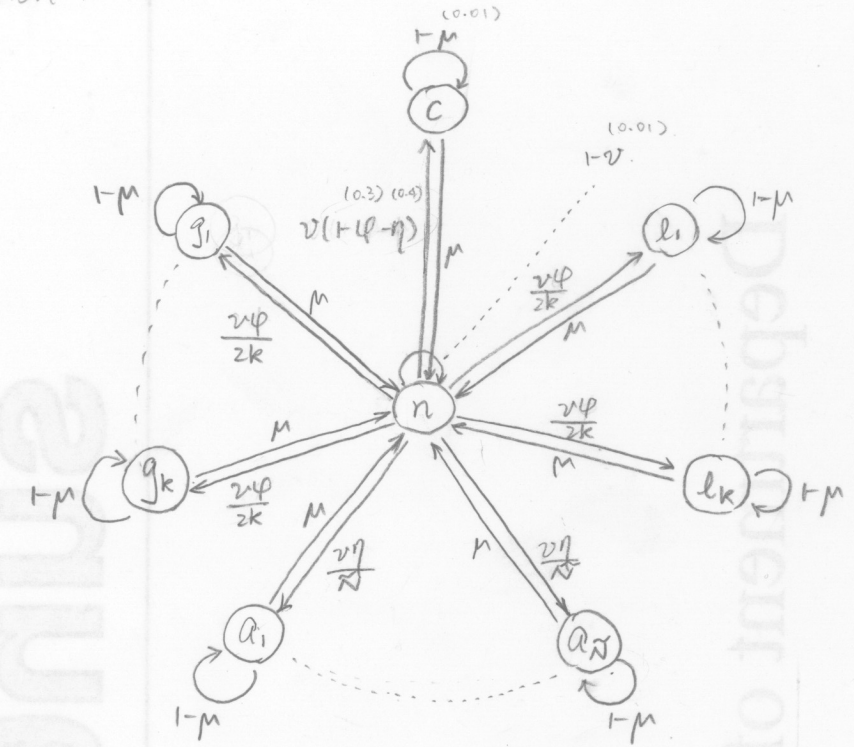
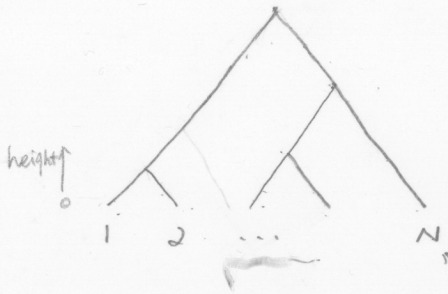
Transition Matrix:



Start:

neutral	all conserve	birth/death	acc
$\frac{\mu}{\mu+\nu}$	$\frac{\nu(1-\varphi-\eta)}{\mu+\nu}$	$\frac{\nu\cdot\varphi}{2k(\mu+\nu)}$	$\frac{\nu\eta}{\tilde{N}(\mu+\nu)}$



$k = 2N-3$ (# branches)

↑ ignore root node

← # present-day species (n leaves)

$\Rightarrow \begin{cases} \text{nnodes} + 1 = 2N \\ k = 2N-3 = \text{nnodes} - 2 \end{cases}$

$\rho_{(0.3)}$ shrink branch length < 1

$\lambda_{(1.5)}$ shrink branch length > 1

$\tilde{N}$: # of acc states with height < acc_height

l : loss (or death) outside × ρ

g : gain (or birth) inside × ρ.

a : acc inside × λ

↑ only for the leaf branches
everywhere else neutral

e.g.