FEARING THE FEARSOME: AVOIDING MINNESOTA'S TROUBLE WITH TIMBER WOLVES WITH CALIFORNIA'S MOUNTAIN LIONS

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Introduction

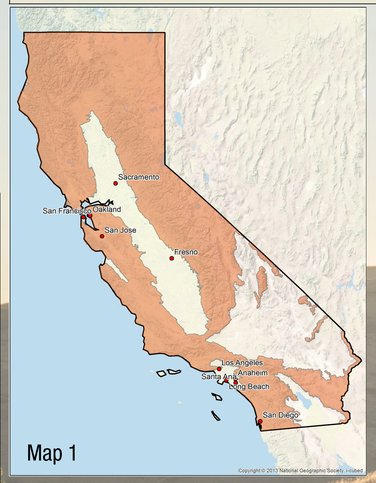
California is home to between 4,000 and 6,000 mountain lions, according to the California Department of Fish and Wildlife (CDFW). The population of humans in the state has been growing slowly, but steadily. This constant growth has resulted in a surge of urban and suburban expansion. Mountain lions are very territorial animals; each lion occupies a home range of between 50 to 150 square miles. With the growth of urbanization, mountain lion habitat is overlapping more and more with human inhabited areas. Within the state, mountain lions are a protected species and it is illegal to hunt, kill, or possess a mountain lion unless done in defense of human life. Minnesota's experience dealing with the decline, recovery, and the stabilization of the wolves, provide lessons in impactful predator management that could be implemented in California with the mountain lions to ease the tensions between homeowners and resident mountain lions. This raises the question of **how or in what ways should the state of California further manage the population of mountain lions as urban and suburban areas grow?**

Image 1: A mother mountain lion and her two spotted cubs. Baby mountain lions have spots to help them stay camouflaged.

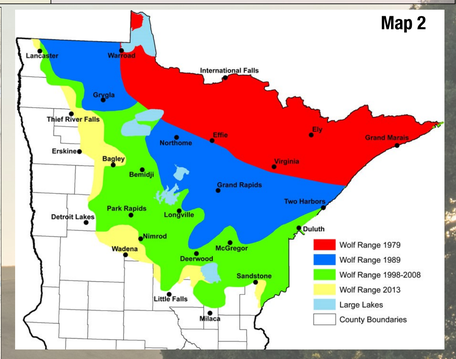
Map 1: The orange indicates the current range of mountain lions in California. The cities listed on the map are the ten largest cites in the state with populations over one million people.

Predator Management Practices

California	Minnesota
Bounties had been placed on mountain lions to reduce their numbers and risk of encountering them. The earliest one recorded was set in the 1500s by a Jesuit priest.	**Unregulated hunting** that led to near extirpation of the eastern timber wolf in the entire state.
Regulated hunting seasons were put in place in the late 1960s and early 1970s before a moratorium was enacted by governor Ronald Reagan.	The implementation of a a **livestock depredation program** that was created by the Minnesota Department of Natural Resources.
In 1990 California voters passed **Proposition 117** (The Wildlife Protection Act) to list mountain lions as a "specially protected species". Also banning the hunting of mountain lions in the entire state.	**State and federal protection** from the Endangered Species Act of 1973.
Depredation Permits are issued to Californians who have a problem mountain lion in the area.	Implementing **management plans** created by the MNDNR and the U.S. Fish and Wildlife Service.



Map 1



Map 2: This map shows the progression of wolf recovery in Minnesota through the expansion of eastern timber wolf range.

Methods

In order to learn about the relationship between humans and predators I conducted a literature review of a collection of informative books and scholarly articles from environmental databases. I collected information from the Mountain Lion Foundation based out of Sacramento, California. As well as the International Wolf Center in Ely, Minnesota. Additionally, I looked at case studies of mountain lions in California and the timber wolves in Minnesota. I utilized legal documents regarding the management practices of predators in both states. Furthermore I looked at the recovery plan from the Minnesota Department of Natural Resources of the eastern timber wolves in the state and the recovery plan issued by the United States Fish and Wildlife Service.

Image 2 : A mountain lion exploring a backyard.

Image 3: A child watches a mountain lion on a porch.

Sources

Image 1: http://animel-information.blogspot.com/2013/02/mountain-lion-few-facts-images-photos.html

Image 2: http://cdn.abclocal.go.com/content/kabc/images/cms/1293588_1280x720.jpg

Image 3: http://mediad.publicbroadcasting.net/p/kpcw/files/styles/x_large/public/201605/13255952_10208073928663564_5316838053954552827_n.jpg

Image 4: https://www.pinterest.com/pin/382102349606813811/

Map 1: Created by Dora O'Brien with ArcGIS using data from the California Department of Fish and Wildlife, mgisdata, and USA Topo maps from National Geographic

Map 2 : http://wolf.org/wp-content/uploads/2013/05/mnwolfrangemap.jpg

Results

Through my research I have come across a plethora of management techniques used to control large predator populations. Currently, California issues depredation permits to people (particularly ranchers) who have troublesome lions on their property or in the area. Minnesota currently manages their eastern timber wolf population via the U.S. Fish and Wildlife Service and their designated protection plan. Hunting of wolves is illegal and only government agents can remove specific wolves that threaten human life. The management plan for wolves in the state, divides the state into different zones for more effective and relevant protection of the animal. The difference between management of wolves in Minnesota and the management of mountain lions in California is that the government handles wildlife management in Minnesota, while California utilizes citizens to help keep mountain lions under control. It is important to note that citizens in both states like to know that mountain lions and wolves exist within the state and are generally supportive of greater protection of them.

Image 4: An eastern timber wolf.

Conclusion

In conclusion, as California's human population continues to grow they will be faced with more human-mountain lion interactions which will increase the publics fear of mountain lions. By looking at what Minnesota has done to manage the wolf population in Minnesota, California should consider creating a management plan that divides the state up into different zones. Creating zones that are more relevant to the number of known lions in the area, the habitat, and the number of people living in the zones would enable more effective management of mountain lions that are more suitable to the area the lions inhabit. Additionally, the Mountain Lion Foundation advises that livestock owners should house their animals at night to avoid mountain lion attacks that will result in the death of a now, nuisance, lion. Lastly, more education should be made available to the general public to protect both mountain lions, livestock, pets, and people.