

# Are we doing enough to save the felids?

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## INTRODUCTION

Felidae is a diverse, globally-distributed, and highly threatened taxon. It is a large family of carnivores, with ~37 species.

Climatic, environmental and land-use change will compromise the ability of many species to survive unless they are able to adapt, disperse or migrate to other latitudes or altitudes. For these reasons, several felid species are extremely endangered, largely due to habitat destruction and overexploitation.

Apart of that, humans represent a very big problem for the Felidae family. With the increasing pace of human population growth and development over the last century, the populations of felids are decreasing a lot.

## SITUATION OF FELIDS IN 2008

Critically Endangered	Vulnerable	Near Threatened	Least Concern
<i>Lynx pardinus</i>	<i>Acinonyx jubatus</i>	<i>Catopuma temminckii</i>	<i>Leopardus pardalis</i>
<b>Endangered</b>	<i>Felis bieti</i>	<i>Caracal aurata</i>	<i>Leptailurus serval</i>
<i>Leopardus jacobita</i>	<i>Panthera leo</i>	<i>Felis margarita</i>	<i>Lynx canadensis</i>
<i>Panthera tigris</i>	<i>Pardofelis marmorata</i>	<i>Leopardus colocolo</i>	<i>Lynx rufus</i>
<i>Prionailurus planiceps</i>	<i>Felis nigripes</i>	<i>Leopardus geoffroyi</i>	<i>Prionailurus bengalensis</i>
<i>Catopuma badia</i>	<i>Leopardus guligna</i>	<i>Leopardus wiedii</i>	<i>Caracal caracal</i>
<i>Panthera uncia</i>	<i>Leopardus tigrinus</i>	<i>Otocolobus manul</i>	<i>Felis chaus</i>
<i>Prionailurus viverrinus</i>	<i>Neofelis diardi</i>	<i>Panthera onca</i>	<i>Felis silvestris</i>
	<i>Neofelis nebulosa</i>	<i>Panthera pardus</i>	<i>Herpailurus yagouaroundi</i>
	<i>Prionailurus rubiginosus</i>		<i>Lynx lynx</i>
			<i>Puma concolor</i>

Table 1. Classification of felid species in 2008 IUCN Red List.

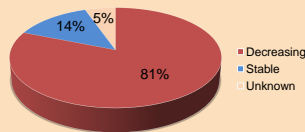
## METHODOLOGY AND GOALS

A research was made using Google Scholar using the words "endangered felidae", "felidae conservation", "felidae distribution", "ex situ felidae", "protection felidae". After this a Table was done summing up all the species of Felines included in the IUCN. Using IUCN maps, a map with the most endangered species was created overlaying range's maps of different species. Graphics and percentages obtained were made by using the IUCN information.

### Goals:

1. To make a review and classified the Felidae family for its threatened status.
2. To make a distribution map of the most endangered species of Felids and to find reasons to explain why felines are endangered.
3. To find which protection measurements *ex situ* and *in situ* are used to save the species.
4. To discuss if the species with a highest grade of threatened received more protection than the ones that are less endangered.
5. To discuss if the protection and recuperation measurements could improve in order to preserve the maximum of biodiversity.

### Population Trend



Graphic 1. This graphic shows percentage of species included in the IUCN that are Decreasing, Stable or Unknown. The 81% represents 30 species; the 14% represents 5 species and unknown are only 2 species.

The species are categorized as Critically Endangered (CR), Endangered (EN) and Vulnerable (VU) to determine the relative risk of extinction, all the species inside this categories are classified as Threatened. When species could be threatened in a future they are classified as Near Threatened (NT) and that ones that have been evaluated to have a low risk of extinction are classified as Least Concern (LC).

Today the Felidae is a very threatened group of mammals, the classifications of species can be seen in Table 1.

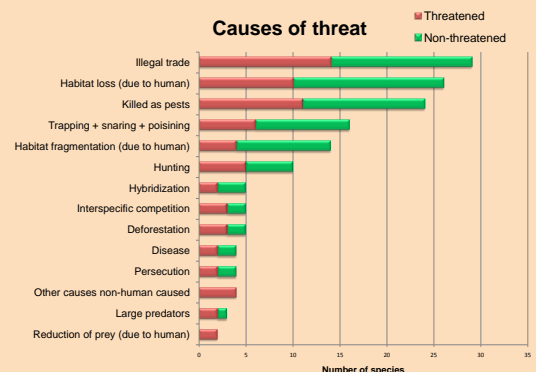
Species are also classified using their population trend and the situation is shown in Graphic 1.

## CAUSES OF THREAT AND CONSERVATION ACTIONS



Map 1. Geographic range and causes of threat of the felid species classified as Critically Endangered and Endangered.

As predators, wild cat populations need relatively large blocks of habitat and sufficient quantities of suitable wild prey. With the increasing pace of human population growth and development over the last century, both habitat and prey for cats have declined widely. The big cats have been persecuted because they are a danger to human and livestock, and for their skins, and some small cat species off-takes for the fur trade. All species have declined in range and number.



Graphic 2. It shows the most important causes why the Felidae family is so endangered.

*In situ* and *ex situ* conservation are seen as two distinct approaches to the protection of wild species. The actions to preserve the maximum diversity of felids are:

### In situ

- All species included on CITES.
- A lot of species are in protected areas.

### Ex situ

- Captive-breeding programmes.
- Programmes using wild-caught reintroduction.

*Ex situ* conservation is very difficult to be successful because the processes for reintroduction cats into the wild from captivity are profoundly limited by a lot of biological, technical, financial and sociology factors, that can be due to temperament traits.

## ARE THE MOST ENDANGERED THE MOST PROTECTED?

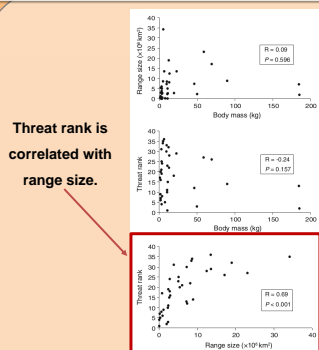


Figure 1. Relationships between body mass, geographical range size and threat rank (higher rank indicates lower threat). (Brodie, 2009).

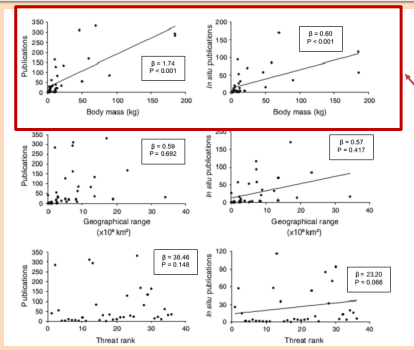


Figure 2. Effects of body mass, geographical range size, and threat rank (higher rank indicates lower threat) on research effort, measured as total publications (left column) and *in situ* publications (right column). (Brodie, 2009).

Publications are correlated with Body mass.

It shows that the most threatened are not the most studied.

## CONCLUSIONS

Felidae family is a very threatened taxon. Its situation is getting worse every year and several things should be done to improve the status of all the felids.

Moreover, human are one of the biggest problems for these species. Due to human, felids are losing their habitats, are being persecuted, hunted and are found in illegal markets.

To solve that, more means should be used in order to improve *ex situ* measurements and make the populations to recover because temperament remains largely unexplored. In *in situ* measurements the best way to save them is to get protection to all the range where these animals can be found and forbidding the hunting all around.

It is suggested that the most threatened and severely understudied cats urgently require more attention from conservation biologists.

## REFERENCES:

- Pictures from: [mundofelinork.wordpress.com/2011/03/08/catopuma-badia/](http://mundofelinork.wordpress.com/2011/03/08/catopuma-badia/); [www.iucn.org/knowledge/news/73888/Bleak-future-for-Mediterranean-mammals-IUCN](http://www.iucn.org/knowledge/news/73888/Bleak-future-for-Mediterranean-mammals-IUCN); [www.stewinterphoto.com](http://www.stewinterphoto.com); [animalsplanet.wordpress.com/tag/panthera-tigris-amoyensis/](http://animalsplanet.wordpress.com/tag/panthera-tigris-amoyensis/); [en.wikipedia.org/wiki/Fishing\\_cat](http://en.wikipedia.org/wiki/Fishing_cat); [en.wikipedia.org/wiki/Flat-headed\\_cat](http://en.wikipedia.org/wiki/Flat-headed_cat); [www.dicyt.com/viewitem.php?temId=32226](http://www.dicyt.com/viewitem.php?temId=32226)
- Figures 1 and 2 from: Brodie, J. F. (2009). Is research effort allocated efficiently for conservation? Felidae as a global case study. *Biodiversity and Conservation*, 18(11), 2927-2939.