Berkeley Agroecology Lab: Inclusive Authorship Guidelines

Authorship and author position on peer-reviewed publications are critical in the development of a scientific career. Authorship on a paper is an indication of significant contribution to a scientific work, and is a critical component for applications to graduate schools and fellowships, and hiring decisions for postdocs and professorships. First and last authorship also dictate who is seen and recognized as a disciplinary expert. While it is common practice for groups to only include authors that have made some sort of significant 'intellectual' contribution, this system is plagued with issues relating to how contributions are evaluated and quantified.

This type of merit-based approach to authorship most often negatively impacts undergraduates and early-stage graduate students, who may have significantly contributed to the labor of a research project but are nonetheless excluded from authorship opportunities. This is particularly true for Black, Indigenous, and other students of color, as well as students from working-class backgrounds. In order to circumvent the many challenges presented by determining authorship, our lab has produced the following framework for approaching authorship. Our framework is highly influenced by the protocols published by the CLEAR lab, which centers an equity, rather than equality, framework (Liboiron et al., 2017).

Equity and inclusivity: One of our goals as a lab is to be equitable and inclusive in authorship and contribution consideration. Consider that graduate students, early career scientists, and undergraduate students may contribute less to project planning or writing but contribute heavily to data collection and analysis when defining author contributions and orders but may benefit from the first, last, and corresponding author positions the most (along with non-tenured professors).

A critical component of including undergraduates on papers may simply be offering them the opportunity to contribute more significantly to the research process. By providing them this opportunity, we create an opening for undergraduates and graduate students in our lab to co-author on ongoing research projects. A student may decide that they are content with aiding in data collection and do not wish to engage with the writing process, perhaps warranting a place in acknowledgements. However, if a student does want the opportunity to contribute, we must make space for them to take that opportunity and work with them so that they can learn and grow from the process.

Discussions around authorship should happen as early in the research process as possible. This allows for there to be clear expectations amongst collaborators, and avoids potential issues down the road. Following this conversation, a written agreement/document should be made that delineates a timeline and expected contributions from all authors. If (and perhaps inevitably when) timelines shift, this should be communicated openly with the group.

Expectations for authorship: To be an author on a paper, one must make substantial contributions to project inception/planning *or* data collection *or* analysis/data interpretation. All authors should contribute to either the writing of the manuscript *or* editing and peer review revisions. All authors must approve of the manuscript within a given timeframe before submission to a journal.

- **Lead author or authors**: Each paper will have one or more lead author(s) who will manage the paper's workflow and facilitate communication, planning, and decisions for the paper. The lead author(s) will create a work plan with tasks for the paper and will help delegate these roles to the coauthors. The lead author(s) is(are) expected to contribute the most to the paper.
    - For first-time lead authors, Tim and/or other senior authors on the paper will provide guidance throughout the development and execution of a project, as well as through the writing and publication.

- **Coauthors**: Coauthors have the responsibility of attending meetings and contributing to their delegated tasks on the paper. Coauthors can voluntarily remove themselves from the project if they no longer have the time or capacity to work on it.

Author orders:

- First author: Lead author and highest contributor to the paper.
- Last author: Secondary contributor to the paper, main supervisor, or key figure in research conception, analysis, and/or writing.
- Other co-authors: Consensus based decision making process a la Liboiron et al 2017 which uses a collaborative, and open discussion among co-authors to determine an appropriate order. This process may include consideration of:
    - Whether the author is an academic or not
    - Author affiliation
    - Who needs the cultural capital of a higher author ranking more?
    - Who has access to working on future projects that will result in more articles?
    - Hierarchical status in the lab (undergrad, grad, staff, PI etc)
    - Number of existing publications
    - Research direction
    - Markers of social difference such as gender, race, Indigeneity, age, disability, and other markers of privilege (See Liboiron et al. for in depth explanations)
- Alphabetical order for middle authors on papers may be used, if this is deemed appropriate by all co-authors.

Conflict resolution: Please address concerns with authorship (i.e. author order or contributions) as early as possible. Address issues with the paper's coauthor policy with the paper lead author(s) first and bring in other co-authors as necessary. If conflicts are not resolved, ask another project member not on the paper to mediate discussion. *Do this department admin or campus publication officer.*

Sources:

Liboiron, M., Ammendolia, J., Winsor, K., Zahara, A., Bradshaw, H., Melvin, J., ... & Fürst, B. (2017). Equity in Author Order: A Feminist Laboratory's Approach. *Catalyst: Feminism, Theory, Technoscience*, *3*(2).