Reuse

Open science

- Document analysis code
 - Comments
 - Consistent style
- 'Drop-in' data replacement
 - Modular functions

```
4 registerDoParallel(clus)
    1 # 1.1. Gather data #
    2 # get data
    3 dist_data <- Claddis::ReadMorphNexus("data/matrix.nex") %>%
                  Claddis::MorphDistMatrixFast()
   6 # get taxon ages
    7 taxon_ages <- read.table("./data/ichthyosaur_occurrences.tsv",</pre>
                               header
                                       = TRUE,
                               row.names = 1,
                                         = "\t")
  11
  12 # get bins
  ▶13 bins <- list(# bins corresponding to epochs
                  epochs = read.table("./data/epoch_bins.tsv",
  15
                                       header = TRUE,
  16
                                                 = "\t"),
  17
                  # 10 Ma bins aligned to the base of the Jurassic (201.3 Ma)
  18
                  tenMa_bJ = data.frame(max_age = seq(251.3, 100, -10),
  19
  20
                                         min_age = seq(241.3, 90, -10),
                                         row.names = paste0("bin", seq(1, 16)))
  21
  22
  23 # bin taxa and remove outgroup taxon _Hupehsuchus_nanchangensis_
  24 outgroup <- "Hupehsuchus_nanchangensis"
  25 bin_data <- lapply(bins, function(scheme) {</pre>
  26 data <- list()
      for (bin in seq_along(rownames(scheme))) {
NORMAL '> master 1A-disparity_analyses.R
                                                    utf-8 A @r 5% 31:1
20 >
76083:R [-]
                                                                         20:1
                                   .89 4.96 ?
                                                    2021-03-24 Wed 16:27:37
open-sci-5 ~/G/i/supp_code nvim
                    □ ~/O/C/t/revision
© 24/03, 4:27 pm
```

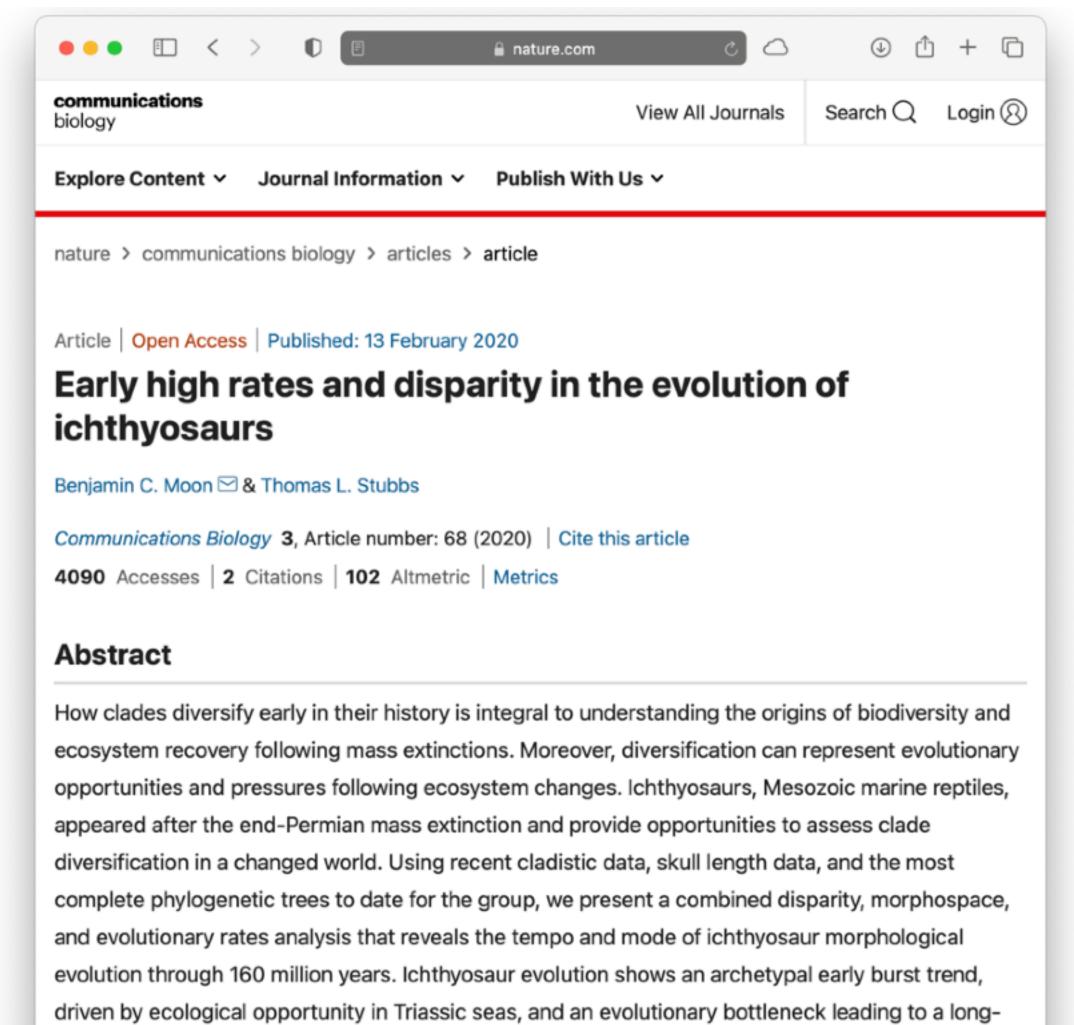
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Reach

Open science

- Open Access publication
 - Communications Biology
 - DOI: 10.1038/s42003-020-0779-6
- Open review
- Press release
 - Twitter
 - Popular in Japan





term reduction in evolutionary rates and disparity. This is represented consistently across all

analytical methods by a Triassic peak in ichthyosaur disparity and evolutionary rates, and

morphospace separation between Triassic and post-Triassic tava