Appendix S3

*Species community composition.—* Over 80% of amphibians captures were from four amphibian species of two families: *Espadarana prosoblepon* and *Sachatamia albomaculata* of Family Centrolenidae, and *Pristimantis cruentus* and *Pristimantis cerasinus* of Family Craugastoridae (Appendix S2; Table 1). We collected less than 15 samples for each of 20 species (Appendix S2; Table 1). Of the 32 total species captured, 15 species were found in both streams and trails, while the other 17 were found in only one habitat type. Similarly, 20 species were caught in both wet and dry seasons and only 11 species were found in a single season.

We used a non-metric multidimensional scaling ordination using function nmds() and a permutational MANOVA using function adonis() in the “vegan” package (Oksanen *et al.* 2016) to determine if community composition varied among habitats, seasons, years, and transects. We ran each variable (i.e., habitat, season, year, and transect) in a separate analysis to avoid significance tests based on sequential sums of squares (i.e., each term is added sequentially to the analysis and their significance is determined). We used Jaccard dissimilarity index.

We found that community composition was significantly different among habitats (Pseudo-*F* = 10.54, *p* < 0.001) and transects (Pseudo-*F* = 3.18, *p* < 0.001), but it was not different between seasons (Pseudo-*F* = 1.48, *p* = 0.13) or years (Pseudo-*F* = 1.23, *p* = 0.14). From visually inspecting the ordination plots (Figure S1), stream and trail habitats overlap in some shared species but are largely distinct, consistent with field observations (i.e., species in the genus *Pristimantis* are common on streams and trails).

Macintosh HD:Users:Cici:GitHub:2010to2014ElCope:Ordination:Ordination 20 July 2017.pdfFigure S1. Non-metric multidimensional scaling analysis used to visualize differences in community composition (stress = 0.14) among (A) seasons, (B) habitats, (C) years, and (D) transects. Each point represents a transect, year, and season combination. Points that are close together have more similar community composition than points that are far apart. Ellipses represent 95% confidence intervals around the centroid of each variable.

References

Oksanen, J., Blanchet, F. G., Friendly, M., Kindt, R., Legendre, P., McGlinn, D., Minchin, P. R., O'Hara, R. B., Simpson, G. L., Solymos, P., Stevens, M. H. H., Szoecs, E. & Wagner, H. (2016). vegan: Community Ecology Package. R package version 2.4-0. https://CRAN.R-project.org/package=vegan