Intellectual Merit Criterion

Overall Assessment of Intellectual Merit

Excellent

Explanation to Applicant

The applicant has diverse research experiences in Minnesota, the Rockies, Canada, and Costa Rica. She has presented findings at conferences and is on her way to publishing. She has worked in a variety of systems with different taxa including rodents, pika, cougars, and wolves. She created a program in R for cougar captures.

Broader Impacts Criterion

Overall Assessment of Broader Impacts

Excellent

Explanation to Applicant

The applicant has participated in public education initiatives and was president of the environmental magazine at her school. She also spearheaded sustainability initiatives in her residence hall. She co-leads two undergraduate research initiatives at her current institution. She engages with local high schoolers. She's on a media outreach committee for a scientific society and provides wildlife education outreach to underprivileged elementary students. She started a student quantitative group. She will take elementary students out and plans a display at the park. She will blog about her research.

Intellectual Merit Criterion

Overall Assessment of Intellectual Merit

Excellent

Explanation to Applicant

Applicant has worked diligently on accumulating the background and skills required for the proposed project, and has greatly impressed her referees with her previous work. Having a paper in press and having made a presentation at a national meeting are good indicators of her progress. Application was very well written. There is great interest in understanding the general decline of mule deer populations in the western US, as well as a need to understand their demographics in habitats that are now developed. The proposed hypotheses are logical, the methods are appropriate, and the applicant has developed or has access to the requisite equipment, contacts, and analytical tools. "...populations well below NCC are limited by predation." - what about roles of disease and parasites?

Broader Impacts Criterion

Overall Assessment of Broader Impacts

Excellent

Explanation to Applicant

Applicant has a strong track record of involvement in broader impacts activities both at CU as an undergraduate and now at UCSC as a graduate student. Activities encompass involvement at the campus, community, and national scales. The nature of the proposed research will lend itself to additional broader impacts, as it's likely the results will be of interest to a diverse audience.

Intellectual Merit Criterion

Overall Assessment of Intellectual Merit

Very Good

Explanation to Applicant

The applicant has an impressive academic track record. Importantly, she has also built up an impressive resume of research experiences in mammalian ecology. This includes field surveys of pikas in Colorado, rodent work in Costa Rica, wolf studies in Minnesota and mountain lion work in California. There is every indication that the applicant is a more than capable field researcher. In addition, the applicant has more recently worked (in many cases on her own initiative) to beef up her quantitative skillset through both course work and a graduate student working group. There is evidence that the applicant can see projects through – a publication is in the final stages of acceptance and a second publication is in preparation already from graduate work. The proposed work focuses on top up and bottom down controls on mule deer populations, and the applicant is based in a lab capable of supporting this ambitious project. The proposal is hypothesis driven – with specific testable hypotheses and relevant analysis has been identified.

Broader Impacts Criterion

Overall Assessment of Broader Impacts

Excellent

Explanation to Applicant

The applicant has a clear appreciation for communicating science to broad audiences and in engaging a diverse population in scientific research. The applicant was president of an undergraduate magazine bring student voices to a wide audience. She has already engaged undergraduates in research and leads research trainings on mammalian ecology. In addition the applicant is developing a wildlife education day program targeted towards underrepresented elementary students. The applicant proposes to engage multiple undergraduates in the proposed field work, coordinate additional elementary school outreach field trips and maintain an active blog detailing research efforts.