

**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 2021**

**Prepared by the Wildlife Health Laboratory  
Wildlife Branch, Wildlife and Fisheries Division**

**January 24, 2022**

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

## Summary

Based on the California Department of Fish and Wildlife (CDFW) records received from the Wildlife Incident Reporting (WIR) System, the primary reporting tool for depredation permits, and various staff at the time of this report, CDFW issued 182 mountain lion depredation permits in calendar year 2021. Non-lethal<sup>1</sup> permits made up 90% (163/182) of the depredation permits issued by the CDFW, while 10% of the issued permits (19/182) were authorized for lethal take.

The CDFW amended its mountain lion depredation, public safety, and animal welfare policy in December 2017. The purpose of the amendment was to avoid, where possible, mountain lion mortalities resulting from the issuance of lethal depredation permits. Further amendments to mountain lion depredation were issued in February 2020 to reflect the special protections given to mountain lions during the CESA listing evaluation. Mountain lions within specific geographically and genetically isolated mountain lion populations in Southern California (implementation area) as defined by Gustafson et al. 2018<sup>2</sup>, would require a stepwise process to first issue non-lethal depredation permits prior to the issuance of a lethal depredation permit within the implementation areas.

CDFW issued the greatest number of permits in March, April, and May 2021 (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 (40%) followed by sheep (33%) (Figure 2). Necropsied mountain lion stomach contents that could be identified most frequently contained goats (23%) with other contents also observed (Figure 3).

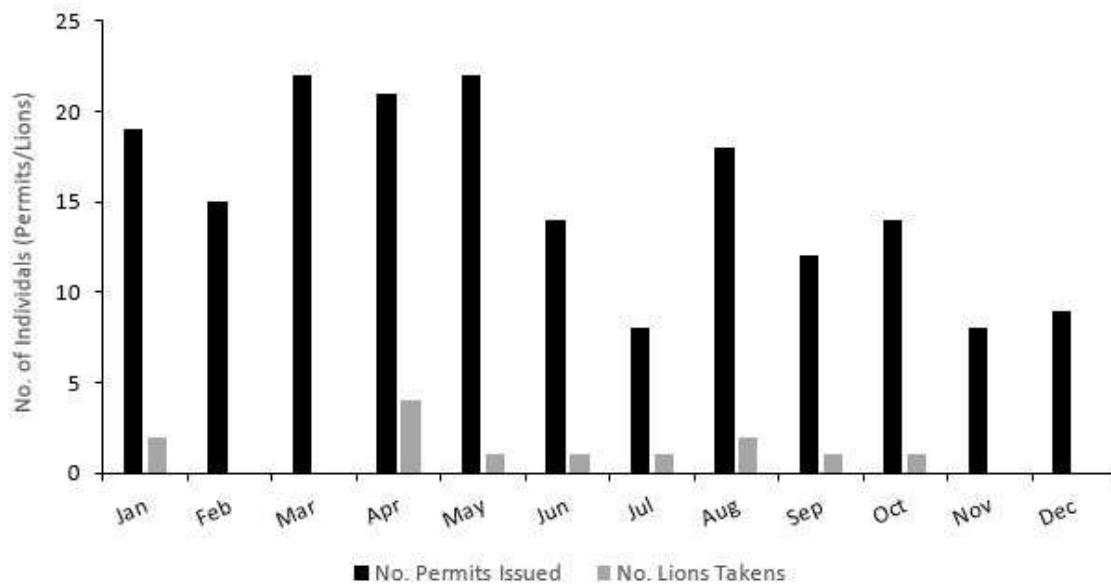
Thirteen mountain lion carcasses were reported and submitted to CDFW staff for necropsy after they were taken on depredation. Sixty-two percent of the mountain lions necropsied were male and 38% were female (Table 1). Eighty-five percent of mountain lions necropsied were aged as adults (24 months or older); 7.5% were sub-adults (13-24 months of age); 7.5% were juveniles (12 months or younger, Table 2). The highest number of depredation carcasses came from CDFW's North Central Region (31%; Table 3).

Of the 13 depredation carcasses necropsied, three mountain lions were reported in the department's electronic WIR System as being taken under a lethal depredation permit. The remaining ten mountain lions were reported directly to CDFW staff in person, by phone, or email, primarily as animals taken while "caught in the act" of depredating. Some reporting parties have reported intermittently being unable to report depredation take using the WIR System for various reasons, such as limited internet access or not knowing how to use the WIR system. In those instances, CDFW staff continue to make efforts to input reported mountain lion depredation data on their behalf as well as providing training on how to use the WIR system to report take.

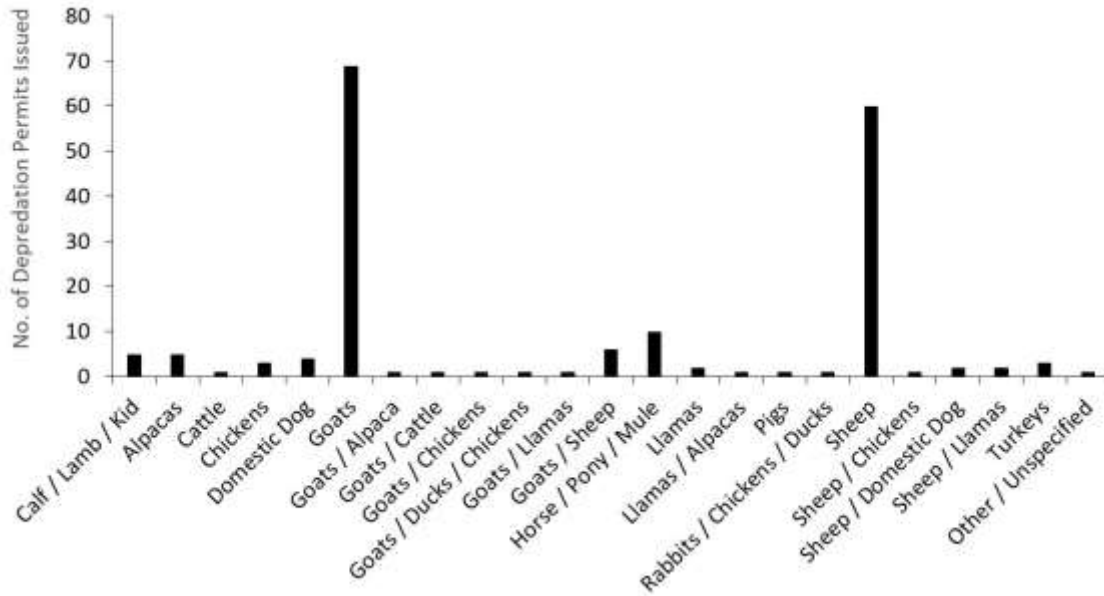
<sup>1</sup> Non-lethal methods are to be used to discourage further depredation by mountain lion(s) and includes aggressive hazing that does NOT injure or kill the mountain lion. The use of less than lethal ammunition (beanbags, rubber bullets, cracker shells, rock-salt, paintballs), noise making devices, pursuit with ATV, and/or pursuit with dogs may be authorized.

<sup>2</sup> Gustafson, K.D., R.B. Gagne, T.W. Vickers, S.P.D. Riley, C.C. Wilmers, V.C. Bleich, B.M. Pierce, M. Kenyon, T.L. Drazenovich, J.A. Sikich, W.M. Boyce, and H.B. Ernest. 2018. Genetic source-sink dynamics among naturally structured and anthropogenically fragmented puma populations. *Conservation Genetics* 20:215-227.

**Figure 1. Monthly summary of combined lethal and non-lethal mountain lion depredation reports for 2021. 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 2021 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 reported to have been taken in a single incident.**



**Table 1. Sex of depredating mountain lions necropsied by CDFW in 2021.**

Sex	Total by Sex
Male	8
Female	5

**Table 2. Ages of depredating mountain lions necropsied by CDFW in 2021.**

Age Class	Total by Age Class
Juvenile <sup>1</sup>	1
Sub Adult <sup>2</sup>	1
Adult <sup>3</sup>	11

<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 2021.**

<b>CDFW Region</b>	<b>Total by Region</b>
Northern	3
North Central	4
Bay Delta	1
Central	2
South Coast	3

**Figure 3. Stomach contents of depredating mountain lions necropsied by CDFW in 2021.**

