- Title: The title of your groundbreaking research paper
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- Author Contributions: FA conceived of the study, conducted the analyses, and wrote the original, and revised drafts
- 8 of the manuscript. SA, and TA, helped with the draft manuscript and revisions and supplied guidance to FA. TA
- 9 provided the data for the case study, contributed to the revisions, and assisted with the analysis of the case study data.
- Data Availability: The data and code that support the findings of this study are openly available on Zenodo / GitHub
- at https://link\_to\_archived\_release\_or\_GitHub.com.
- 12 Conflict of Interest statement
- No conflicts of interest
- Acknowledgements: We would like to thank a whole bunch of people.

### 5 Abstract

- 1. Ecologists often have lots of questions about lots of stuff
- 2. We evaluated a bunch of things using sophisticated methods and carried out complicated statistical tests
- 3. We discovered a bunch of things that we didn't already know but suspected
- 4. Our research has greatly advanced out knowledge about stuff and will make a significant contribution to some-
- thing and someone
- 21 **Key-words**: stuff, something

#### 22 Introduction

- 23 Ecologists have long recognized that some combinations of species are regularly found together, while other combi-
- nations occur infrequently (Elton 1946; Cole 1949).

#### 25 Methods

- To evaluate the ...
- As with Pielou's Evenness (Pielou & Pielou 1967), Shannon's diversity index (Shannon 1948)(H) is normally calcu-
- lated from species abundance values; however, for our purposes it is calculated from the column totals (species richness
- 29 per sample) using the following equation:

$$H_x = -S[P(i_x) \times ln(P(i_x))]$$

- where x denotes which set of values we are using to calculate the index (observed, minimal or maximal), and  $P(i_x)$
- is the proportion of species that occur in each sample (i).
- 32 Statistical analyses were carried out in R 3.4.0 (R Core Team 2017). All code along with the simulation algorithms
- used are available on Zenodo / GitHub https://link to archived release or GitHub.com.

#### 34 Results

#### 35 Discussion

#### 36 References

- <sup>37</sup> Cole, L.C. (1949). The measurement of interspecific association. *Ecology*, 30, 411.
- Elton, C. (1946). Competition and the structure of ecological communities. *The Journal of Animal Ecology*, 15, 54.
- <sup>39</sup> Pielou, D.P. & Pielou, E.C. (1967). The detection of different degrees of coexistence. *Journal of Theoretical Biology*,
- 16, 427–437.
- Shannon, C.E. (1948). A Mathematical Theory of Communication. Bell System Technical Journal, 27, 379–423.

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- Figure 1.
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## 49 Appendices