

Pumas in populated areas kill more and eat less

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Pumas are a specially protected species in California. This study shows that female pumas alter their behaviour in areas with more residential development. Credit: Paul Houghtaling

Female pumas in areas with a high density of housing kill more deer but eat less of the carcasses than those in areas with little housing, finds a study in *Proceedings of the Royal Society B*.

Fear of predators can cause changes in the [behaviour](#) of [prey animals](#) but few studies have investigated how fear of humans could impact the behaviour of [apex predators](#). A study published today that tracked 30 pumas in California in rural and suburban areas shows that in areas with a high density of housing female pumas killed 36% more [deer](#) than in

more rural areas, but spent less time feeding off the carcasses.

The team of scientists from the University of California, captured and tagged wild pumas with collars so they could track their movements with GPS. The team investigated sites which pumas visited more than once for signs of puma kills; recording when they found evidence of a puma's meal and using data from the satellite tracking to work out how often they visited the kill sites.

The results showed that male pumas were unfazed by the density of housing and made the same number of kills, around 43.7 per year, regardless of the number of houses. Female pumas on the other hand made more kills in areas with higher housing density, killing 81.2 deer every year in the most densely developed areas compared with 59.7 in areas with lower housing density.

The study also found that in suburban areas female pumas spent less time feeding from their kills, possibly as a result of the perceived risk in these areas where there were more houses. This reduced time spent consuming [prey](#) could explain why female pumas in built up areas were also hunting more.

Stalking, subduing and killing their prey is an energetically costly activity. To get the most out of each meal pumas usually revisit a kill site and consume their prey over several days. By spending less time with kills, female pumas in suburban areas limit the nutrients they can gain from each kill meaning they must hunt more.

"The loss of food from decline in prey consumption time paired with increases in energetic costs associated with killing more prey may have consequence for puma populations, particularly with regard to reproductive success," say the team. Abandoned [carcasses](#) also mean more food for scavenging predators and a possible effect on the rest of

the food web.

More information: "Top carnivores increase their kill rates on prey as a response to human-induced fear:" rspb.royalsocietypublishing.org/doi/10.1098/rspb.2014.2711

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