

Overview

This project initially set out to better understand bobcat use of suburban environments in West Reno, which seems to be thriving. During the last year, a GPS-collared female bobcat had three kittens and successfully reared them to weaning and is pregnant again in this field season. Despite the potential challenges a suburban environment poses to bobcats, our initial results indicate some females in this environment can successfully rear kittens for several reproductive seasons. These results show that some wildlife can flourish in a suburban habitat.

Introduction

- The bobcat population in suburban West Reno is currently being tracked and studied to determine the impacts of the suburban habitat on health, persistence, and reproduction.
- In April 2022, a 4-year-old female bobcat was trapped and fitted with a GPS collar (Fig 2). Data continues to be collected on her via GPS tracking and on camera traps.
- The female was recollared in March 2023 (Fig 3,4) and continues to be tracked to determine movement patterns and to track reproductive success.



Figure 2. Female collaring 2022.



Figure 3. Female re-trapping 2023.



Figure 4. Female processing 2023.

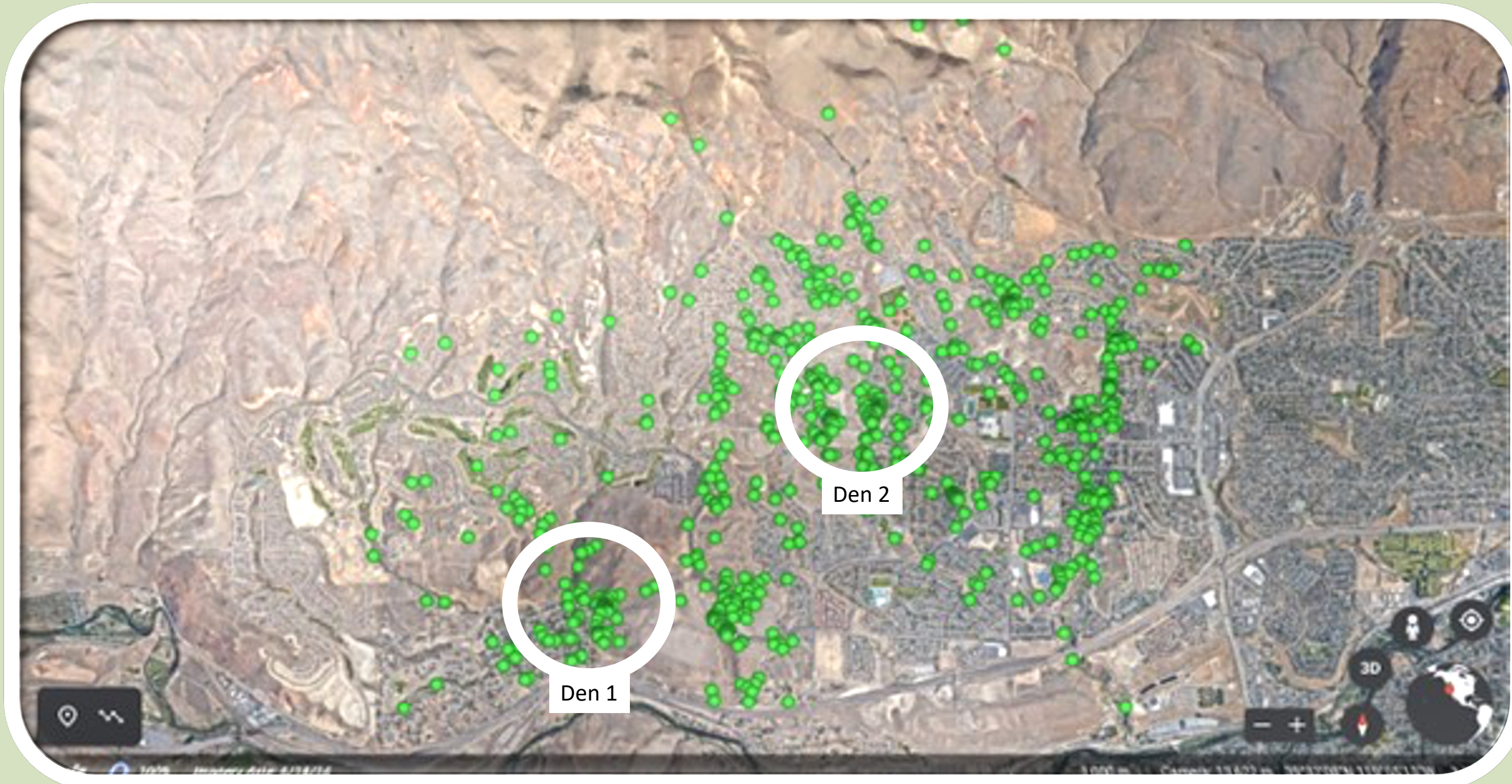


Figure 1. Female bobcat GPS points 2022.

Methods

- The female's location is recorded six times daily at 2,6,10 am/pm in 2022 and 4,8,12 am/pm in 2023 using GPS collar G5-2A.
- Local homeowners provided photos and observations on the whereabouts and behaviors of the female and her kittens.
- Clustered GPS points were used to locate two den sites (Fig 1). Den sites were investigated, and camera traps were set up to determine use and to track kitten survival (Fig 8). Homeowner observations were also used to track kitten survival and dispersal.

Results: Den Sites

- The female was trapped in April 2022. May-June 2023 her GPS points showed use of den site 1 (Fig 7). Kittens were most likely born in May. Den site 1 is thought to be the birthing site and location of early kitten rearing. Den 1 was isolated and in a "wild" area, presumably for safety. The female left the site a few days after another unknown bobcat was caught on camera at the den site.
- July 4, 2022, the female was first documented at den site 2 (Fig 8) in a backyard in suburban West Reno. Den site 2 characteristics include areas free of frequent use or pets. Other backyard use included sites that have an abundance of prey, including chickens, small birds, hares, and snakes.



Figure 5. Female and kitten.

Results: Kitten Rearing and Movement

- The first sighting of three kittens was on August 15, 2022. Kittens were approximately three months of age. The female was documented with kittens (Fig 5,6,9) until March 2023.
- The female was trapped and recollared on March 13, 2023, and was pregnant. The female was seen a week before being trapped with two kittens. Re-trapping may have caused the dispersal of the older (10-month-old) kittens.

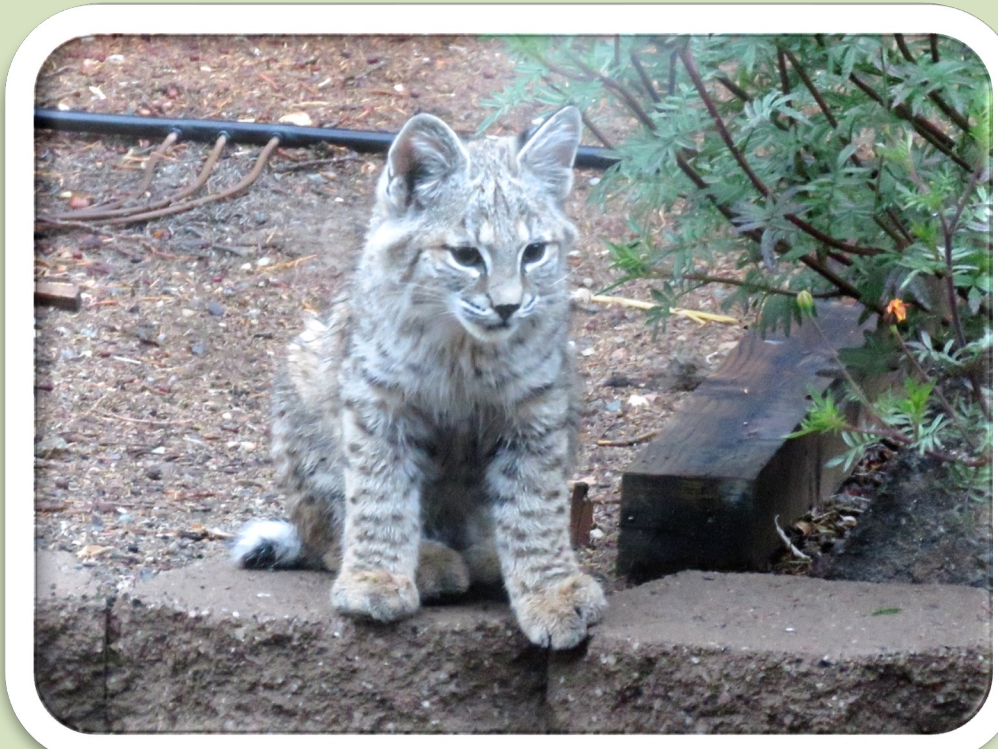


Figure 6. Kitten in suburban yard.



Figure 7. Den site 1.



Figure 8. Female, camera trap den site 2.

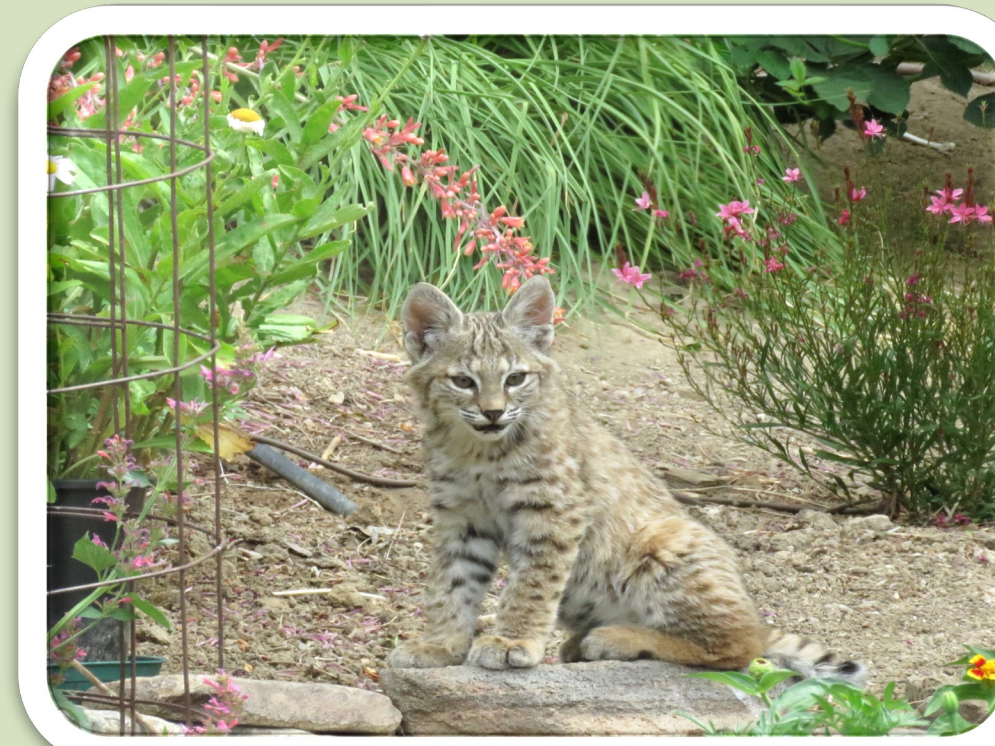


Figure 9. Kitten in suburban yard.

Conclusion

The observed success in kitten rearing from this collared female suggests that suburban areas in Reno are both favorable and well-used environments. Our data are consistent with other research that shows the typical breeding season is from late February to early March, with a gestation period of 70 days (1). This is consistent with our female's early pregnancy in March. The denning season starts in early March or late May (1). Last year the female's denning began in May, so we can anticipate her to den during a similar time this season. The average litter size of bobcats varies from two to four kittens, consistent with our camera data. However, we cannot know the initial litter size or what happened to the third kitten, but we suspect mortality. While kitten survival data varies significantly, ranging from 9-71% mortality based on other studies (2), this female successfully raised two kittens to dispersal age. Female bobcats have been shown to nurse their kittens until about seven weeks. During this time, their home range will decrease. After seven weeks of age, they will expand their home range again, where their kittens will follow closely until six months or older (2). Our female was observed with her kittens until they were approximately ten months old, when her second trapping may have initiated their dispersal. The female's pregnancy during the second trapping suggests that breeding overlaps with the rearing of last year's kittens. We will continue to monitor the female as she enters another reproductive season in order to determine patterns of den site use and to better elucidate the impact of the suburban environment on the reproductive success of female bobcats.

