## R packages used

| Package | Version | Citation |
| --- | --- | --- |
| ape | 5.7.1 | Paradis and Schliep (2019) |
| base | 4.2.2 | R Core Team (2022) |
| BioGeoBEARS | 1.1.3 | Matzke (2013) |
| biscale | 1.0.0 | Prener, Grossenbacher, and Zehr (2022) |
| cluster | 2.1.4 | Maechler et al. (2022) |
| cowplot | 1.1.1 | Wilke (2020) |
| fs | 1.6.1 | Hester, Wickham, and Csárdi (2023) |
| geobr | 1.8.2 | Pereira and Goncalves (2024) |
| geodata | 0.5.9 | Hijmans et al. (2023) |
| GGally | 2.1.2 | Schloerke et al. (2021) |
| ggdist | 3.2.1 | Kay (2023) |
| ggtext | 0.1.2 | Wilke and Wiernik (2022) |
| ggtree | 3.6.2 | Yu et al. (2017); Yu et al. (2018); Yu (2020); Yu (2022a) |
| glue | 1.7.0 | Hester and Bryan (2024) |
| here | 1.0.1 | Müller (2020) |
| Herodotools | 1.0.0 | Nakamura et al. (2023) |
| knitr | 1.44 | Xie (2014); Xie (2015); Xie (2023) |
| lemon | 0.4.6 | Edwards (2022) |
| patchwork | 1.1.2 | Pedersen (2022) |
| picante | 1.8.2 | Kembel et al. (2010) |
| pvclust | 2.2.0 | Suzuki, Terada, and Shimodaira (2019) |
| rcartocolor | 2.0.0 | Nowosad (2018) |
| renv | 0.17.3 | Ushey (2023) |
| rmarkdown | 2.25 | Xie, Allaire, and Grolemund (2018); Xie, Dervieux, and Riederer (2020); Allaire et al. (2023) |
| rnaturalearth | 0.3.2 | Massicotte and South (2023) |
| scales | 1.3.0 | Wickham, Pedersen, and Seidel (2023) |
| sf | 1.0.14 | Pebesma (2018); Pebesma and Bivand (2023) |
| SYNCSA | 1.3.4 | Debastiani and Pillar (2012) |
| terra | 1.7.18 | Hijmans (2023) |
| tidyterra | 0.5.2 | @ |
| tidytree | 0.4.6 | Yu (2022b) |
| tidyverse | 2.0.0 | Wickham et al. (2019) |
| viridis | 0.6.2 | Garnier et al. (2021) |

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We used R version 4.2.2 (R Core Team 2022) and the following R packages: ape v. 5.7.1 (Paradis and Schliep 2019), BioGeoBEARS v. 1.1.3 (Matzke 2013), biscale v. 1.0.0 (Prener, Grossenbacher, and Zehr 2022), cluster v. 2.1.4 (Maechler et al. 2022), cowplot v. 1.1.1 (Wilke 2020), fs v. 1.6.1 (Hester, Wickham, and Csárdi 2023), geobr v. 1.8.2 (Pereira and Goncalves 2024), geodata v. 0.5.9 (Hijmans et al. 2023), GGally v. 2.1.2 (Schloerke et al. 2021), ggdist v. 3.2.1 (Kay 2023), ggtext v. 0.1.2 (Wilke and Wiernik 2022), ggtree v. 3.6.2 (Yu et al. 2017, 2018; Yu 2020, 2022a), glue v. 1.7.0 (Hester and Bryan 2024), here v. 1.0.1 (Müller 2020), Herodotools v. 1.0.0 (Nakamura et al. 2023), knitr v. 1.44 (Xie 2014, 2015, 2023), lemon v. 0.4.6 (Edwards 2022), patchwork v. 1.1.2 (Pedersen 2022), picante v. 1.8.2 (Kembel et al. 2010), pvclust v. 2.2.0 (Suzuki, Terada, and Shimodaira 2019), rcartocolor v. 2.0.0 (Nowosad 2018), renv v. 0.17.3 (Ushey 2023), rmarkdown v. 2.25 (Xie, Allaire, and Grolemund 2018; Xie, Dervieux, and Riederer 2020; Allaire et al. 2023), rnaturalearth v. 0.3.2 (Massicotte and South 2023), scales v. 1.3.0 (Wickham, Pedersen, and Seidel 2023), sf v. 1.0.14 (Pebesma 2018; Pebesma and Bivand 2023), SYNCSA v. 1.3.4 (Debastiani and Pillar 2012), terra v. 1.7.18 (Hijmans 2023), tidyterra v. 0.5.2 [@], tidytree v. 0.4.6 (Yu 2022b), tidyverse v. 2.0.0 (Wickham et al. 2019), viridis v. 0.6.2 (Garnier et al. 2021).

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