Each data file is named according to the scenario simulated as “number.RData”, with the number in the name indicating the row of the scenarios data frame defined between lines 38 and 444 of SimulationScript.R.

Each data file is a list. Each list element represents the state of the community (resources and consumers) at a certain time.

Each list element is itself a list, consisting of the elements:

parms 🡪 a one-row data frame with the following columns

limit: Specialists or Generalists

parametrization: FixedAbunds or FixedParameters

bounce: TRUE or FALSE (whether species are allowed to go extinct)

epsilon: efficiency of consumption to reproduction conversion

nu: speciation rate (zero when bounce == TRUE)

NR: number of resources

NS: number of consumers

Rstar: expected abundance of each resource

Nstar: expected abundance of each consumer

mu: in the Specialists limit, diagonal elements of the C matrix. In the Generalists scenario, the C matrix is uniformly distributed between mu – b an mu + b

b: in the Specialists limit, off-diagonal elements of the C matrix. In the Generalists scenario, the C matrix is uniformly distributed between mu – b an mu + b

run: iteration of the scenario being simulated. Controls the seed of the random number generator

scenario: the row of the scenarios data frame being run. Should match the number on the name of the data file

simtime: number of simulation steps – i.e. events (consumption, resource supply, etc) – up to this point

phystime: number of seconds of simulation time up to this point, starting with the beginning of the dynamics loop

node: HPC cluster where the simulation was run, whether Rosalind or Wilson

rho 🡪 resource supply rate. In the Specialists but not the Generalists limit, it is the same for every resource.

eta 🡪 consumer death rate. In the Specialists but not the Generalists limit, it is the same for every resource.

C 🡪 the resource-by-consumer affinity matrix

resources 🡪 current abundance of each resource

consumers 🡪 current abundance of each consumer

Only simtime and phystime in parms, as well as resources and consumers, change between list elements in each file.