited instead of this fabrication.

So what really exterminated these species supposedly killed off by cats? Domestic cats are super abundant and therefore can be expected to kill large numbers of prey. But this is only because people have made them so numerous. The problem therefore lies with humanity, as does many other problems besetting nature today. To regulate our impact on nature we have to take the responsibility for regulating ourselves and not of just blaming scapegoats. According to the World Wildlife Fund, humanity may be exterminating a species every five minutes or at least one every two days. Cats cannot match this, no matter how numerous they are.

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APPENDIX

Reappraisal of the '33 bird species' presumed by Ziswiler (1967) as exterminated by cats

	Bird Species or sub-species (modern scientific name)	Where	Extinct?	Sibling species or sub-species?
1	Guadalupe Storm Petrel <i>Oceanodroma macrodactyla</i> (<i>Hydrobates macrodactylus</i>)	Guadalupe	Yes	A sibling species
2	Bonin night heron <i>Nycticorax caledonicus crassirostris</i>	Bonin	Yes. But parent species still living	A sub-species
3	Red-billed Rail <i>Rallus pacificus</i> (<i>Gallirallus pacificus</i>)	Tahiti	Yes	-
4	Chatham Island Banded Rail <i>Rallus dieffenbachia</i> (<i>Cabalus modestus</i>)	Chatham Island	Yes	-
5	Auckland Island Rail <i>Rallus muelleri</i> (<i>Lewinia muelleri</i>)	Adams & Disappointment Islands.	Living	-
6	Samoa Wood Rail <i>Pareudiastes pacificus</i>	Samoa	Yes	-
7	Iwo Jima Rail <i>Poliolimnas cinereus brevipes</i> (<i>Porzana cinerea brevipes</i>)	Iwo Jima	Yes. But parent species still living	A sub-species
8	Choiseul Crested Pigeon <i>Microgoura meeki</i>	Choiseul, Solomon Islands	Yes	-
9	Bonin Wood Pigeon <i>Columba versicolor</i>	Bonin	Yes	-
10	Macquarie Island Kakariki <i>Cyanoramphus erythrotis</i>	Macquarie Island	Yes	-
11	Jamaica Pauraque <i>Siphonorhis americana</i>	Jamaica	Yes	-
12	Stephen Island Wren <i>Xenicus lyalli</i> (<i>Traversia lyalli</i>)	Stephen Island	Yes	-
13	Lord Howe Grey-headed Blackbird <i>Turdus poliocephalus vinitinctus</i>	Lord Howe Island	Yes. But parent species still living	A sub-species
14	Raiatea Thrush <i>Turdus ulietensis</i>	Society Islands	Not recognised today as a species	
15	Kittlitz's Thrush <i>Zoothera terrestris</i>	Peel Island, Bonin	Yes	-
16	Eyrean Grass-wren <i>Amytornis goyderi</i>	Central Australia	Living	-
17	Hawaiian Honeycreepers several genera: the Drepaniidae (Drepanidae)	Hawaii	Yes	-
18	St. Christopher Bullfinch <i>Loxigilla portoricensis grandis</i>	St. Kitts & Barbuda	Yes. But parent species still living	A sub-species

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