Title: Vertebrate browsing impacts in a threatened montane plant community

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Montane ecosystems are vulnerable to the removal of vegetation cover through browsing by feral or native vertebrate fauna. The highest peaks of the Stirling Range in Western Australia provide habitat for an endemic plant community, Critically Endangered due to plant disease, frequent fire and an emerging threat of browsing by vertebrate fauna. Survey and camera trapping confirmed the herbivorous feral rabbit (*Oryctolagus cuniculus*) and native quokka (*Setonix brachyurus*) are present. Dietary analysis through faecal examination revealed contrasting diets and implicates native rather than feral species as responsible for impacts on dicotyledonous species, and in particular those of conservation significance. Exclosure experiments conducted over one year revealed significant changes in abundance, cover and height of perennial herbs and an increase in growth and/or reproduction of four threatened endemic plants. Detrimental impacts caused by native browsing fauna are not unprecedented and may be attributed to disequilibria in ecosystem processes due to multiple interacting threats. Montane ecosystems may be particularly vulnerable to browsing due to their naturally slow recovery after disturbance and browsing may also create environmental conditions more conducive to plant disease. For plant species with critically low population numbers, the impact of browsing poses a threat to population persistence, undermines investment in other conservation recovery actions and may require active management intervention.