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To the editors of *Molecular Ecology Resources*:

Enclosed, please find a manuscript my co-authors and I believe would be ideally suited for *Molecular Ecology Resources*. In this article, entitled, “Effects of surface sterilization on diet DNA metabarcoding data of invertebrate consumers in mesocosms and natural environments”, we present results of a study examining the effects of sterilization treatment of invertebrate consumers prior to diet DNA metabarcoding on various metrics of diet. We believe this study is directly in the scope of *Molecular Ecology Resources* by providing validation and improvement of DNA metabarcoding as a molecular tool for diet studies across taxa in a wide range of environmental contexts.

Our findings provide evidence from an open terrestrial environment that surface sterilization does not appear to be a necessary step in most cases when using DNA metabarcoding data to gain diet information from DNA extracted from full body parts (without gut dissection) of invertebrate consumers. However, in a contained environment (a mesocosm), we saw marginal evidence of the effects of surface sterilization on consumption measures of an offered diet item, suggesting that there are some contexts in which surface sterilization protocols should be incorporated into DNA metabarcoding workflows. We believe this study to be timely and of general interest as DNA metabarcoding is increasingly used to identify consumptive interactions in invertebrate consumers (e.g. host-parasitoid, predator-prey, consumer-fungus) across environmental contexts, including aquatic, marine, terrestrial, and experimental mesocosms. However, the field has not addressed the potential problem of environmental contamination and there is no consensus on best practice for use of surface sterilization to address these risks. Our study provides validation for past and future studies that do not use surface sterilization and provides suggestions of environmental contexts in which surface sterilization steps may be necessary. Validating and refining methods and protocols in the field of diet DNA metabarcoding will be critical to improving conclusions from these types of studies and facilitating cross-study comparison.

We look forward to hearing your thoughts on this work. Please feel free to contact me with any questions about this material. On behalf of my co-authors, I thank you for your consideration of our submission.

Sincerely,



Ana Miller-ter Kuile