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sDiv working group meeting report
"sMars 3"

Main Goals of the Workshop

The primary objectives of the 3rd workshop were to finalize the concept paper on species-specific spatial scales, advance the project focusing on body-size dependent impacts of human activities and resource availability on animal space use, discuss the progress of the movement database, and explore further funding opportunities for the continuation of the sMars project.

Workshop Details

1. *Concept paper on species-specific spatial scales*

The workshop started with a detailed discussion on the concept paper concerning species-specific spatial scales. All participants reviewed the final draft and addressed any open questions. Following a productive discussion, the team designed a new conceptual figure and made necessary edits to the text. By the second day of the workshop, the paper was ready and successfully submitted.

2. *Body-size dependent impacts of resource availability on animal space use*

In advancing the project on body-size dependent impacts of resource availability on animal space use, participants split into two break-out groups. The first group concentrated on empirical data and analysis of home range sizes, and the use of remote sensing data to capture environmental conditions. Meanwhile, the second group-initiated simulations to examine how varying landscape configurations and habitat suitability impact the space use of animals of different sizes. Significant progress was made as the empirical data were filtered to match the research question, and major decisions regarding the environmental data and spatial resolution were finalized. The simulations' code was developed, and the first figures were produced. On the workshop's final day, all participants collaboratively drafted the first outline of the manuscript. Moving forward, the team plans to extend the simulations to include bioenergetics to predict home range changes based on resource availability, and a formal analysis of the empirical data will be conducted. Leaders and timelines for these tasks have been assigned to ensure continued progress.

3. *Movement database*

Caitlin Wilkinson presented the current state of the movement database, noting that an additional student helper is now assisting in filling in missing data, with the goal of finalizing the

database by autumn. The potential inclusion of more insect data, potentially provided by Myles Menz, was also discussed, contingent on the project timeline.

4. *Other topics*

Other topics covered during the workshop included the planning of a potential in-person writing retreat for the winter and exploring further funding opportunities for the continuation of sMars. The team compiled a database of possible funding options and corresponding deadlines and guidelines. Responsibilities for each funding opportunity and the drafting of the first proposal were distributed among the participants.

General Atmosphere and sDiv Support

Compared to previous workshops, this session was notably more productive, with a strong focus on finalizing tasks rather than engaging in prolonged discussions on open questions. This focused atmosphere enabled significant progress. The integration of remote participants worked well. Although our participant from New Zealand was only able to join for half a day, continuous updates each morning and afternoon helped maintain progress and ensured the commitment of all participants. All participants expressed a strong desire to continue working together, reflecting the workshop's collaborative spirit. As in previous workshops, iDiv provided crucial support, ensuring that everything proceeded seamlessly.

Conclusion

The 3rd workshop successfully met its main goals, making substantial progress on key projects, including the finalization of the concept paper and advancements in the project on animal space use. Discussions on the movement database and future funding opportunities were fruitful, setting a positive tone for ongoing collaboration. The exceptional support from iDiv contributed to the productive and focused atmosphere, making this workshop a significant step forward for the sMars project.