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## R packages used

| Package | Version | Citation |
| --- | --- | --- |
| base | 4.2.1 | R Core Team (2022) |
| devtools | 2.4.4 | Wickham et al. (2022) |
| DT | 0.25 | Xie, Cheng, and Tan (2022) |
| ggpattern | 1.0.1 | FC, Davis, and ggplot2 authors (2022) |
| iNEXT | 3.0.1 | Chao et al. (2014); Hsieh, Ma, and Chao (2024) |
| lattice | 0.20.45 | Sarkar (2008) |
| mgcv | 1.8.40 | S. N. Wood (2003); S. N. Wood (2004); S. N. Wood (2011); S. N. Wood et al. (2016); S. N. Wood (2017) |
| nlme | 3.1.157 | J. C. Pinheiro and Bates (2000); J. Pinheiro, Bates, and R Core Team (2022) |
| permute | 0.9.7 | Simpson (2022) |
| phyloseq | 1.40.0 | McMurdie and Holmes (2013) |
| plyr | 1.8.7 | Wickham (2011) |
| qualpalr | 0.4.3 | Larsson (2022) |
| rstatix | 0.7.0 | Kassambara (2021) |
| shiny | 1.7.2 | Chang et al. (2022) |
| shinybusy | 0.3.1 | Meyer and Perrier (2022) |
| shinycssloaders | 1.0.0 | Sali and Attali (2020) |
| SRS | 0.2.3 | Beule and Karlovsky (2020); Heidrich, Karlovsky, and Beule (2021) |
| tidyverse | 2.0.0 | Wickham et al. (2019) |
| usethis | 2.1.6 | Wickham, Bryan, and Barrett (2022) |
| vegan | 2.6.2 | Oksanen et al. (2022) |
| writexl | 1.4.0 | Ooms (2021) |

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We used R version 4.2.1 (R Core Team 2022) and the following R packages: devtools v. 2.4.4 (Wickham et al. 2022), DT v. 0.25 (Xie, Cheng, and Tan 2022), ggpattern v. 1.0.1 (FC, Davis, and ggplot2 authors 2022), iNEXT v. 3.0.1 (Chao et al. 2014; Hsieh, Ma, and Chao 2024), lattice v. 0.20.45 (Sarkar 2008), mgcv v. 1.8.40 (S. N. Wood 2003, 2004, 2011; S. N. Wood et al. 2016; S. N. Wood 2017), nlme v. 3.1.157 (J. C. Pinheiro and Bates 2000; J. Pinheiro, Bates, and R Core Team 2022), permute v. 0.9.7 (Simpson 2022), phyloseq v. 1.40.0 (McMurdie and Holmes 2013), plyr v. 1.8.7 (Wickham 2011), qualpalr v. 0.4.3 (Larsson 2022), rstatix v. 0.7.0 (Kassambara 2021), shiny v. 1.7.2 (Chang et al. 2022), shinybusy v. 0.3.1 (Meyer and Perrier 2022), shinycssloaders v. 1.0.0 (Sali and Attali 2020), SRS v. 0.2.3 (Beule and Karlovsky 2020; Heidrich, Karlovsky, and Beule 2021), tidyverse v. 2.0.0 (Wickham et al. 2019), usethis v. 2.1.6 (Wickham, Bryan, and Barrett 2022), vegan v. 2.6.2 (Oksanen et al. 2022), writexl v. 1.4.0 (Ooms 2021).

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