



Spirits in the Hills: The Black Hills Cougar

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Certain memories are forever etched in a cougar researcher's soul. The unmistakable whistle of a 10-day-old kitten looking for his mother, the innocuous stare of a 170 lb male from a tree limb surveying his options, the guttural reverberations from a female when you've gotten too close to her

den, the excited bawl of the strike dog noting that the track is fresh, the distinct smell of the elk that the cougar you're radio-collaring recently fed on, and the almost paranormal feeling of an unknown presence saying you're not alone in the rim-rocked woods of the Black Hills.

Nestled within the friendly confines of the northern Great Plains, an auspicious formation emanates amongst the sea of prairie. Upon seeing these Hills for the first time, indigenous tribes allotted them the

moniker of "*Paha Sapa* – The Hills that are Black" due to the region's darkened outline when viewed from a distance; the darkness of ponderosa pine stands against the rocky outcroppings found in the Black Hills of southwestern South Dakota and eastern Wyoming. The Black Hills represent the eastern most extension of the Rocky Mountains and, as mentioned before, are surrounded by the vast openness of the Northern Great Plains. The Hills ecoregion is unique in itself, conjuring up

images of forgotten mining towns and brothels in an area where General George Armstrong Custer saw and shot his first grizzly bear. Much in the way a unique landscape evolves, the flora and fauna inhabiting the region tend to convey this uniqueness – Enter the cougar of the Black Hills.

Few animals of the American West invoke such fundamental emotions of freedom, wilderness, fear, and even hatred to the human subconscious as does the cougar. Many of these raw, sometimes ill-conceived emotions led to the general demise of cougars and other large mammals possessing sharp claws or teeth in the late 1800s and early 1900s. Although extirpated in portions of their historic range, cougars proved resilient. Seeking out remote country, subsisting until populations were able to expand, and in some cases returning to areas where the elusive predators once roamed.

The cougar population of the Black Hills provides a striking example of the adaptability and resilience of the species. Through direct bounty and unregulated hunting, along with changes in prey availability, the cougar population was nearly, if not entirely, extirpated from the Black Hills by the early 1900s. Sporadic sightings of the cryptic

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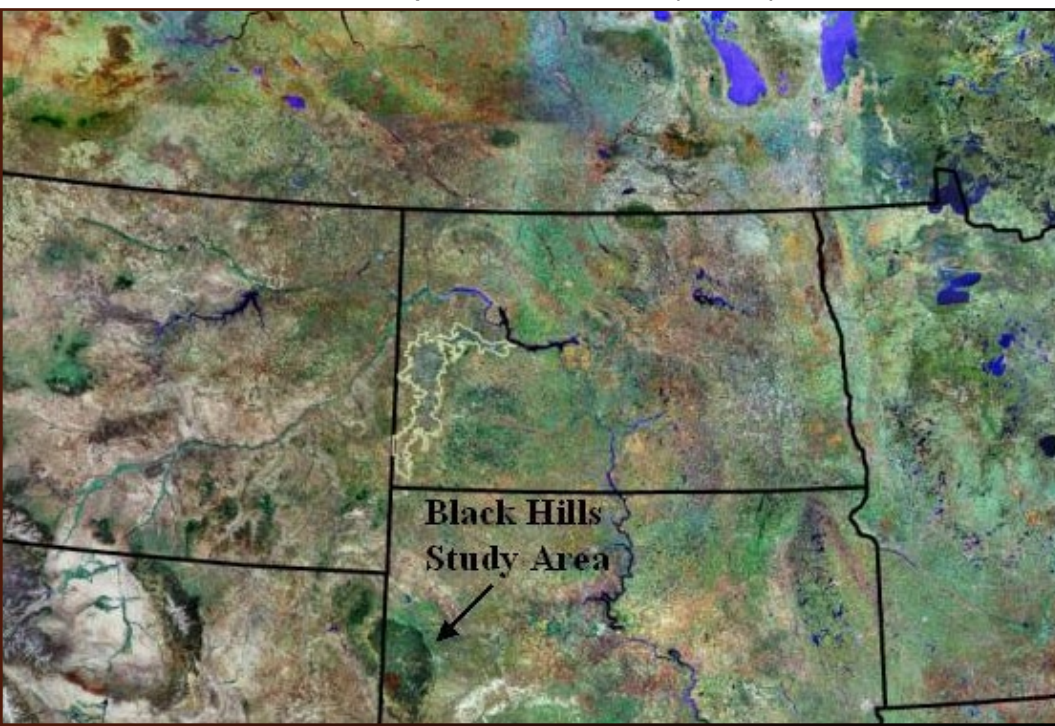


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stalker occurred in the Hills through most of the 1900s. Towards the end of 20th century, the world of cougar population dynamics in the Black Hills crescendoed to an electrifying tempo. Rare sightings changed to repeated sightings, doubts of their presence shifted to confirmation of presence, leading the South Dakota Department of Game, Fish & Parks to monitor all cougar sightings and reports by 1985. Based on ancillary sighting data along with confirmed evidence (i.e., tracks, kill sites, kitten tracks), managers projected

a population of 10 to 15 cougars subsisting in the Black Hills at the time. This was just the beginning.

Because it was evident that a viable cougar population existed in the Black Hills, more questions arose, leading to the first intensive research on the population in 1998. Knowingly having a large carnivore in an area also readily inhabited by people gives way to many stakeholders with many different opinions and questions. Answering some of these questions with reliable knowledge is the cornerstone of proper scientific research and management.

The primary objectives of early research efforts were to determine the distribution and abundance of the mysterious night creatures throughout the Black Hills. Cougars were captured and radio-collared to gather insight into the population (i.e., survival, home range size, movements). Population estimates were revised (130 to 150 animals), and with knowledge of cougars' home range size and movements, habitat throughout the Black Hills was ranked and mapped. Based on the life history patterns of cougars in the Black Hills, combined with topographical and prey



habitat variables, more than 6,700 km² of high-quality cougar habitat was estimated within the Black Hills ecosystem.

As more cougars were captured and followed, more interesting events ensued. Cougars were documented throughout the Black Hills with population numbers (185 to 210 animals) and densities increasing. Resident males were war-battled from defending multiple females throughout their home ranges, while some resident females had near complete overlap of home ranges. Young males were dispersing not only from their natal area but leaving the Black Hills and making long-distance travels, sometimes more than 650 miles – in fact, radioed cougars have been documented moving through all bordering states of South Dakota with the exception of Iowa. Through capture and surveillance of mortalities, samples were obtained for genetic analysis comparing Black Hills cougars with other breeding populations, along with those cougars appearing in areas throughout the Midwest. As the cougar population grew, we began to assess possible

effects of density dependence on the Black Hills cougar population as it relates to home range size and movements, density, dispersal, survival, and philopatry – a main aspect of current research analyses.

Field research efforts continue; objectives now include assessing the effects of harvest initiation and disease prevalence on cougars. The issue of harvest quotas is a highly contentious topic of large carnivore management. The Black Hills cougar population allows for a scientific assessment of how harvest may affect a previously unharvested population by comparing before and after effects on natural mortality, dispersal, philopatry, and human conflicts (i.e., depredation issues). Results from this avenue of research will be paramount in providing answers to questions associated with harvest management of cougars.

The amazing recovery of the Black Hills cougars comes not without controversy. Although most people are very enthused to have a prolific lion population in the region, opinions are highly varied. As cougar numbers increased, unfortunately,

so did conflicts with humans, from depredation of livestock to loss of pets. It is unfortunately an ugly truth that while capable of coexistence, “compromise” between humans and cougars is essential. People must realize that the cougars are there to stay, and cougars at times have to be removed for the greater good of the overall population. The best method of resolving possible conflicts lies in sound scientific assessment of the population, heavily bolstered with public education on cougar ecology and management.

Despite all the controversy, the cougars of the Black Hills represent perseverance. People will continue to build their “dream homes” throughout the remote areas of cougar habitat; cougars will continue to go about their daily activities of hunting and procreating. Increased human knowledge of their existence and habits throughout the Black Hills coupled with sound science-based management will help ensure that cougars remain, along with the opportunity for our children and grandchildren to catch a rare glimpse of this cryptic survivor in the wild.

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