

The Endangerment of Big Cats in Africa and Asia due to Habitat Depletion

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Introduction:

There are many factors that affect the Earth and the organisms that live on it and depend on it. Sometimes, it is a cataclysmic event that can cause a negative impact, but more often it is that organisms are impeding upon each other. The big cats of Africa and Asia have been suffering for decades and are now on the endangered species list. In this study, I am trying to determine whether or not humans are the biggest reason for this decline, with my pilot study focusing on habitat depletion. Through an extensive amount of library research, I have gathered enough data to explore this possibility. There are many studies examining each species focused on how habitat and home range have shifted over the last few decades. If habitat depletion is the main factor leading to the endangerment of these species, then there should be something that humans can do to alter the path to endangerment. It was hypothesized that human populations and activities affect populations of big cats in Africa and Asia and are contributing to their endangerment.

Methods:

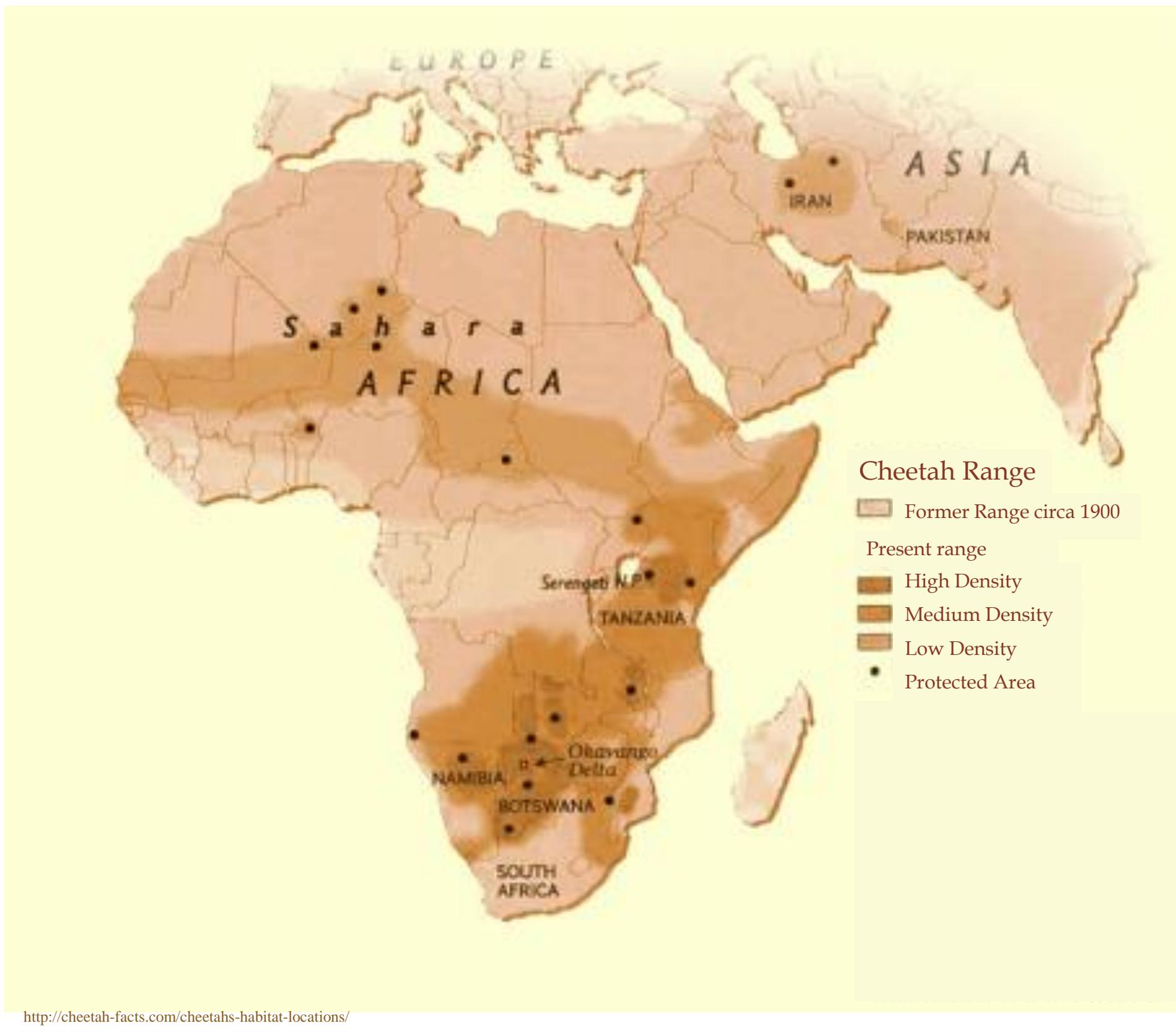
Through intensive library research, I was able to draw conclusions about the habitats of the species that I was focusing on. The maps summarize the results concisely.

Results:

Cheetahs occupy a habitat that is composed of grassland and woodland (Caro, 1994). Some of their typical home ranges fall on land preserves, and these populations are therefore protected. However, other parts of their ranges are not in these protected areas. Concerning fur pattern, cheetahs are the only cat that has simple spot. They have lighter ventral sides and their tail is tipped with stripes. There are also stripes on their faces (Kelly, 2001). This pattern makes them unique and easy to distinguish from other big cats.

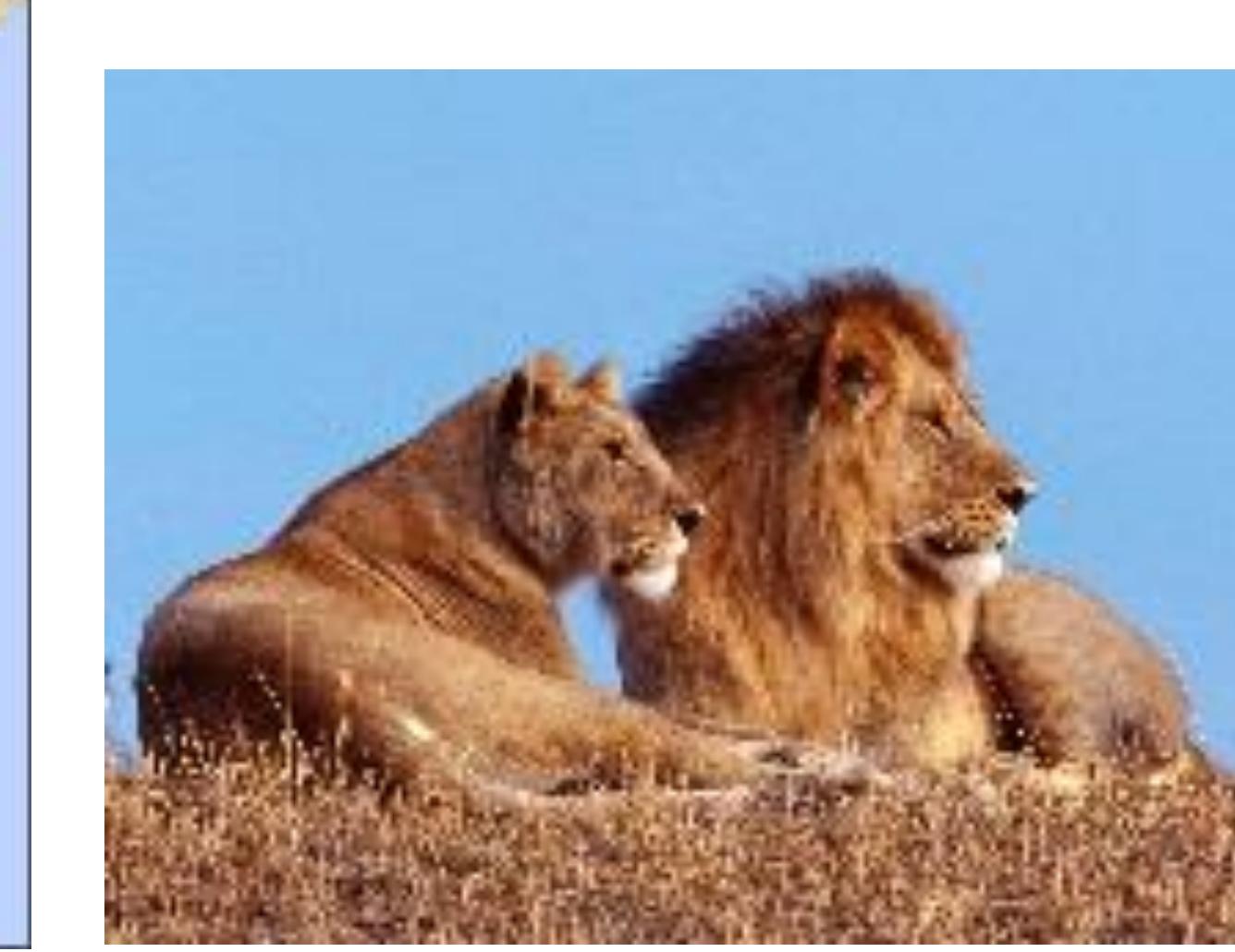
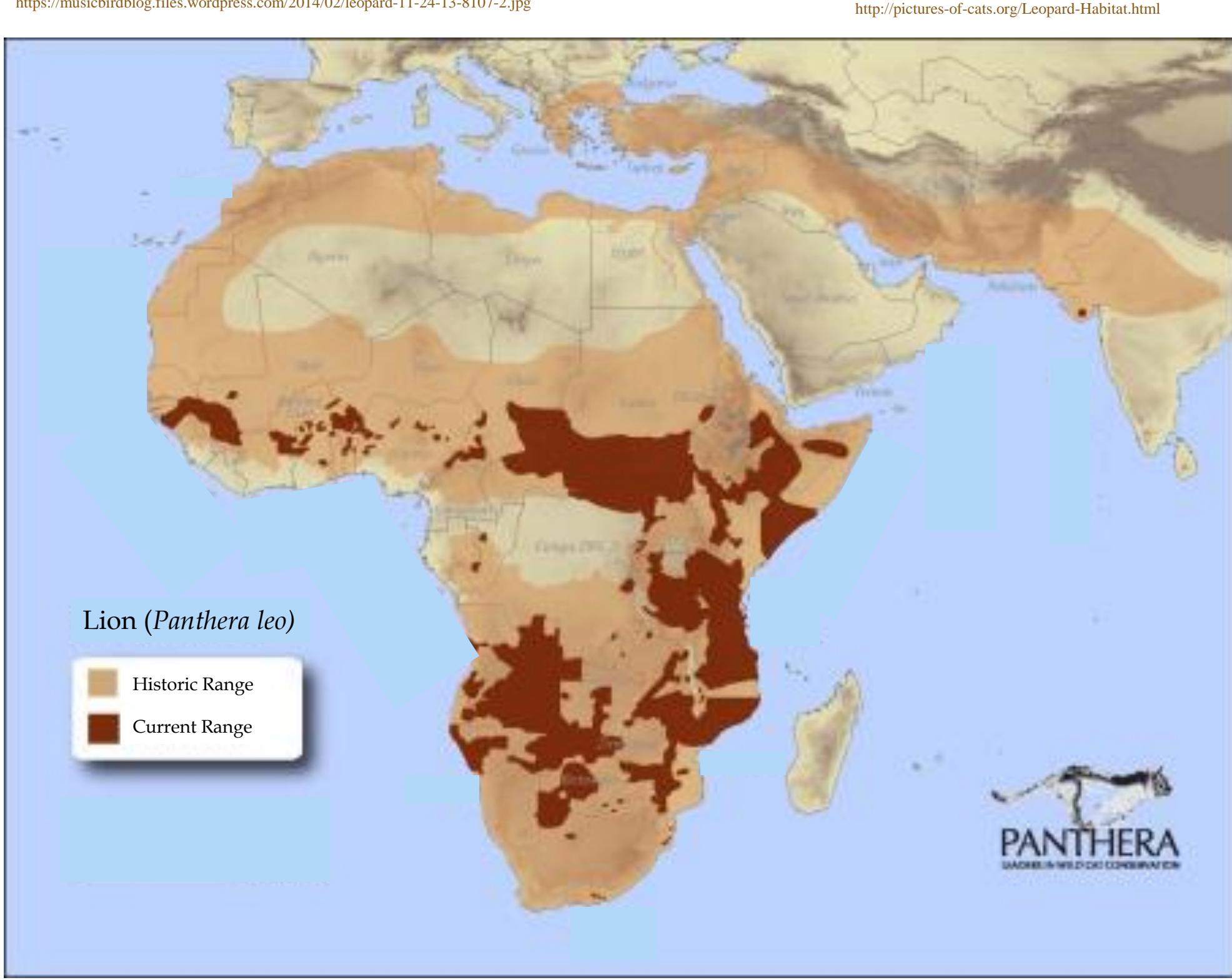
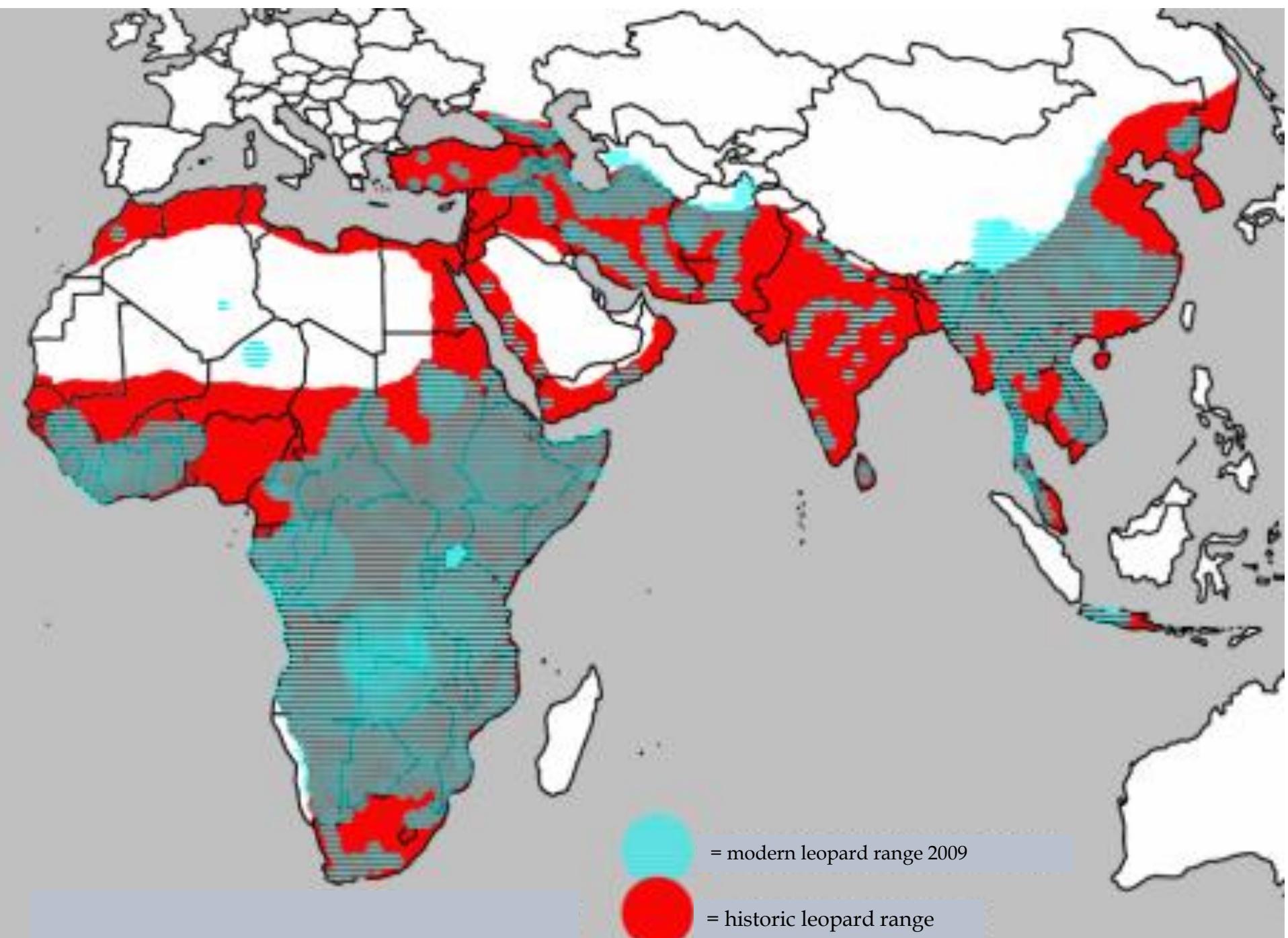
Leopards occupy a wide range of habitats that span from semi desert to rainforest (Bertram, 1978). However, they avoid grasslands (Balme & Slotow, 2007). They are one of several cats that are common in both Africa and Asia, so occupying a large variety of habitats is not surprising. Leopards are one of several cats that have a rosette fur pattern (Bertram, 1978). This species is often mistaken for the jaguar of South America, but is distinguishable by the size of its skull.

Lions reside mostly in grasslands but can be found in woodlands as well (Bertram, 1978). They choose a territory based on its capability to support the size of the pride. Lions are the simplest of the cats included in this study, possessing fur that is simply a sandy color with a white belly. The males also have a unique black tuft of hair on their tail (Bertram, 1978). The mane is also a distinctive feature of this species, but not all subspecies have manes, so it is not the most reliable form of identification (Kays & B.D., 2002). Lions are the only cat that lives in prides, so that is a distinctive feature.



Cheetah

Leopard



Lion

Discussion:

The information found in the study is supportive of the idea that human activity is a direct influence on these species. The amount of habitat that had been impeded upon by human populations has greatly impacted these populations in several ways. First, it has been proven that manipulating habitat structure can also affect how well or poorly a predator can hunt (Quinn & Cresswell, 2004). It has also been proven that habitat is the key to the predator prey relationship because it is so beneficial to the predator (Hilborn, Pettorelli, Orme & Durant, 2012). This goes hand in hand with prey abundance, which is the other factor that predators rely on (Balme & Slotow, 2007). So, if habitat is the key to a predator being successful, it is logical that it is one of the things we should not destroy if we wish to preserve the species. Species preservation is important for the maintenance of ecosystems. Without predators, prey animals will reproduce without limit until the land is exhausted from their presence. Carrying capacity will be met, and unless there is a place for them to go, they will die. The result is catastrophic and results in ecosystems altered beyond repair. For all three species, the number one threat is habitat depletion.

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