

**State of California  
NATURAL RESOURCES AGENCY  
Department of Fish and Wildlife**

**Report to the Fish and Game Commission  
Regarding Findings of Necropsies on Mountain Lions  
Taken Under Depredation Permits in 2019**

**Prepared by the Wildlife Investigations Lab  
Wildlife Branch, Wildlife and Fisheries Division**

**January 10, 2020**

**Submitted in compliance with Section 4807 of the Fish and Game Code**

## **Summary**

According to California Department of Fish and Wildlife (CDFW) records at the time of this report, CDFW issued 194 mountain lion depredation permits in calendar year 2019 and 50 mountain lions were reported as being lethally taken.

The CDFW amended its mountain lion depredation, public safety, and animal welfare policy in December 2017. The purpose of the amendment is to avoid, where possible, mountain lion mortalities resulting from the issuance of depredation permits within specific geographically and genetically isolated mountain lion populations in Southern California as defined by Ernest et al. 2014<sup>1</sup>. A three-tier stepwise process allows the CDFW to first issue non-lethal mountain lion depredation permits that include hazing by the permit holder or authorized agent prior to the issuance of a lethal depredation permit within the Santa Ana and Santa Monica Mountains (implementation areas). In 2019, four non-lethal depredation permits were issued in these implementation areas. Only one of these incidents from the Santa Ana Mountains subsequently resulted in the lethal take of a mountain lion on depredation.

CDFW staff issued the greatest numbers of permits in April, May, September, and December (Figure 1). The reasons for property owners obtaining mountain lion depredation permits varied; however, goats accounted for the highest number of the total reported incidents (43%) followed by sheep (32%) (Figure 2).

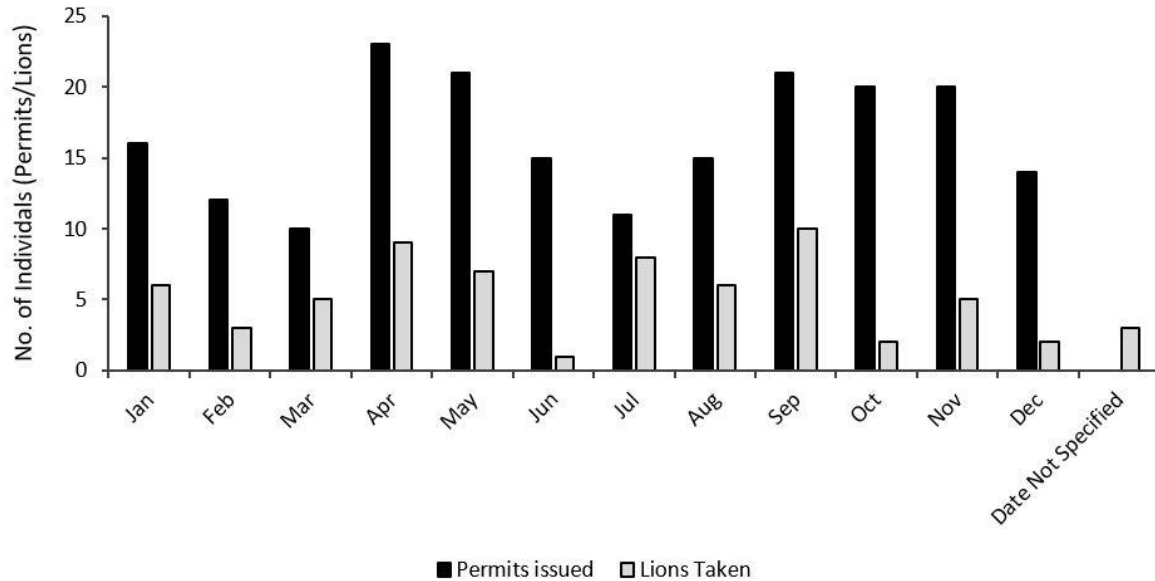
Although 50 mountain lions were reported as being taken in 2019, CDFW staff necropsied 67 depredation carcasses, with five necropsies still pending at the time of this report. Fifty-eight percent of mountain lions necropsied to date were male and 35% were female; the sexes of four lions were not specified (Table 1). Sixty-seven percent of mountain lions necropsied to date were aged as adults (24 months or older); 22% were sub-adults (13-24 months of age); 7% were juveniles (12 months or younger); and the ages of 2 mountain lions were not recorded (3%; Table 2). The highest number of depredation mountain lion carcasses came from CDFW's North Region (34%; Table 3).

Necropsied mountain lion stomach contents that could be identified most frequently contained hoofstock such as goat (18%); however, other contents were observed including a mylar balloon (Figure 3).

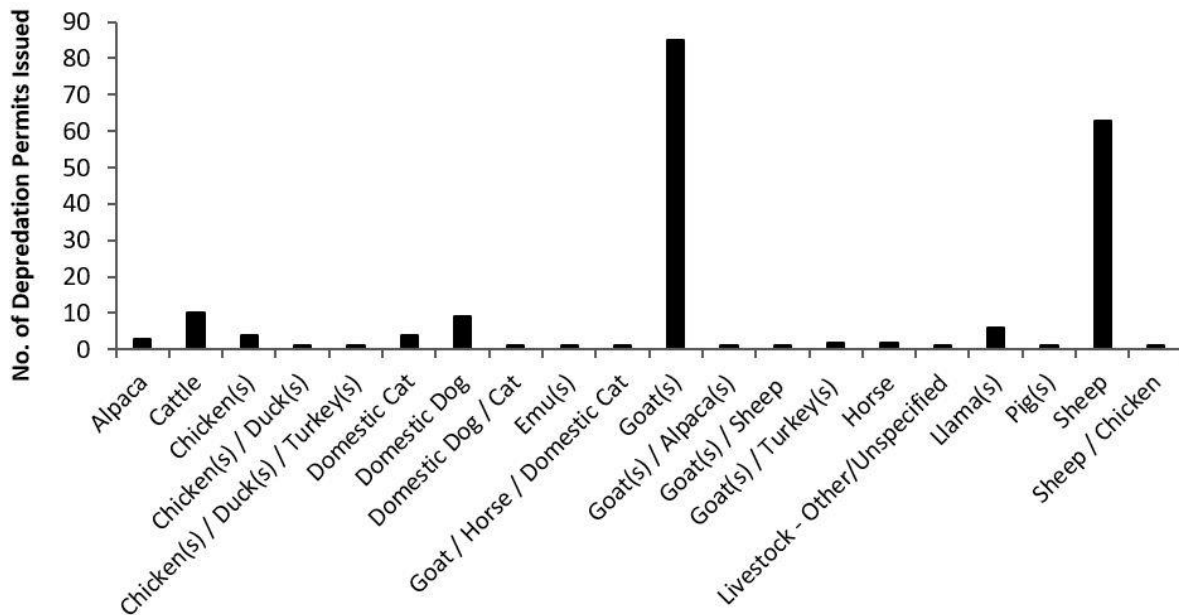
Note: There are two main factors that may contribute to a greater number of depredation necropsies recorded than the number of mountain lions reported as taken on depredation by the CDFW Wildlife Incident Reporting system (WIR). First, reporting parties and CDFW staff have reported intermittently being unable to close WIR depredation incidents and report take. Additionally, the WIR system experienced technical difficulties during the month of August and paper permits were issued during that time. CDFW continues to make efforts to recover these permits, input reported data, and update the WIR system.

<sup>1</sup> Ernest, Holly B., T.W. Vickers, S.A. Morrison, M.R. Buchalski, W.M. Boyce. 2014. Fractured Genetic Connectivity Threatens a Southern California Puma (*Puma concolor*) Population. PLoS ONE 9(10): e107985. doi:10.1371/journal.pone.0107985.

**Figure 1. Monthly summary of lethal and non-lethal mountain lion depredation reports for 2019. The number of depredation permits issued each month and the number of mountain lions taken are shown.**



**Figure 2. Number of lethal and non-lethal depredation permits issued in 2019 and the type of property damage reported (i.e. animal(s) reported to have been taken by a mountain lion). These numbers are based upon the number of incidents and not the total number of animals claimed to have been taken in a single incident.**



**Table 1. Sex of depredating mountain lions necropsied by CDFW in 2019.**

<b>Sex</b>	<b>Total by Sex</b>
Male	39
Female	24
Not indicated	4

**Table 2. Ages of depredating mountain lions necropsied by CDFW in 2019.**

<b>Age Class</b>	<b>Total by Age Class</b>
Juvenile <sup>1</sup>	5
Sub Adult <sup>2</sup>	15
Adult <sup>3</sup>	45
Not indicated	2

<sup>1</sup> Juvenile: 12 months or younger

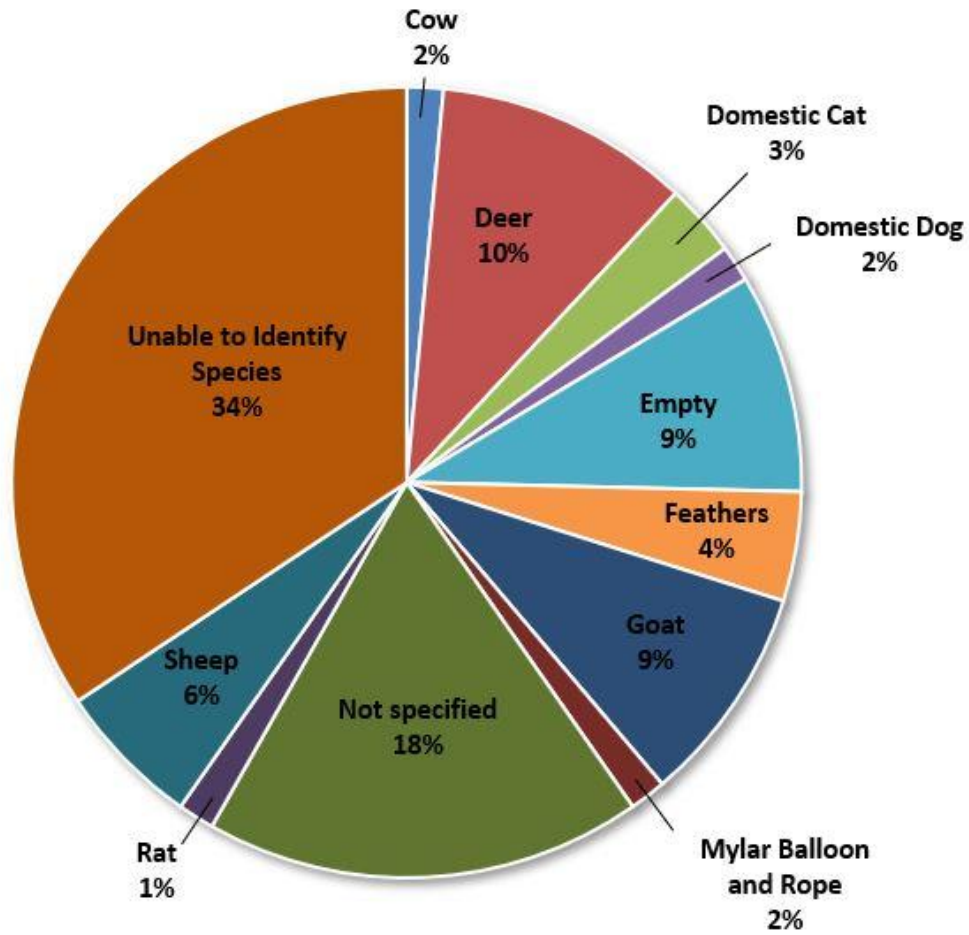
<sup>2</sup> Sub Adult: 13-23 months

<sup>3</sup> Adult: 24 months or older

**Table 3. Geographic distribution of depredating mountain lions necropsied by CDFW in 2019.**

<b>CDFW Region</b>	<b>Total by Region</b>
Northern	21
North Central	16
Bay Delta	12
Central	11
South Coast	6
Inland Desert	1

Figure 3. Stomach contents of depredating mountain lions necropsied by CDFW in 2019†.



† Note: One lawful method of take for depredating mountain lions is by cage trapping. Cage traps are typically baited with the remainder of a depredated carcass.