

## Furnas 2017

Abundance was positively associated with tree canopy cover and negatively associated with latitude. Abundance increased with elevation, but declined at the highest elevations locations where tree canopy declined in sub-alpine and alpine habitats.

90% of samples 2010-2014

For female fishers, average annual home range size varied from approximately 6 km<sup>2</sup> at 20 km from the coast to approximately 13 km<sup>2</sup> at 120 km. For males, average home range size varied from 12 km<sup>2</sup> at 20 km to approximately 27 km<sup>2</sup> at 120 km (Fig. 3). Use data from Hoopa to scale

we estimated a NCSO-average fall home range size of 8.33 km<sup>2</sup>

Average fisher density across the NCSO range was 6.6 fishers/100 km<sup>2</sup> (95% CI: 5.1–8.6). Our estimate for total population size was 3196 fishers (95% CI: 2507–4184). Average density was maximized at 67 km from the coast.

the removal of seasonal scaling of home range size from our analysis reduced our estimate of population size (1921 fishers; 95% CI: 1533–2516) by 40%.

These steps were important because the estimation of density is highly sensitive to changes in effective area. For example, if we had not seasonally scaled home range sizes, our estimates of density and population size

would have been 40% smaller. Our estimate of population size was also sensitive to delineation of the NCSO range. We note that the seasonal scaling factors we used were approximately 20% smaller than those found by Popescu et al. (2014) for fishers in the SSN range. This fact highlights one shortcoming of our analysis: the unavailability of home range information throughout the study area

All of the data used in our seasonal scaling analysis were from a single study area with the largest sample size (Hoopa Tribal Forestry, unpublished data). If we had instead used a scaling ratio based on the findings of Popescu et al. (2014), our population estimate would have been smaller (2634 fishers; 95% CI: 1906–3717) than the estimate using a scaling ratio based on the Hoopa data (3196 fishers; 95% CI: 2507–4184), but the CIs for each estimate overlap the mean of the other.

Other issues with our home range analyses included use of the 100% MCP method instead of a kernel density estimator and the use of as few as 10 locations in the calculation of home ranges, and we are unable to ascertain how these limitations may have biased our results

## Stirling 2016

Our best estimates of survival and reproduction are consistent with a stable or growing population on Stirling. Our population modelling indicates the population is growing, but short-term population stability, or long-term viability, is not demonstrable before year-10 of the project, or 2020.