

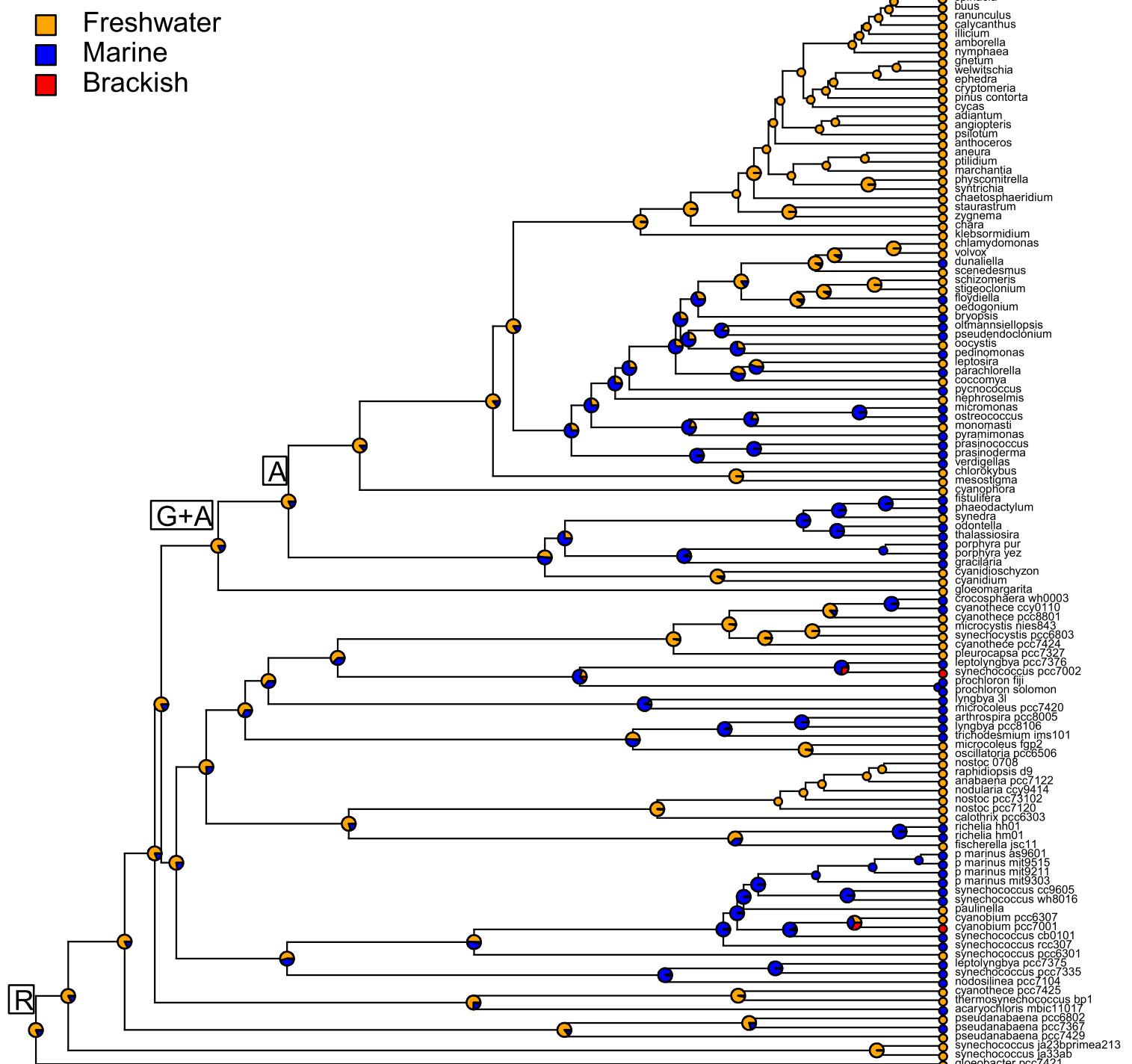
Ancestral state reconstruction plots

The following pages contain the plots of the ancestral state reconstructions that were performed using `phytools` and `corHMM` with the models and parameters stated in each plot.

Multistate phytools

Model = ER

Q = empirical

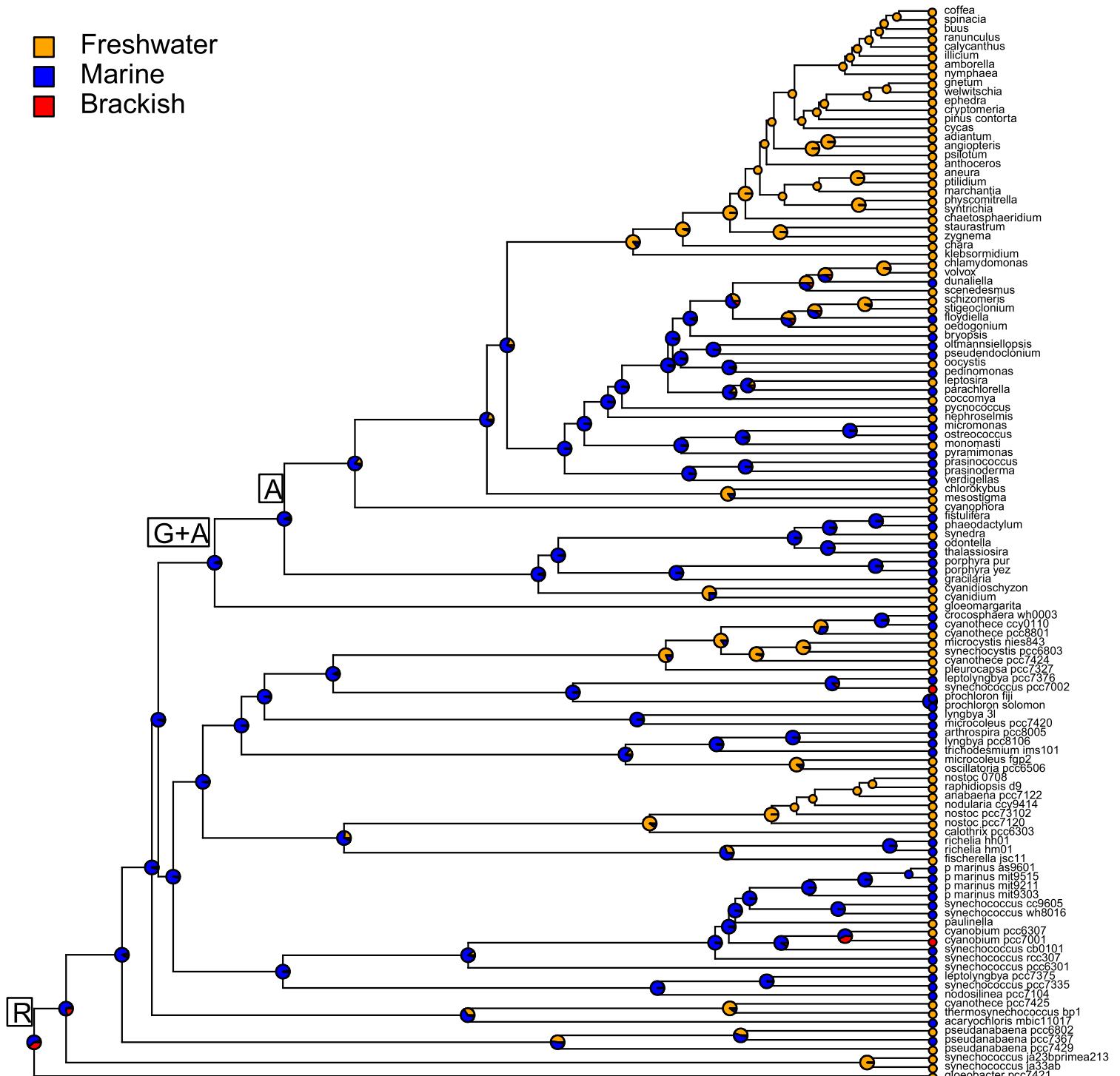


Multistate phytools

Model = ARD

Q = empirical

- Freshwater
- Marine
- Brackish

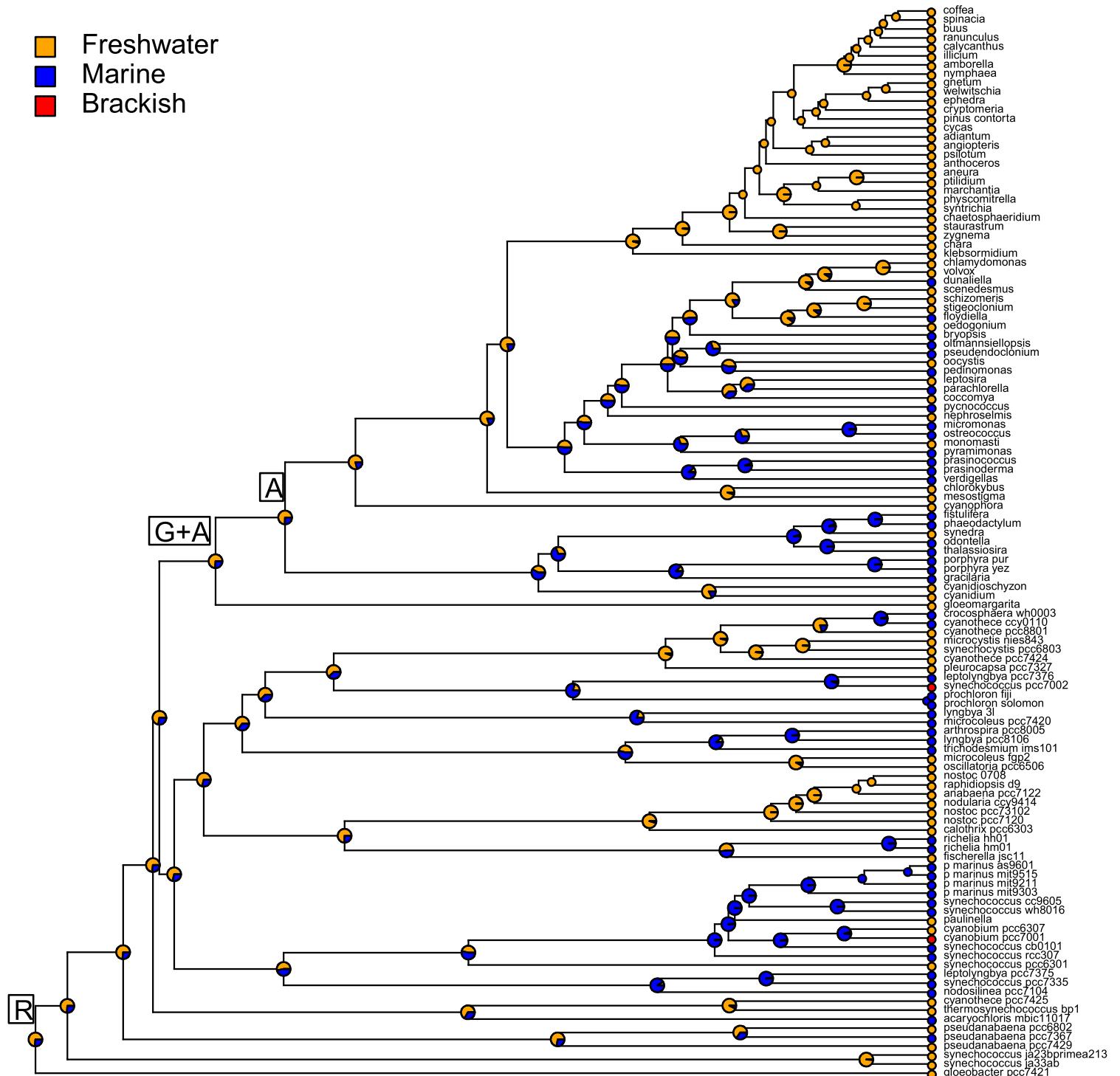


Multistate phytools

Model = SYM

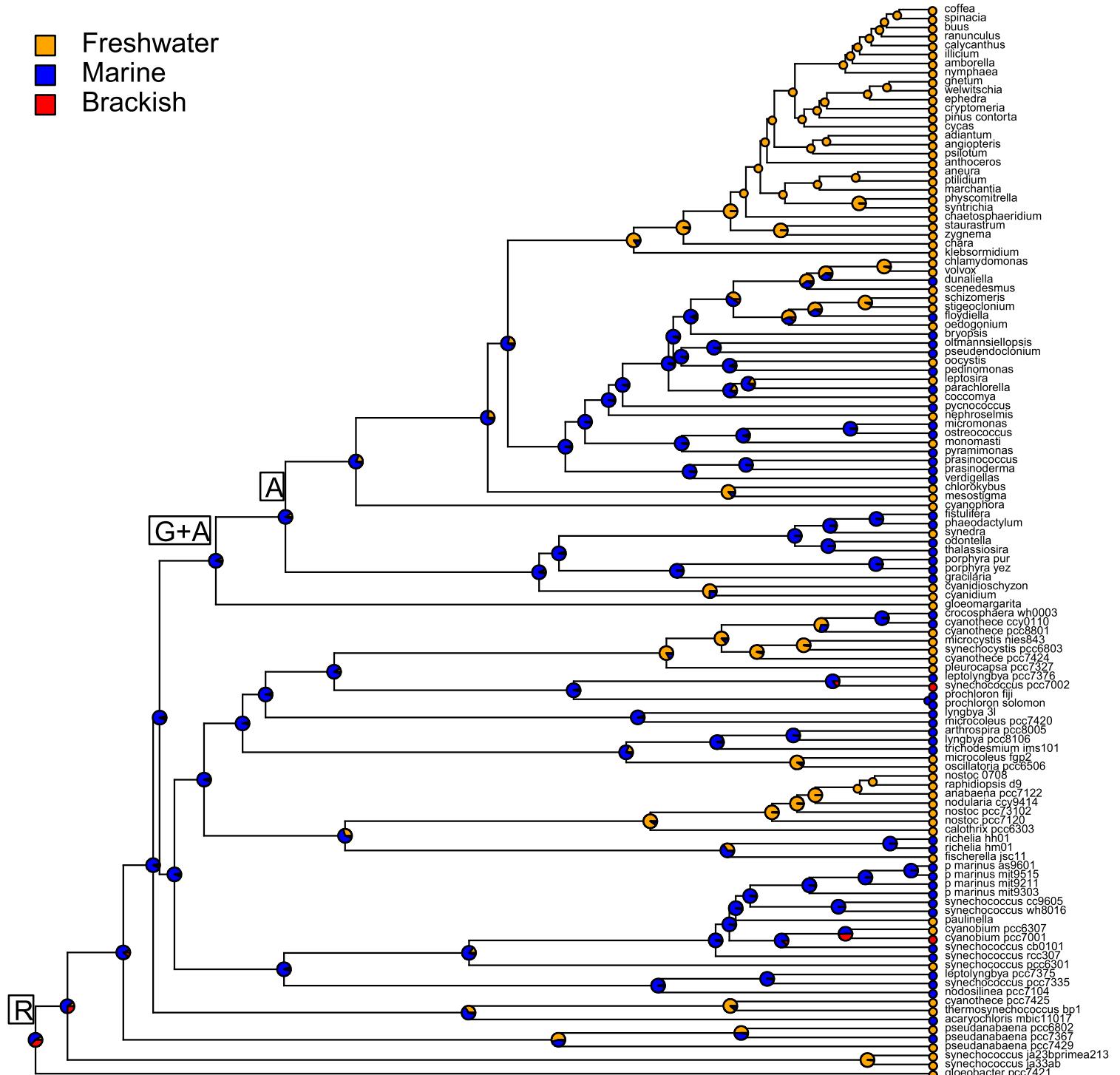
Q = empirical

- █ Freshwater
- █ Marine
- █ Brackish



Multistate phytools

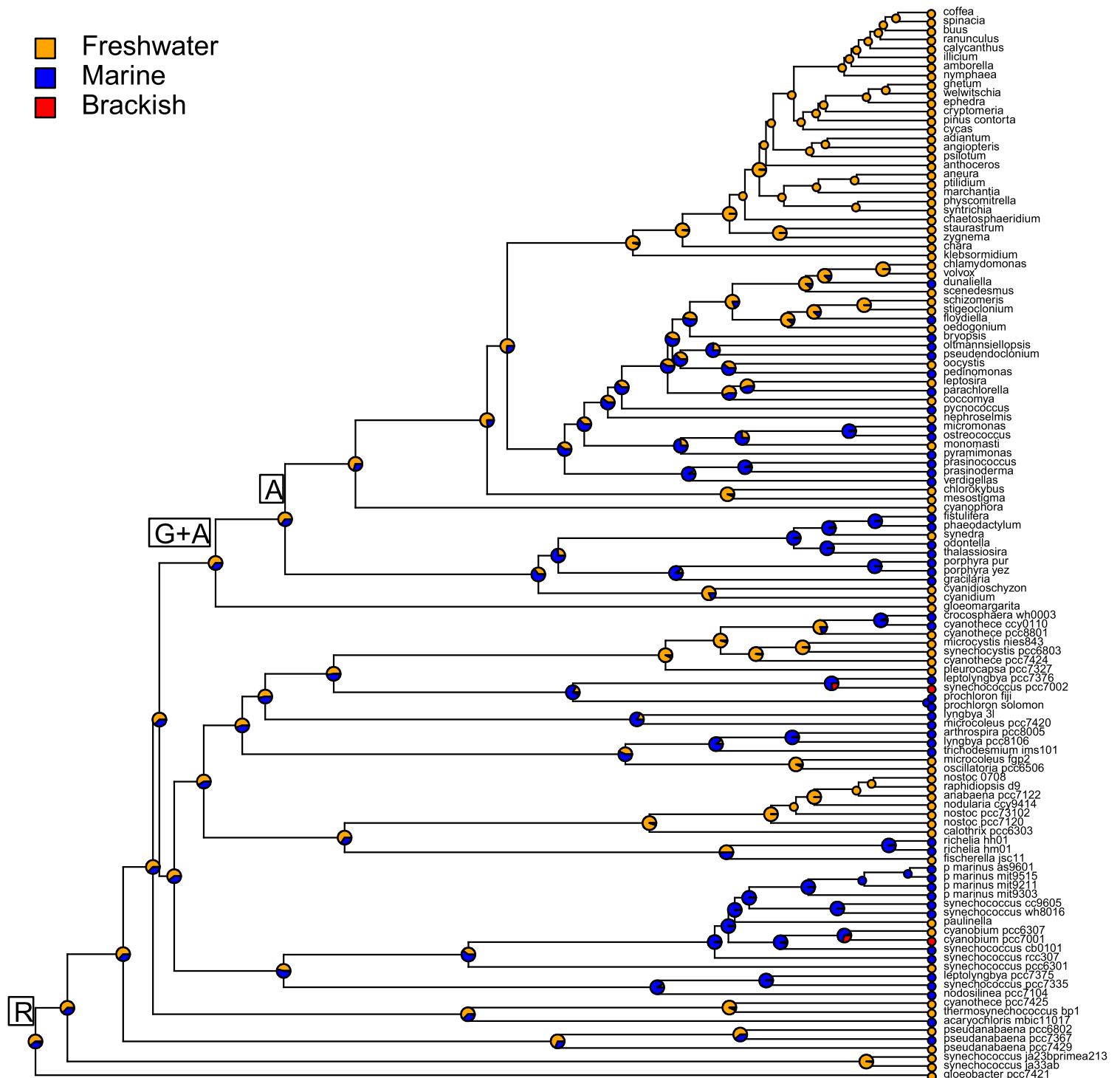
Model average = SAICc



Multistate phytools

Model average = BMA

- █ Freshwater
- █ Marine
- █ Brackish



Multistate phytools

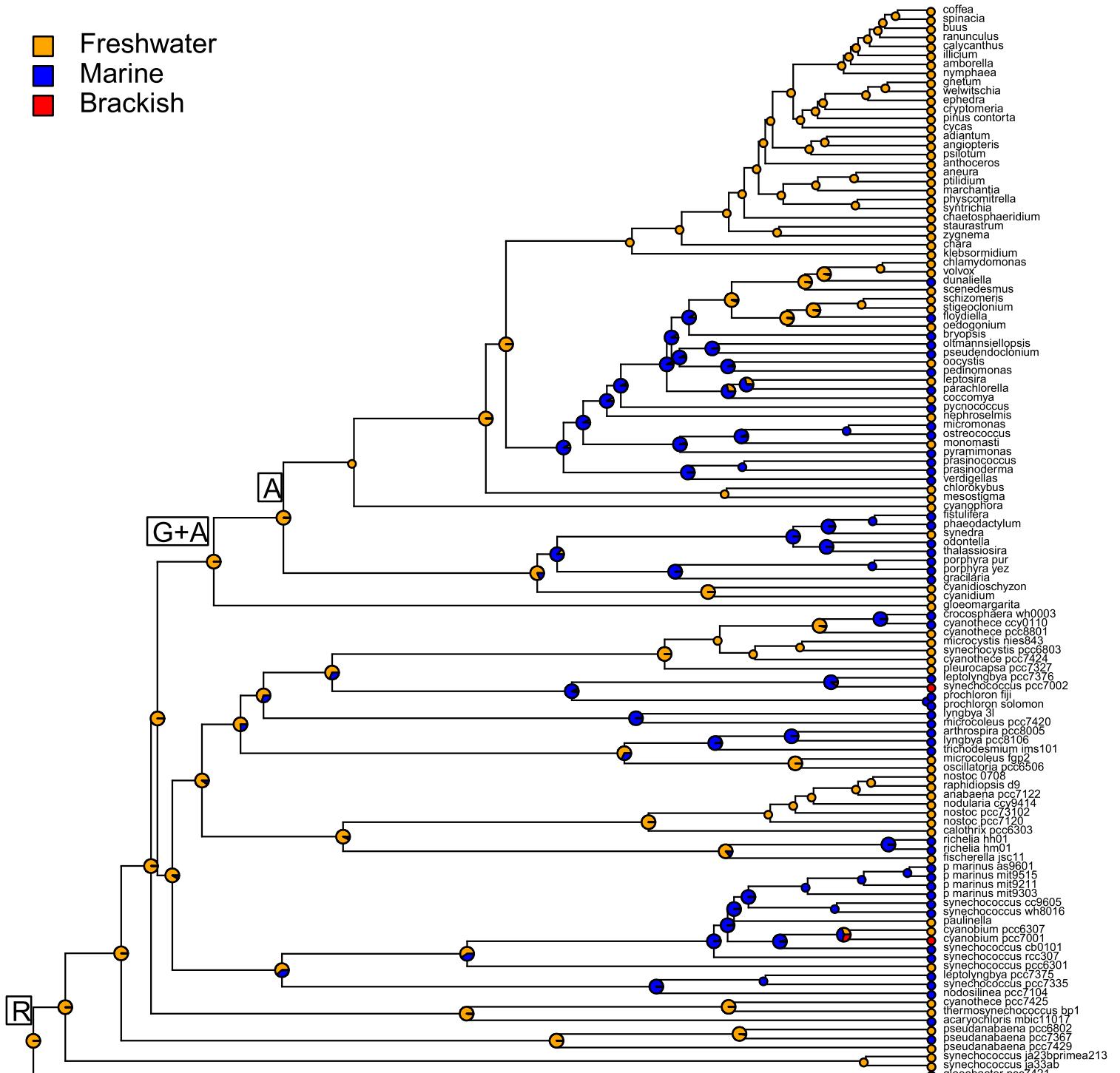
Model = ER

$Q = \text{mcmc}$

$\alpha = 1$

$\beta = 400$

- █ Freshwater
- █ Marine
- █ Brackish



Multistate phytools

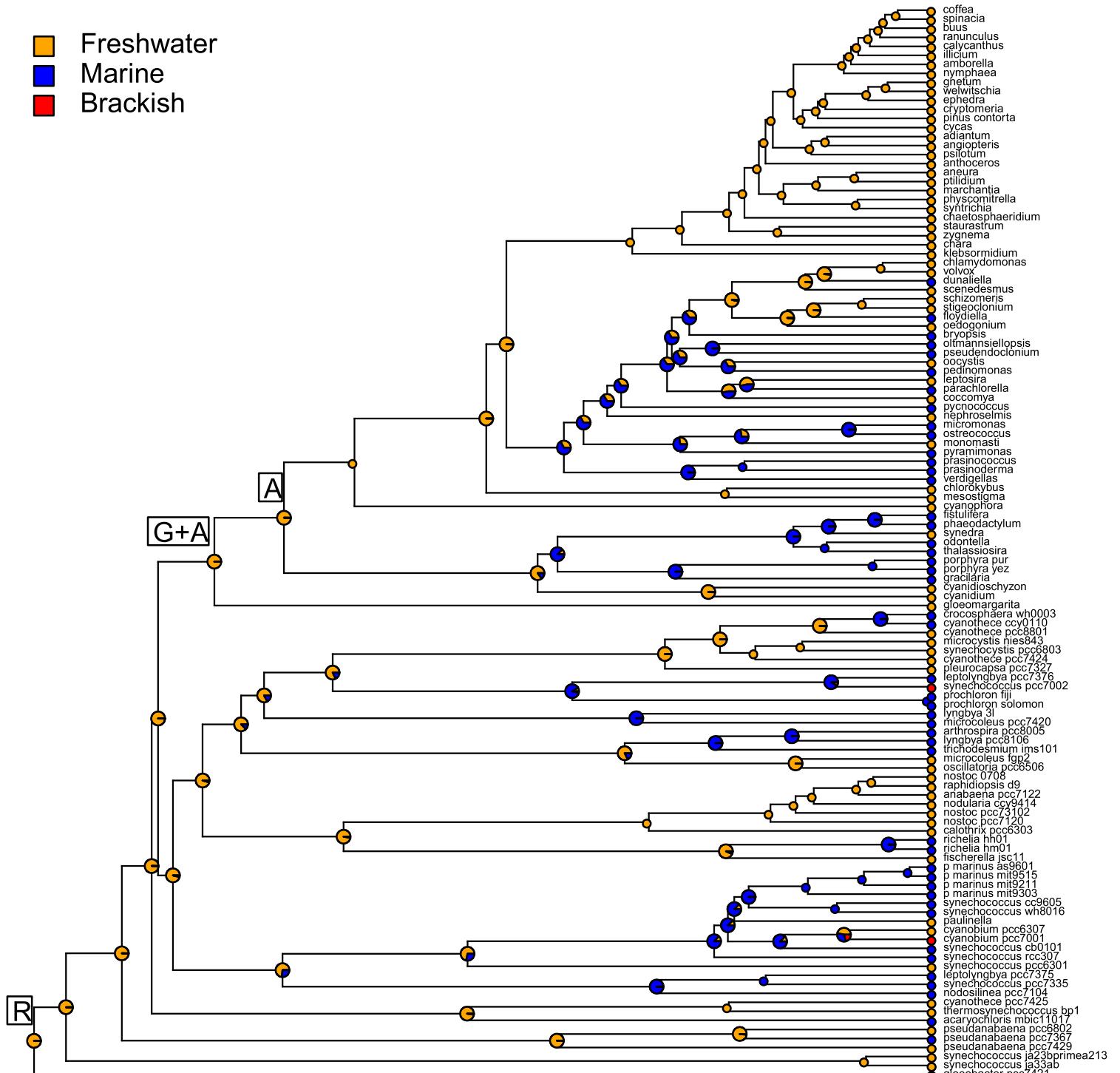
Model = ARD

$Q = \text{mcmc}$

$\alpha = 1$

$\beta = 400$

- █ Freshwater
- █ Marine
- █ Brackish



Multistate phytools

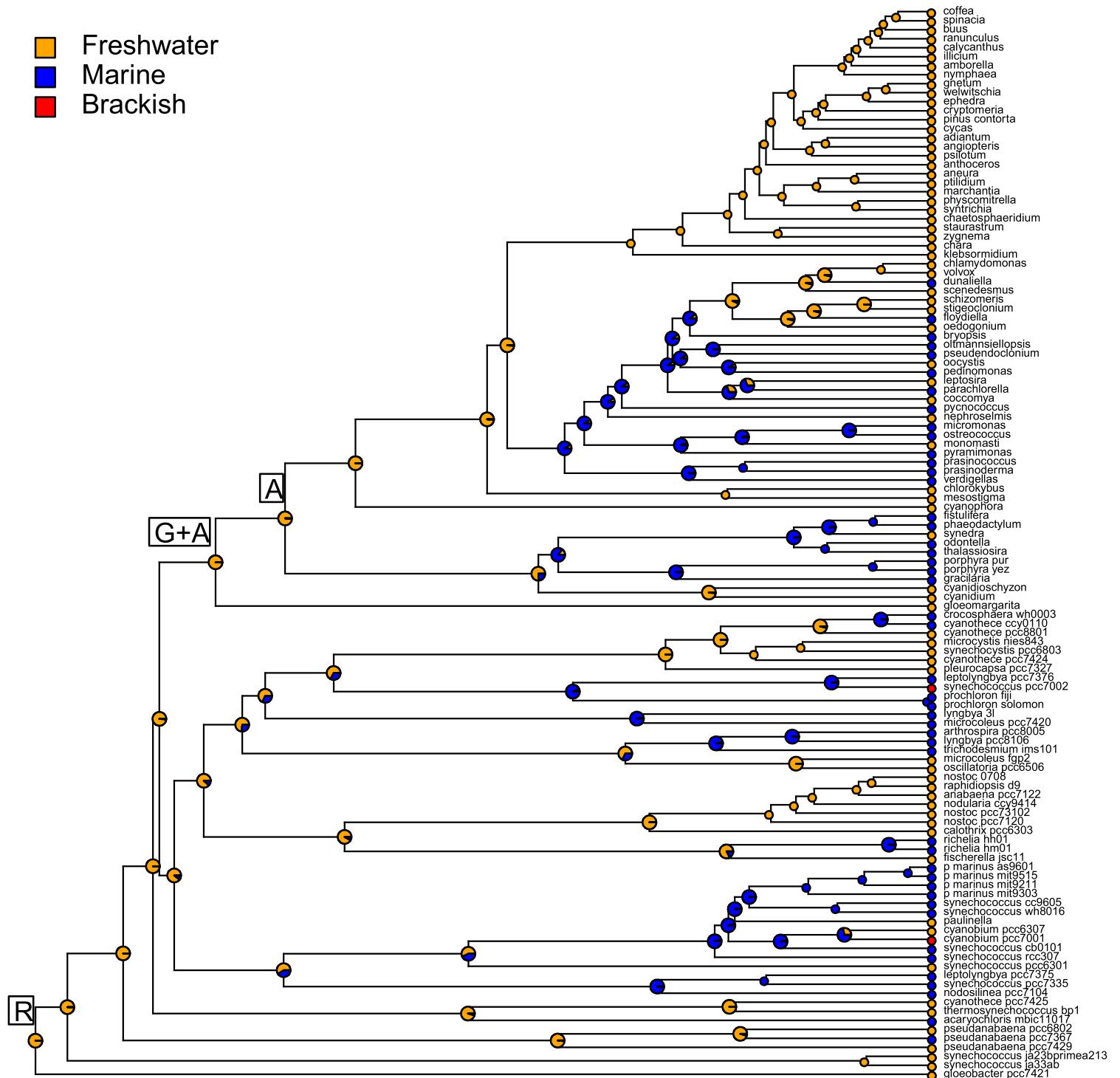
Model = SYM

$Q = \text{mcmc}$

$\alpha = 1$

$\beta = 400$

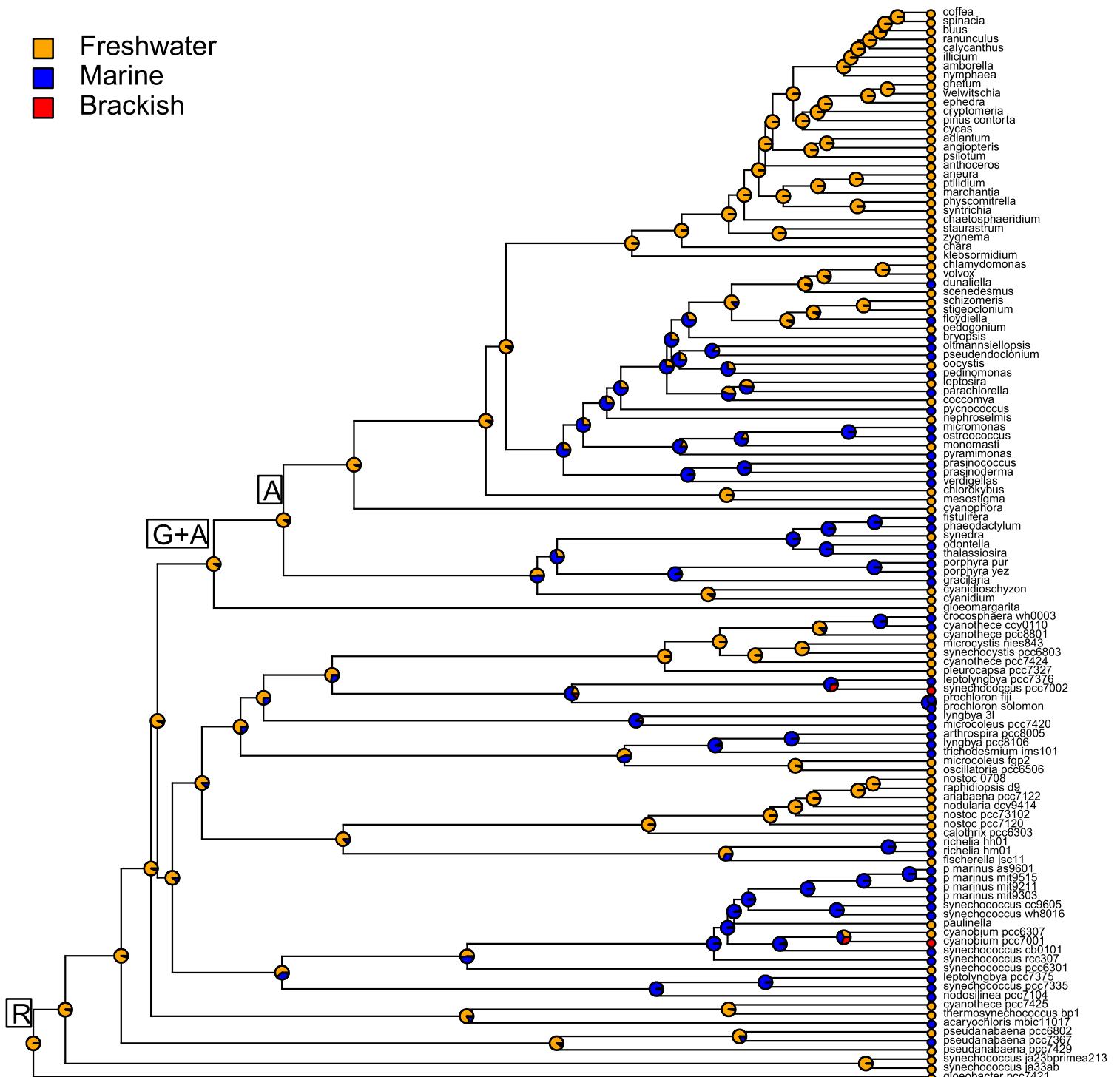
- █ Freshwater
- █ Marine
- █ Brackish



Multistate corHMM

Model = ER

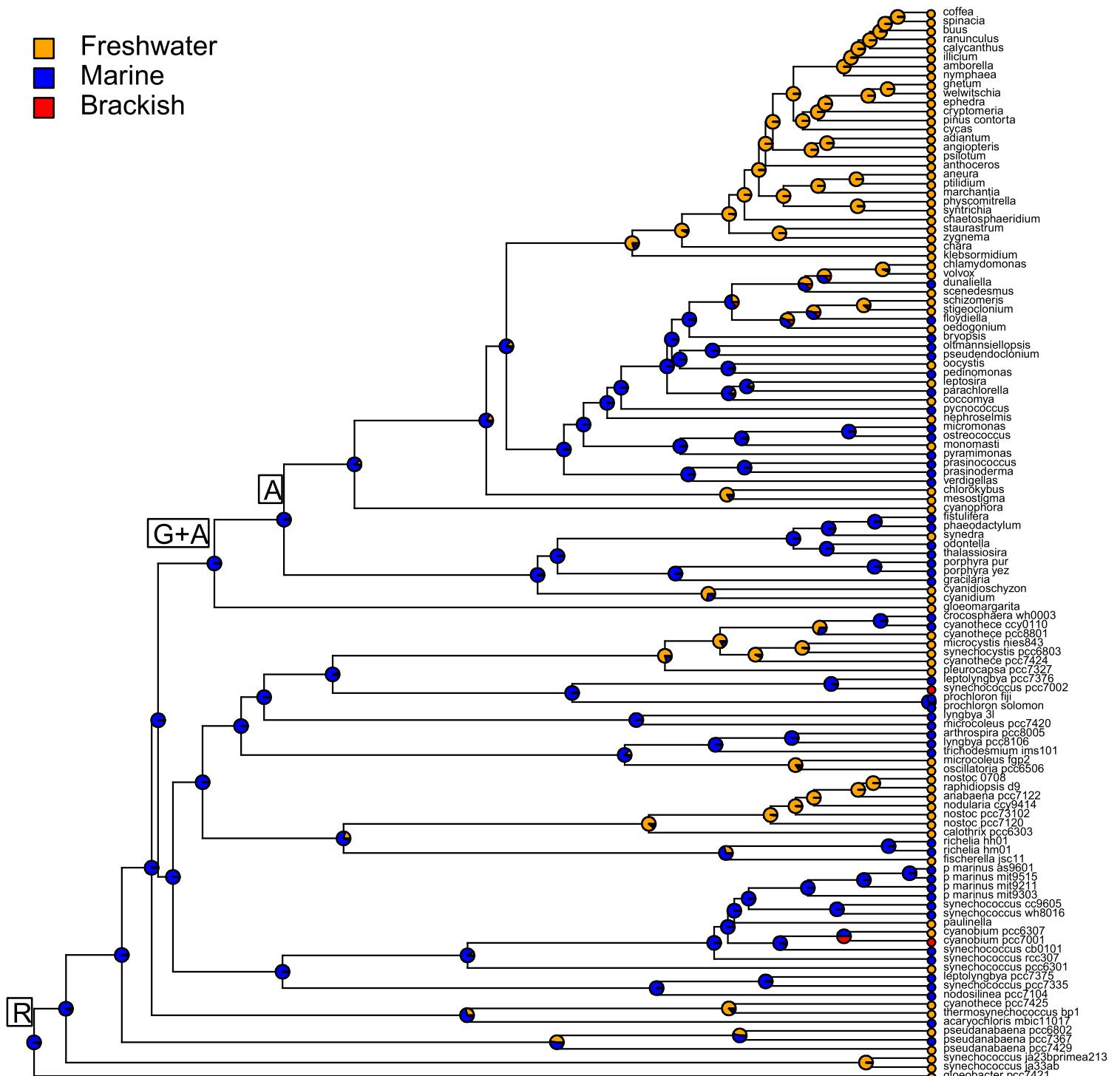
- █ Freshwater
- █ Marine
- █ Brackish



Multistate corHMM

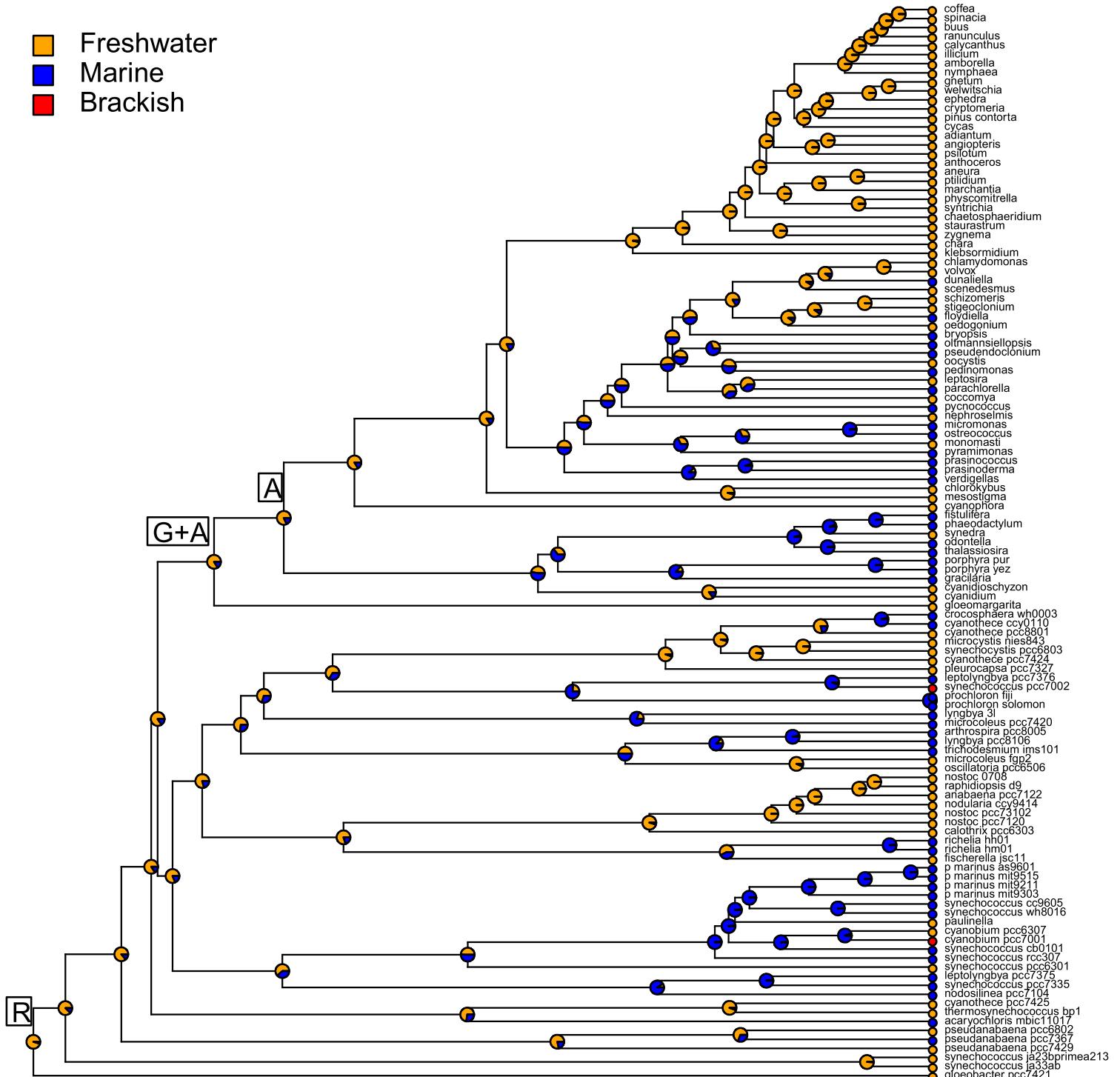
Model = ARD

- █ Freshwater
- █ Marine
- █ Brackish



Multistate corHMM

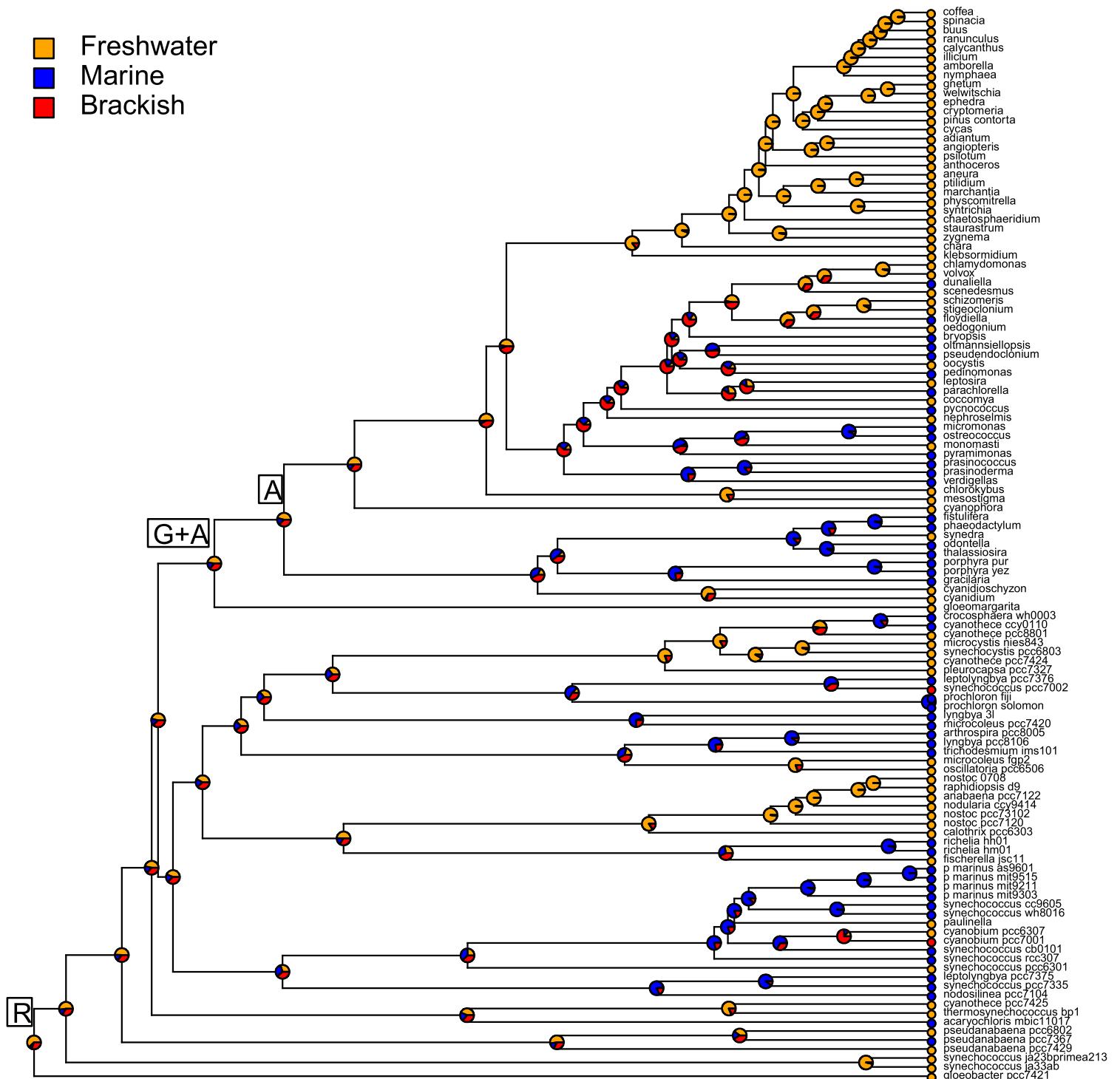
Model = SYM



Multistate corHMM

Model = ordered ER

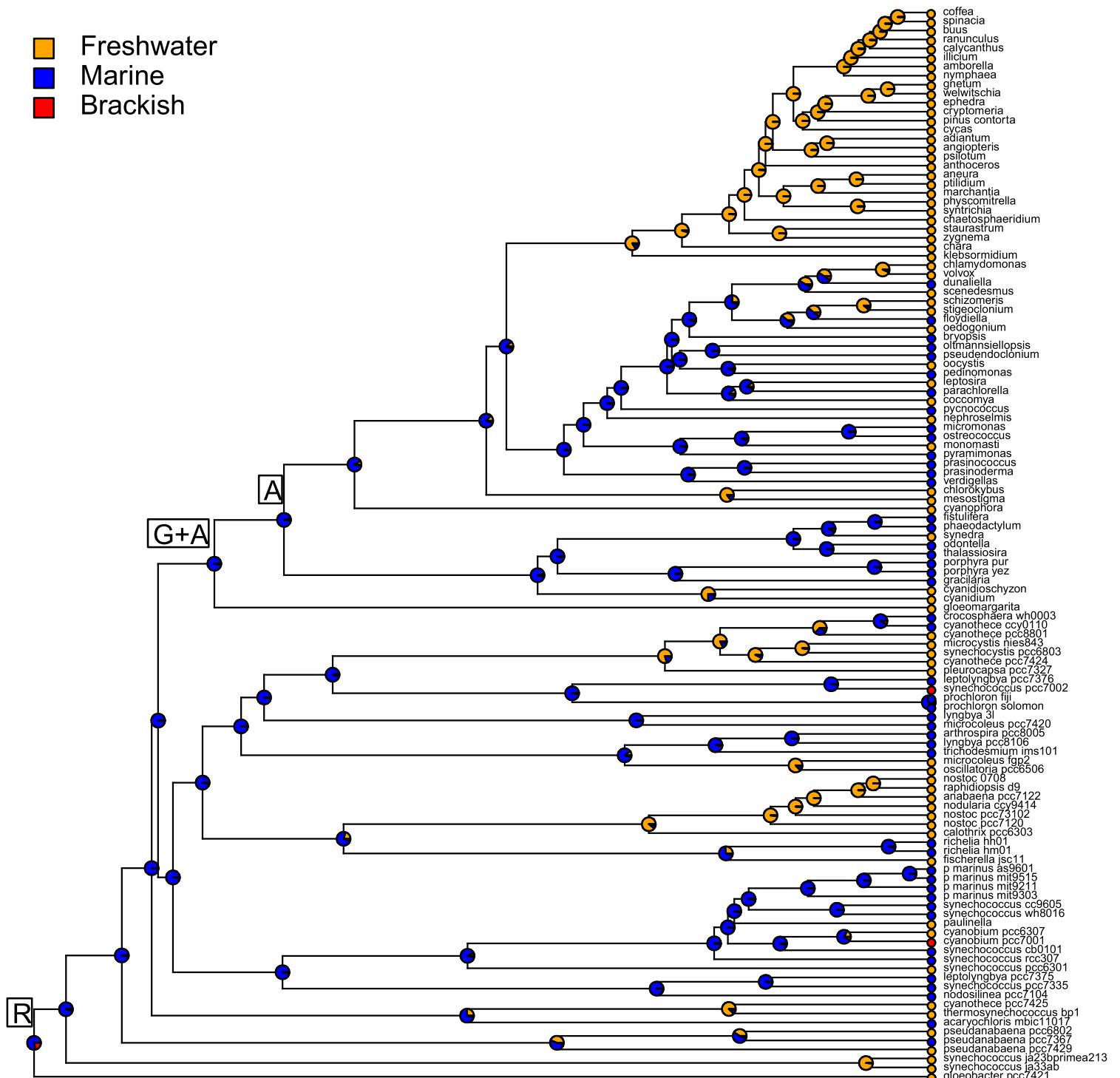
- █ Freshwater
- █ Marine
- █ Brackish



Multistate corHMM

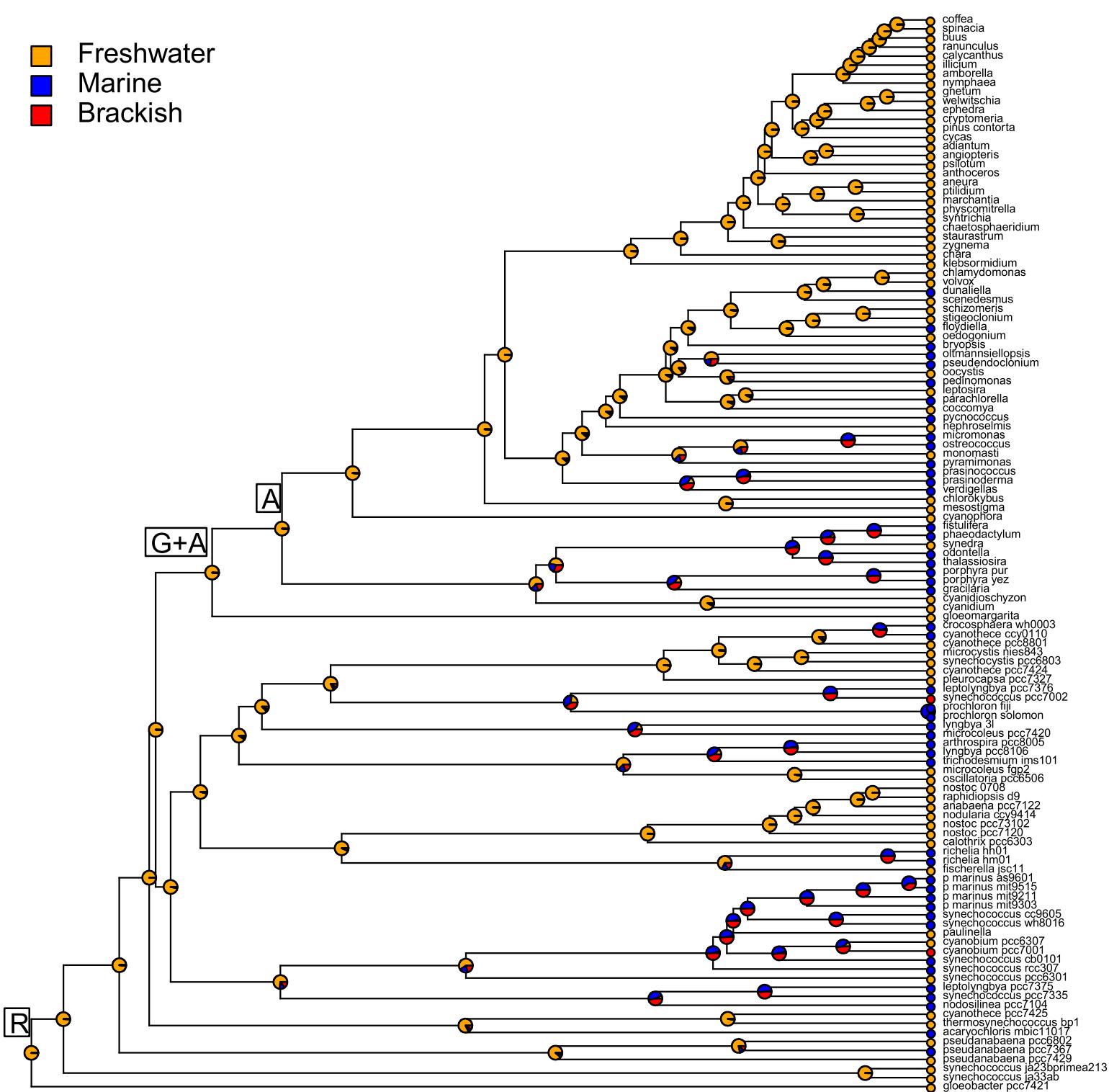
Model = ordered ARD

- █ Freshwater
- █ Marine
- █ Brackish



Multistate corHMM

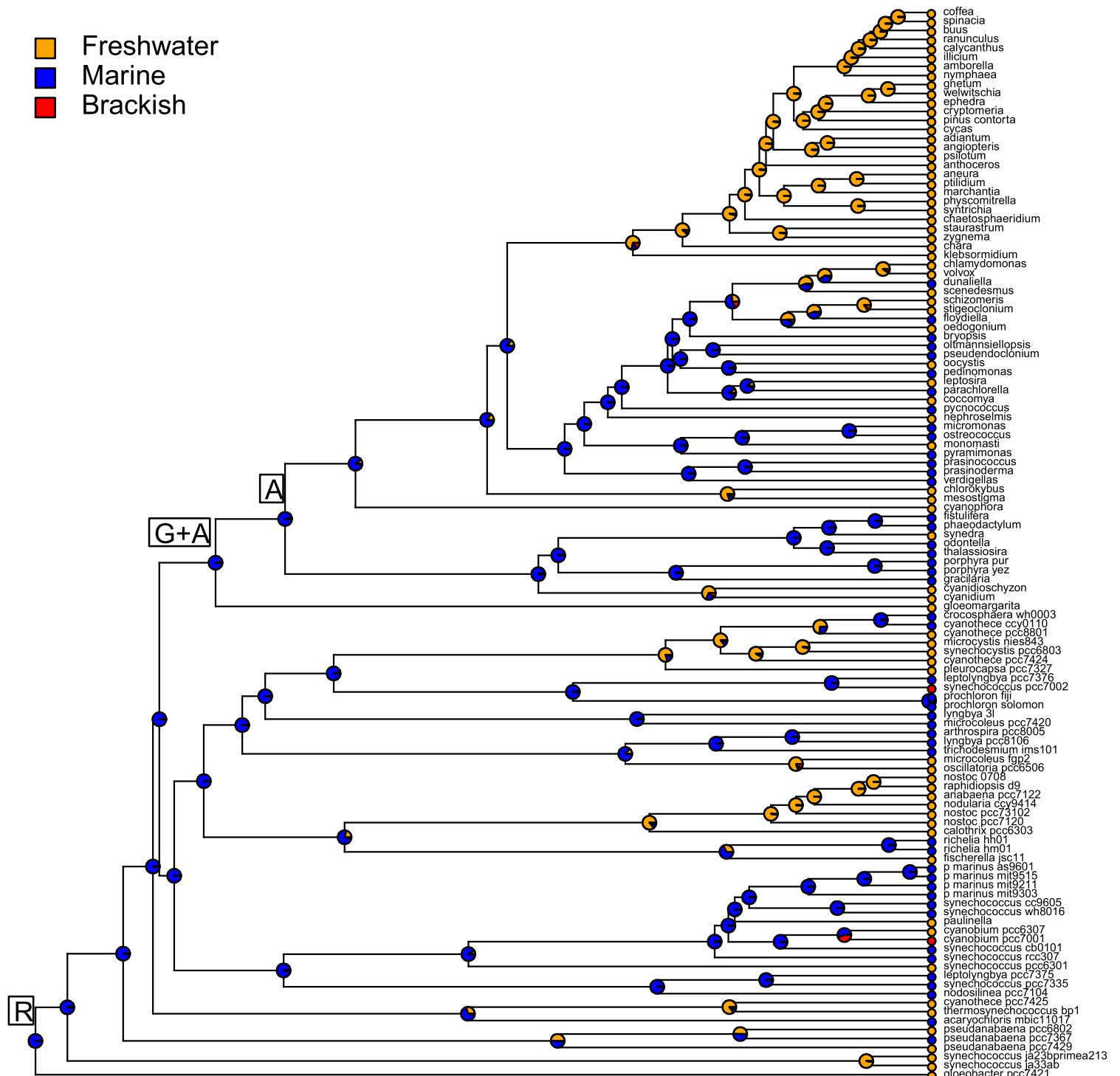
Model = ordered SYM



Multistate corHMM

Model = SRD1

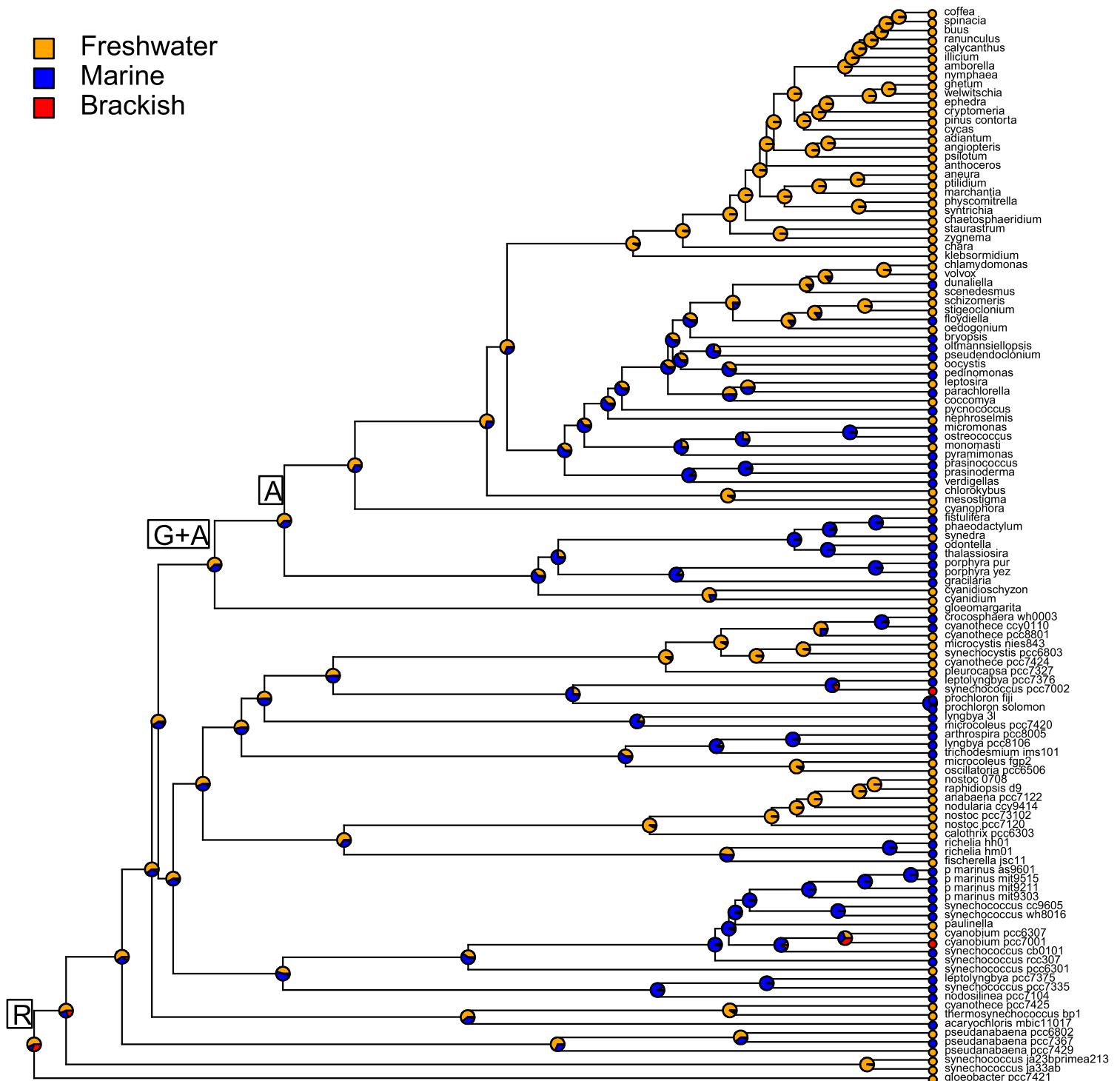
- █ Freshwater
- █ Marine
- █ Brackish



Multistate corHMM

Model = SRD2

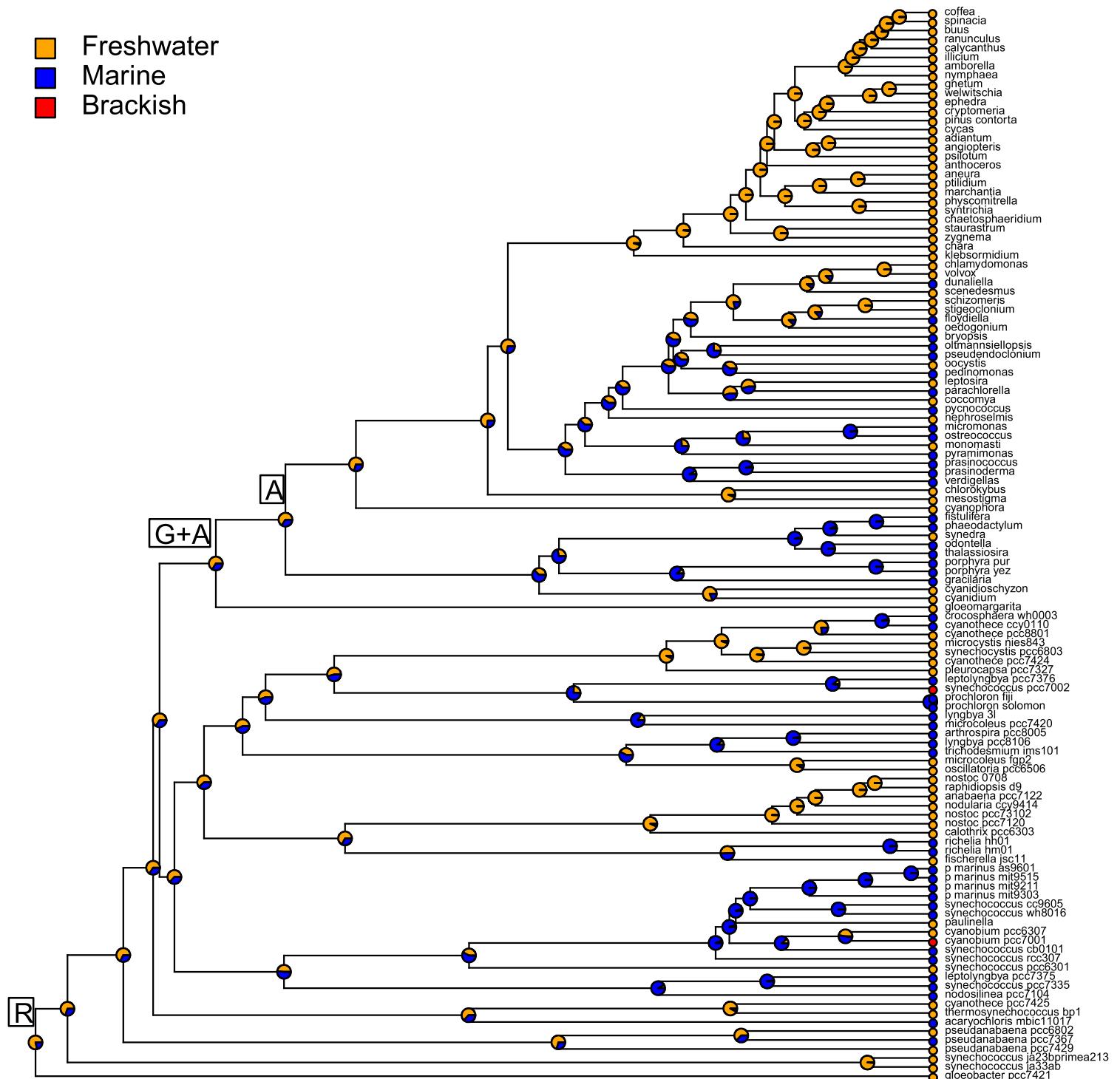
- █ Freshwater
- █ Marine
- █ Brackish



Multistate corHMM

Model = SRD3

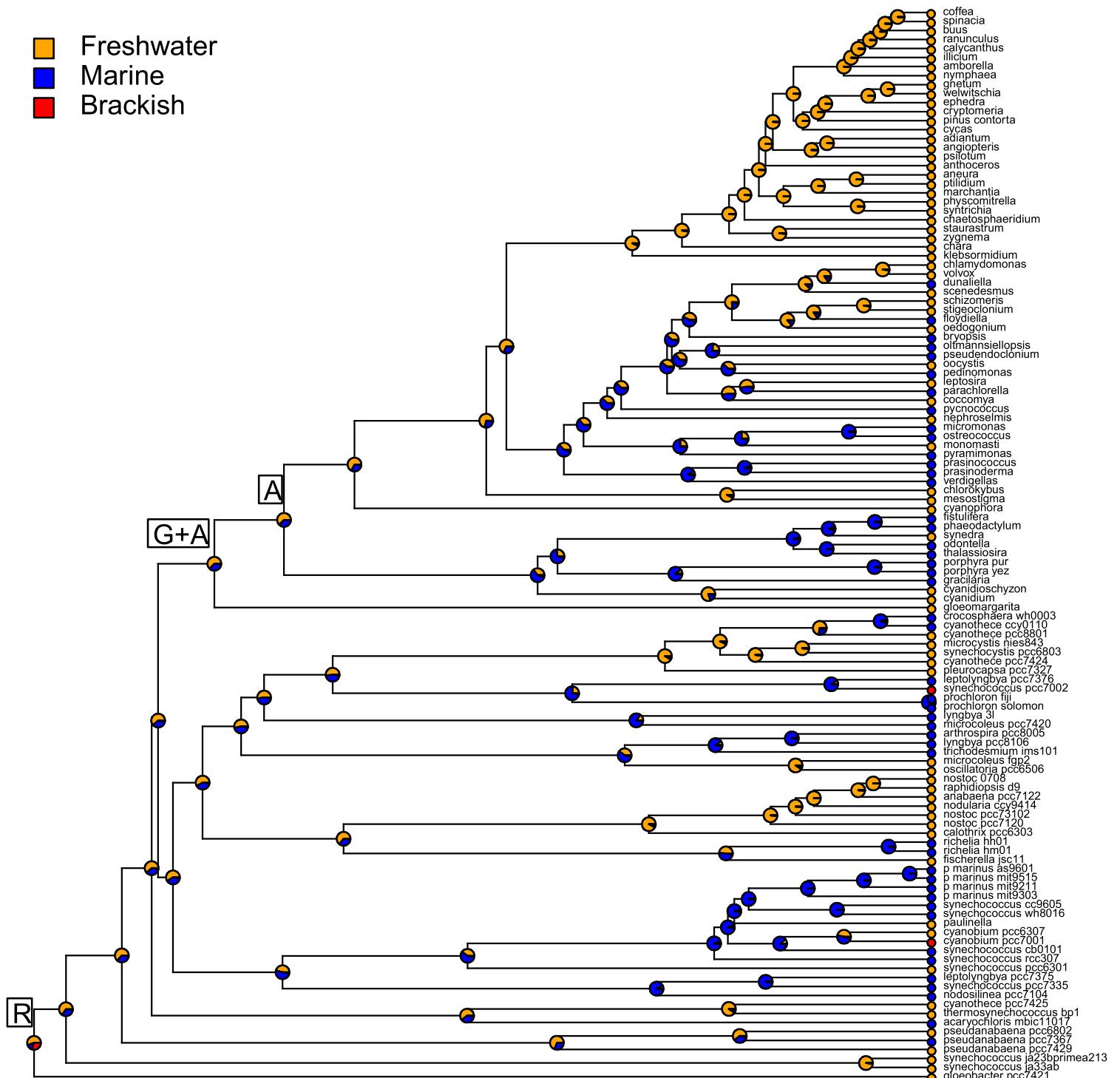
- █ Freshwater
- █ Marine
- █ Brackish



Multistate corHMM

Model = ordered SRD4

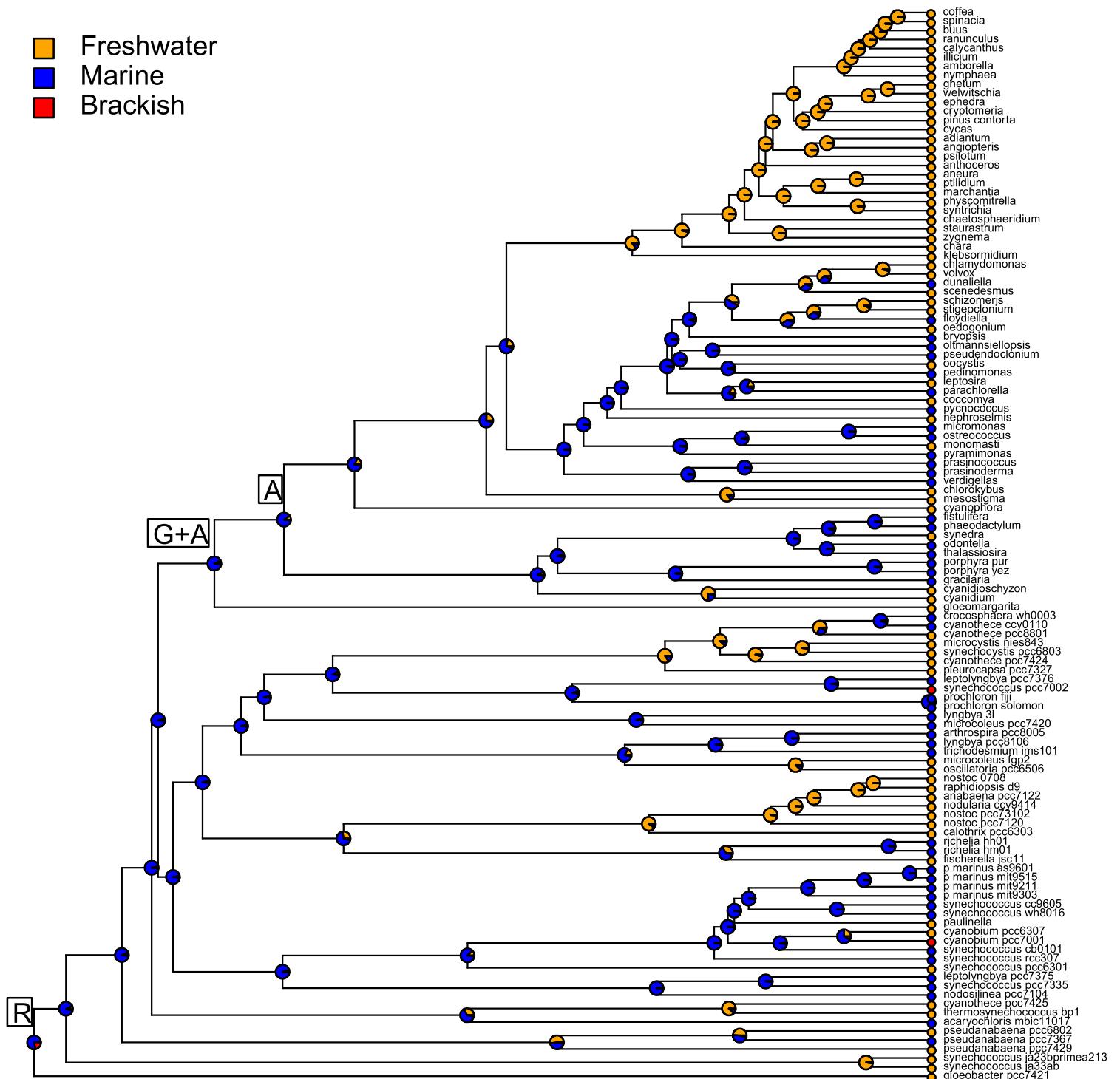
- █ Freshwater
- █ Marine
- █ Brackish



Multistate corHMM

Model average = SAICc

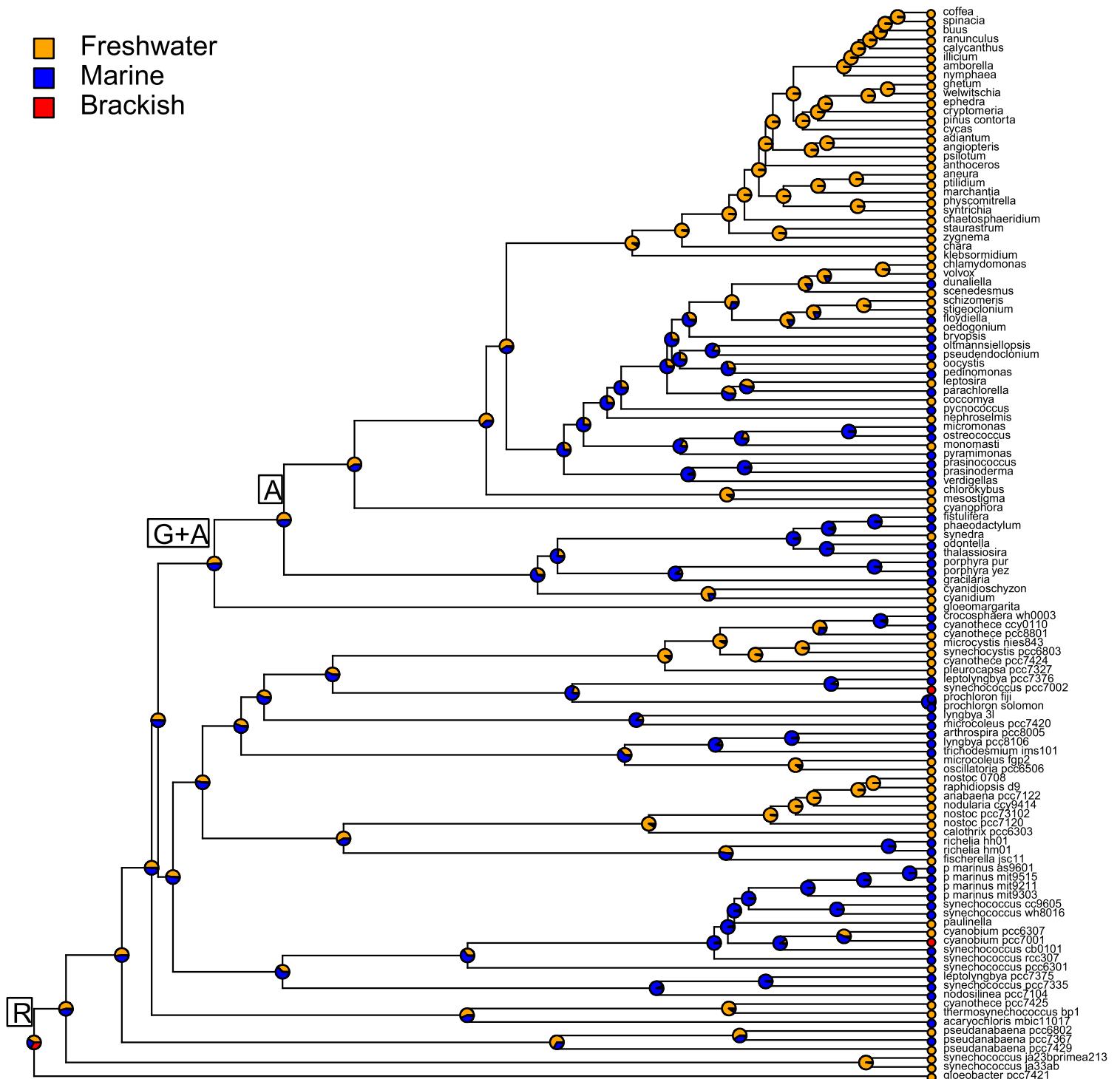
- █ Freshwater
- █ Marine
- █ Brackish



Multistate corHMM

Model average = BMA

- █ Freshwater
- █ Marine
- █ Brackish

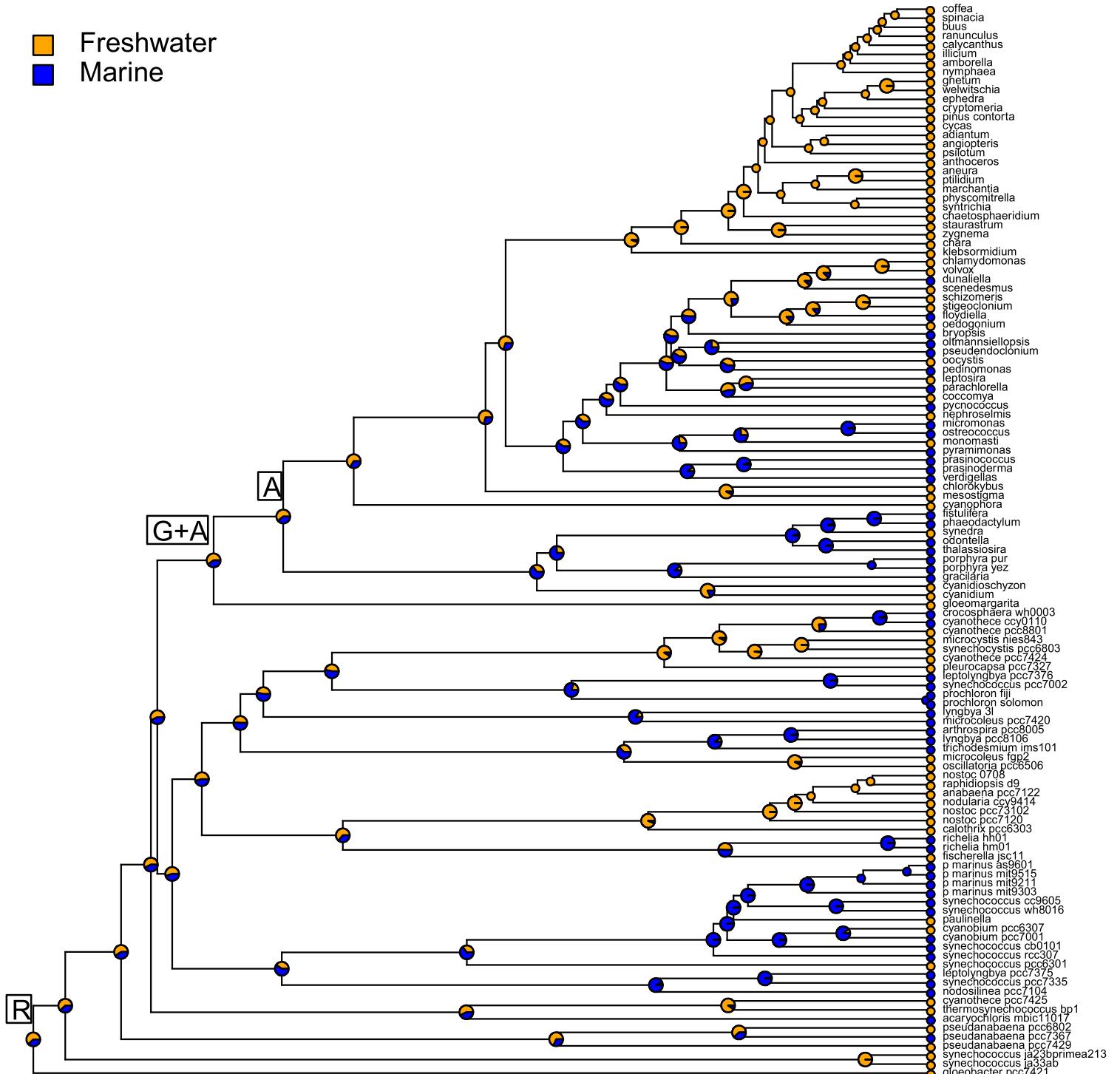


Binary phytools

Model = ER

$Q = \text{empirical}$

█ Freshwater
█ Marine

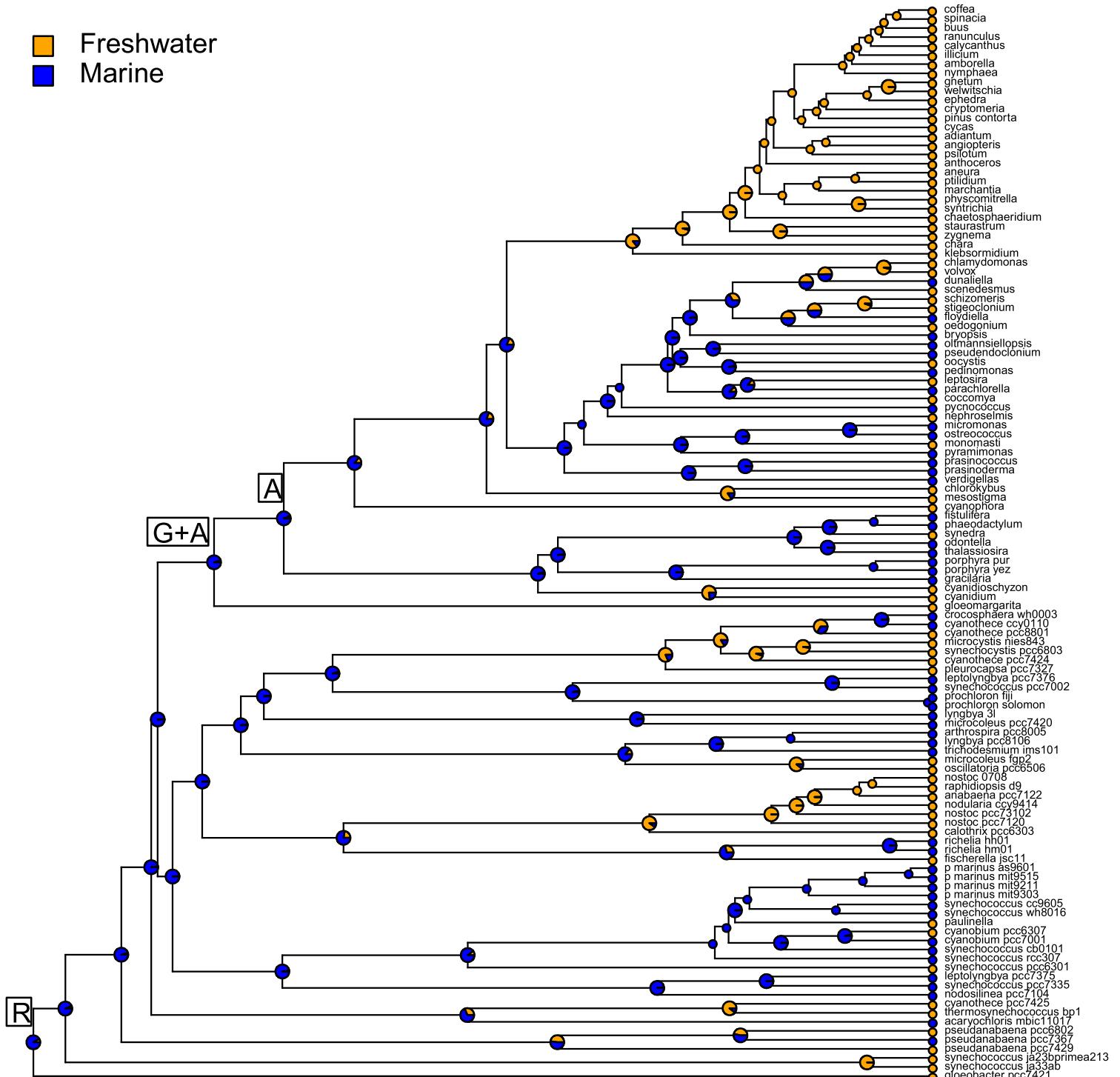


Binary phytools

Model = ARD

$Q = \text{empirical}$

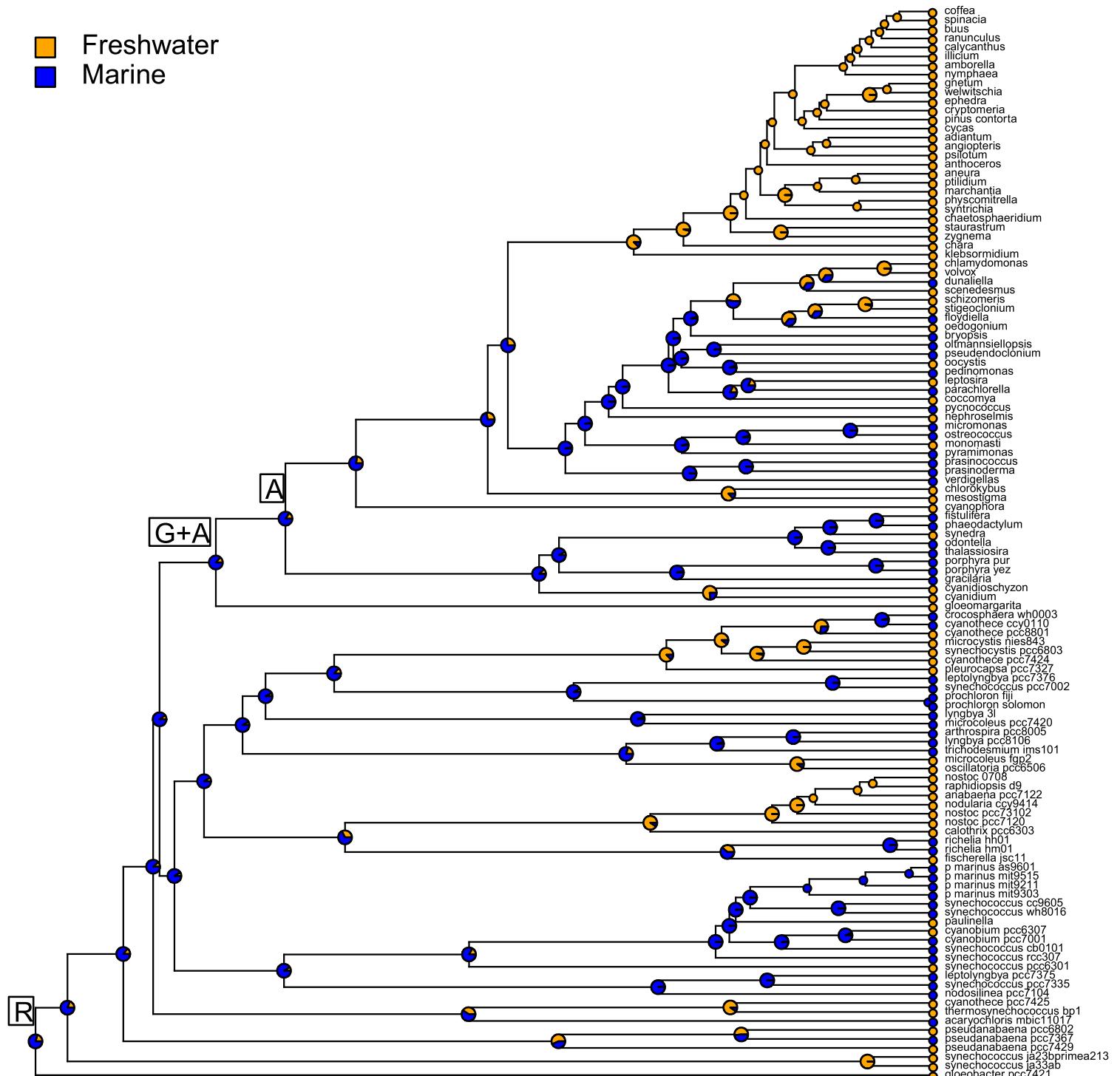
█ Freshwater
█ Marine



Binary phytools

Model average = SAICc

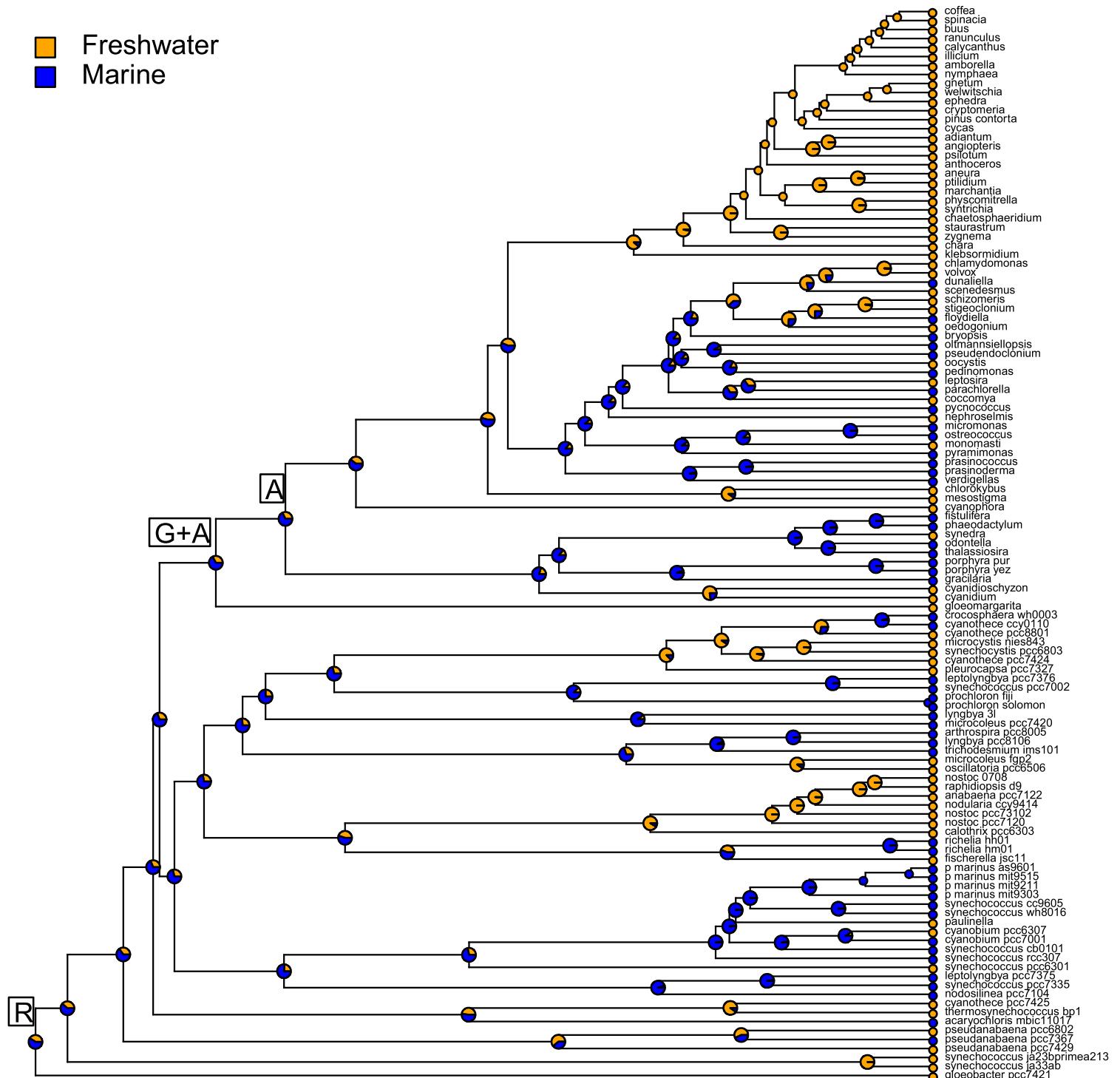
Freshwater
Marine



Binary phytools

Model average = BMA

Freshwater
Marine



Binary phytools

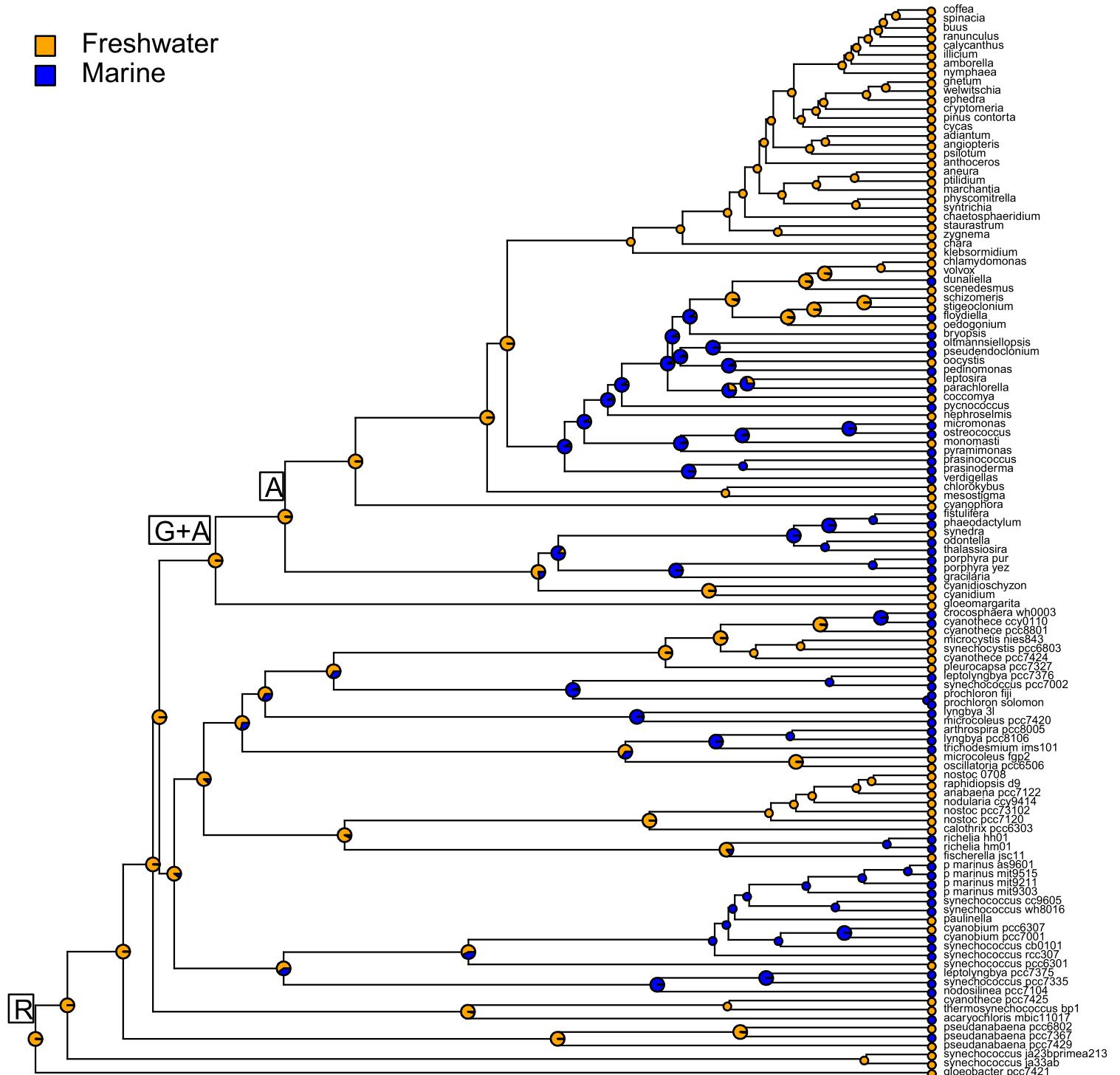
Model = ER

$Q = \text{mcmc}$

$\alpha = 1$

$\beta = 400$

█ Freshwater
█ Marine



Binary phytools

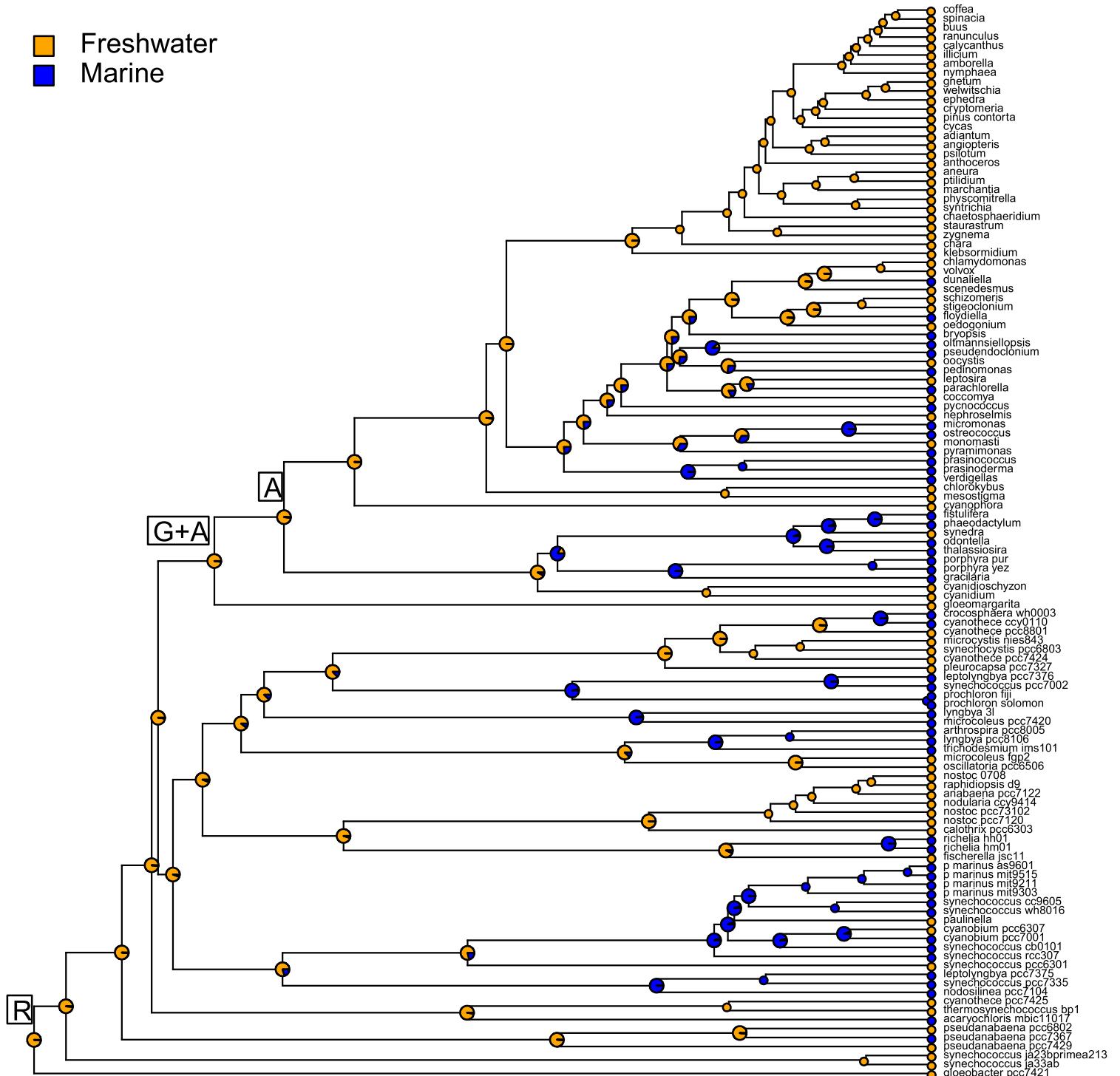
Model = ARD

$Q = \text{mcmc}$

$\alpha = 1$

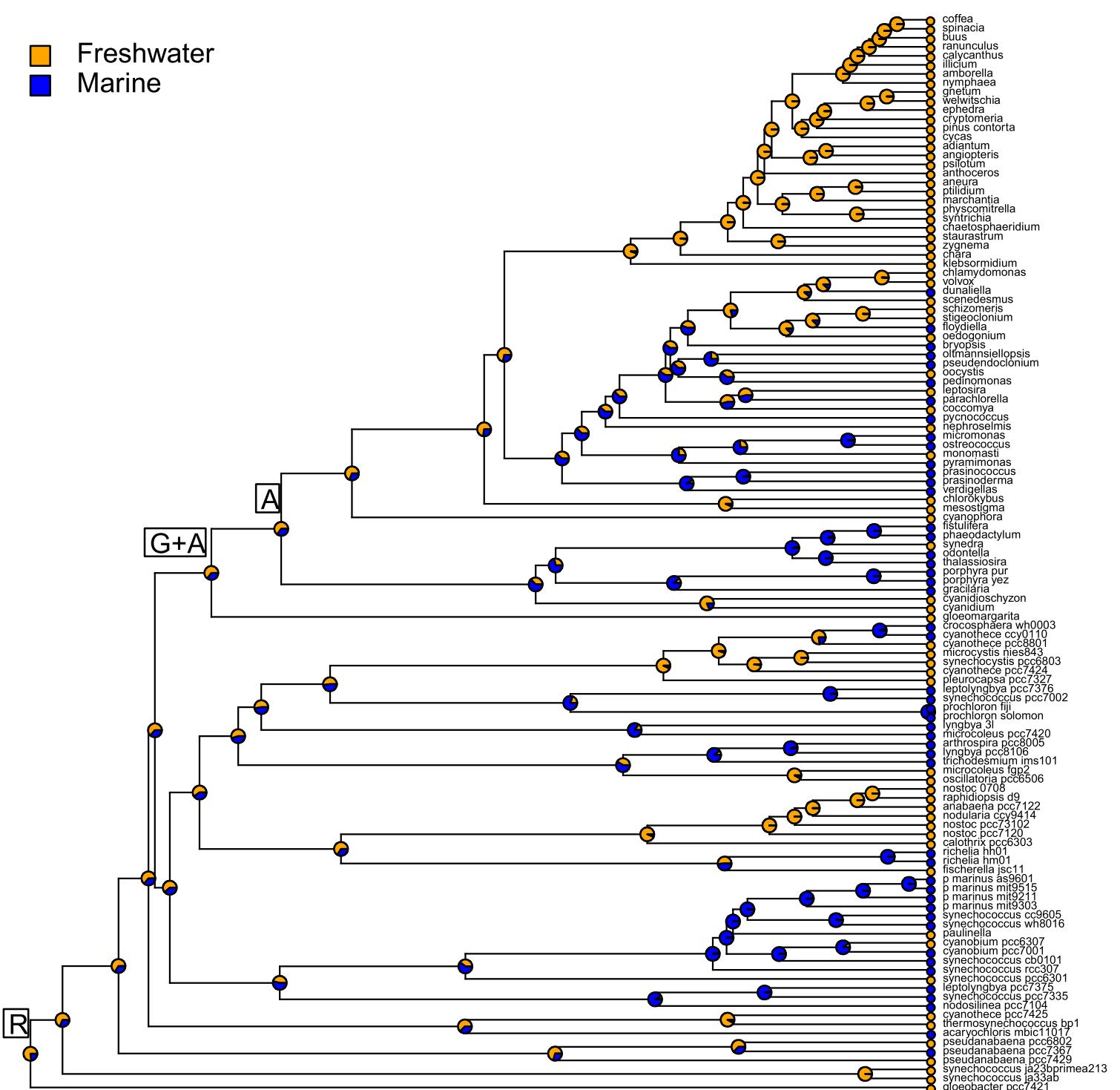
$\beta = 400$

█ Freshwater
█ Marine



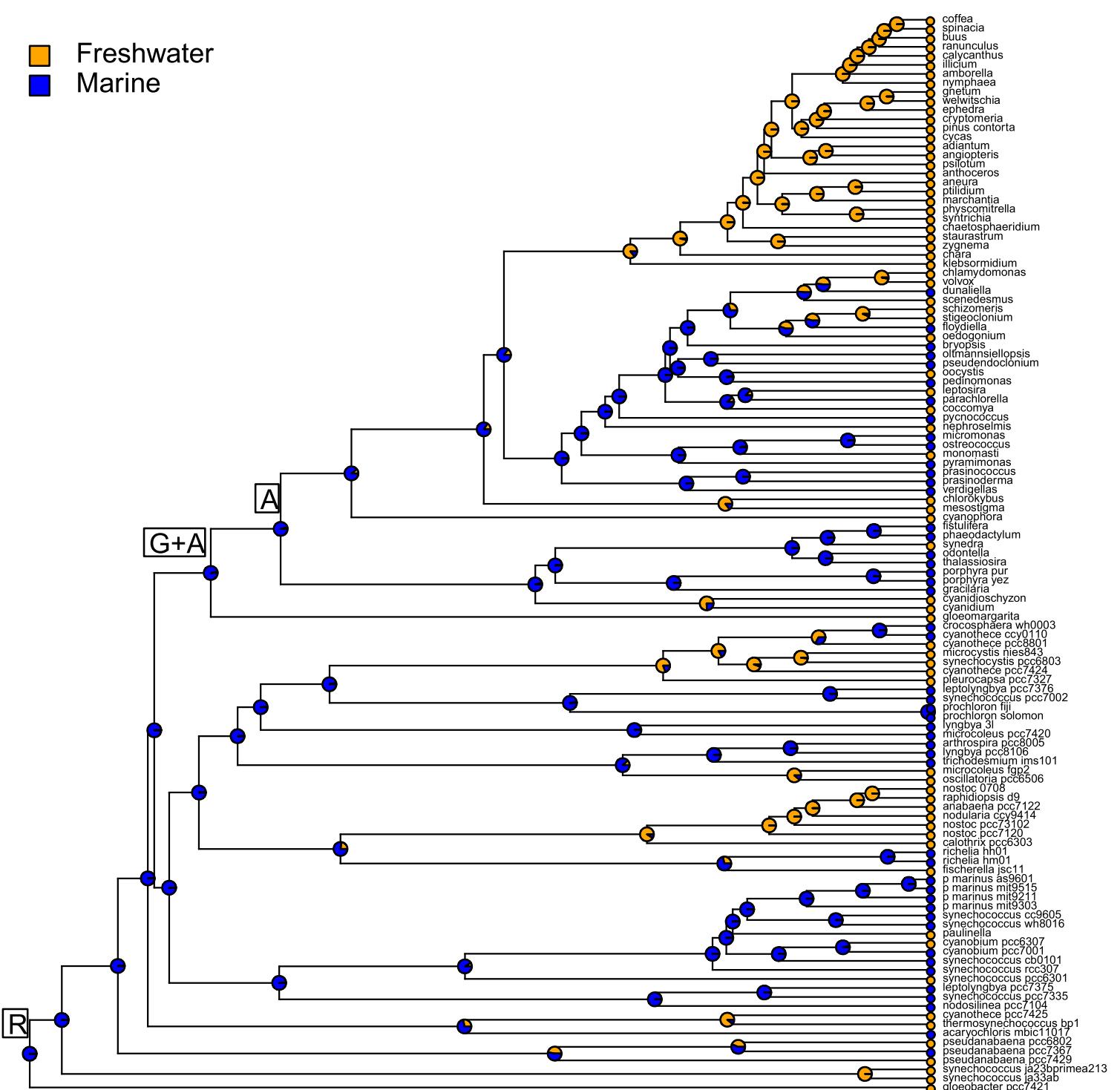
Binary corHMM

Model = ER



Binary corHMM

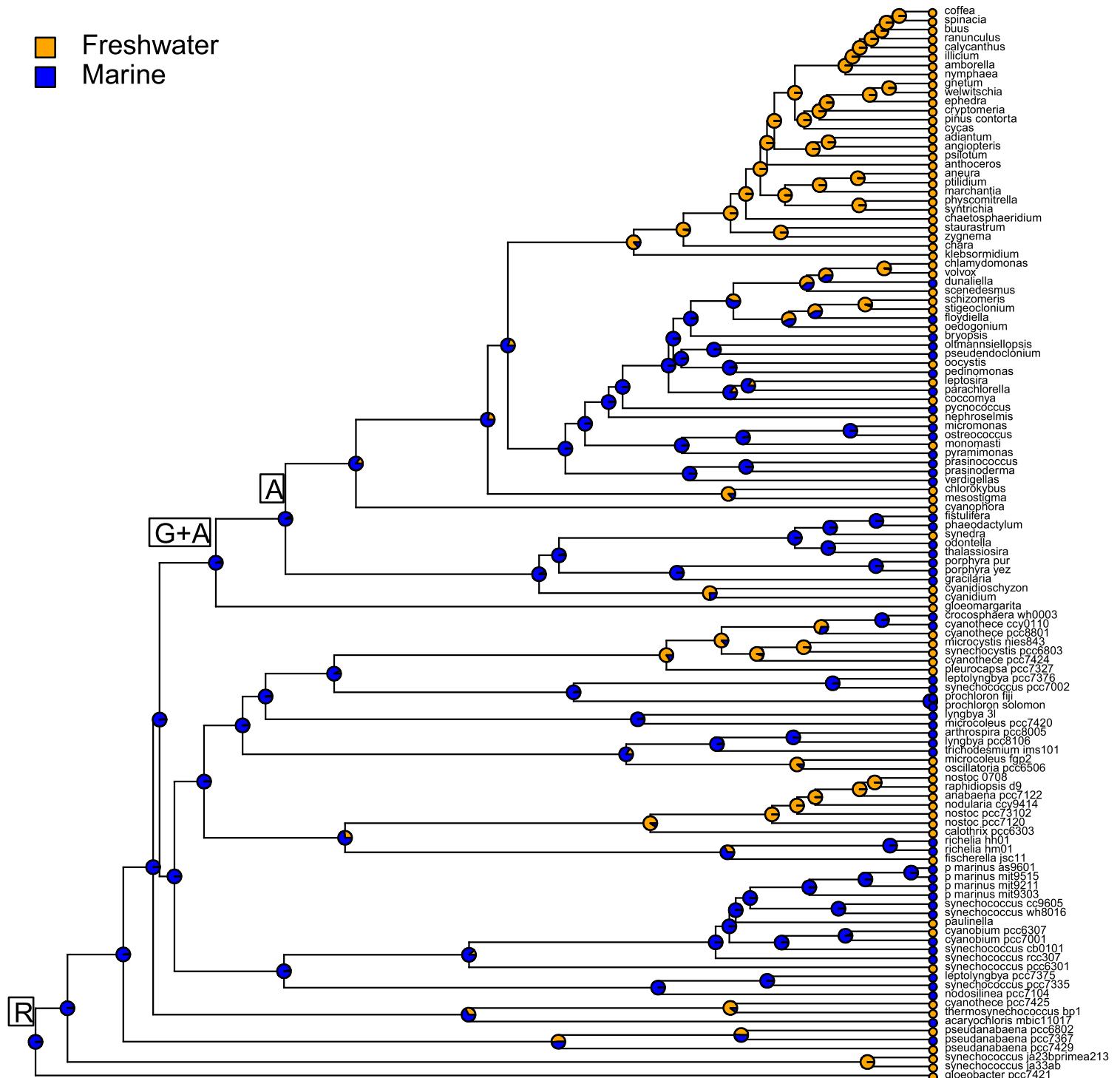
Model = ARD



Binary corHMM

Model average = SAICc

█ Freshwater
█ Marine



Binary corHMM

Model average = BMA

█ Freshwater
█ Marine

