Intellectual Merit Criterion

Overall Assessment of Intellectual Merit
Excellent

Explanation to Applicant
Klinges has had extensive research experience, including publication and presentation, during undergraduate matriculation and has taken the time since graduation to gain more experience in both domestic and foreign settings. He has also had substantial training in statistical and other research-relevant software applications. This apparently includes GIS.

Broader Impacts Criterion

Overall Assessment of Broader Impacts
Very Good

Explanation to Applicant
Klinges has already done some international work and has plans to continue. He has also done significant community service and service learning. His passion for multimedia storytelling has the potential to offer remarkable broader impacts in area of research that he selects.

Summary Comments
Klinges has notable potential and has demonstrated ability to do substantial research and concurrently serve the scientific and broader community. This reviewer would recommend for Award.

Intellectual Merit Criterion

Overall Assessment of Intellectual Merit
Excellent

Explanation to Applicant
The proposal asks how habitat volume, including both two dimensional area and vertical relief in tropical forests of Madagascar, and isolation affects herpetological diversity. The proposal is novel and interesting, using drones to characterize vertical topography of forests (are LIDAR data available?). It builds on the applicants considerable experience in ecology, including in the neotropics, and invokes both ecological theory and conservation applications. The proposal is well written and shows signs of a deep understanding of ecological theory.

Broader Impacts Criterion

Overall Assessment of Broader Impacts
Excellent

Explanation to Applicant
The applicant has made efforts at outreach and science communication through a number of venues and has specific plans to work with foreign scientists, development and conservation agencies. The broader impacts section was a strength of the proposal.

Summary Comments
The applicant has an impressive record of experience in both research and Resident Naturalist in the Peruvian Amazon, and has publications in review and in preparation. The proposed work is novel and insightful and useful for understanding how carbon

storage and biodiversity are related in tropical forests. His academic record is surprisingly weak for someone who produced such a well written proposal, including things like a C+ in Methods in Ecology. His extensive experience in the field suggests that he is likely to succeed in graduate studies.

Intellectual Merit Criterion

Overall Assessment of Intellectual Merit
Excellent

Explanation to Applicant
The applicant is a remarkably-prolific young scientist whose accomplishments are many, including a number of presentations and publications (one of which is a first-authored paper in the American Naturalist). For pure description of science, the application is polished and rigorous, although the novelty of volume as a predictor of biodiversity is a tad overstated in my opinion (as various measures of foliage dimensions and complexity have been used in a similar way for many years). The science is also impressive in being supported by a wide range of skills that the applicant has already acquired, including various coding languages and remote sensing methodologies.

Broader Impacts Criterion

Overall Assessment of Broader Impacts
Excellent

Explanation to Applicant
The letter writers speak to the infectious enthusiasm that the applicant has for science, and there are plans to work with an advisor's lab to train Malagasy graduate students.

Summary Comments
The applicant will clearly be a force in conservation science, and the care and energy that went into the application is evident.