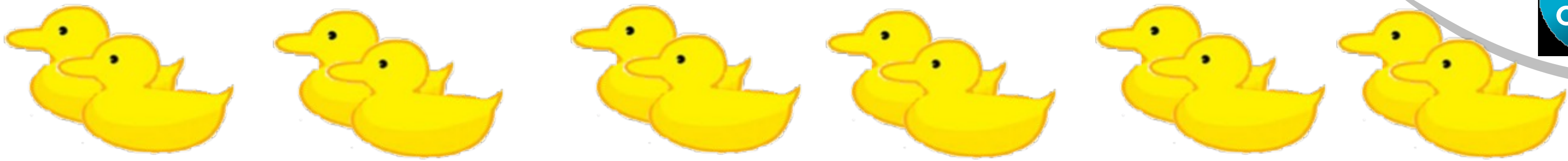
Southern Sweetlips: extra slides

Mark Bravington, CSIRO: June 2021



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Age-based pop dyn much simpler than joint-L-A

but *length* drives fec and sel

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If sel-within-age strong enough to affect Z-within-age... yuk!

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My tip: fit the above to A@L data as well as CKMR
can estimate "growth curve" E[L|A] and V[...] directly

Tedia #2: the plus-group

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My preferred solution:

`. Keep track of $\overline{A}_+$ via

$$\bar{A}_{+,t+1} = \frac{N_{+t}\left(\bar{A}_{+,t}+1\right) + N_{A_+-1,t}A_+}{N_+ + N_{A_+-1,t}}$$

2. Assume geometric distro of age *within* plus-group, matching $\overline{A}_+$

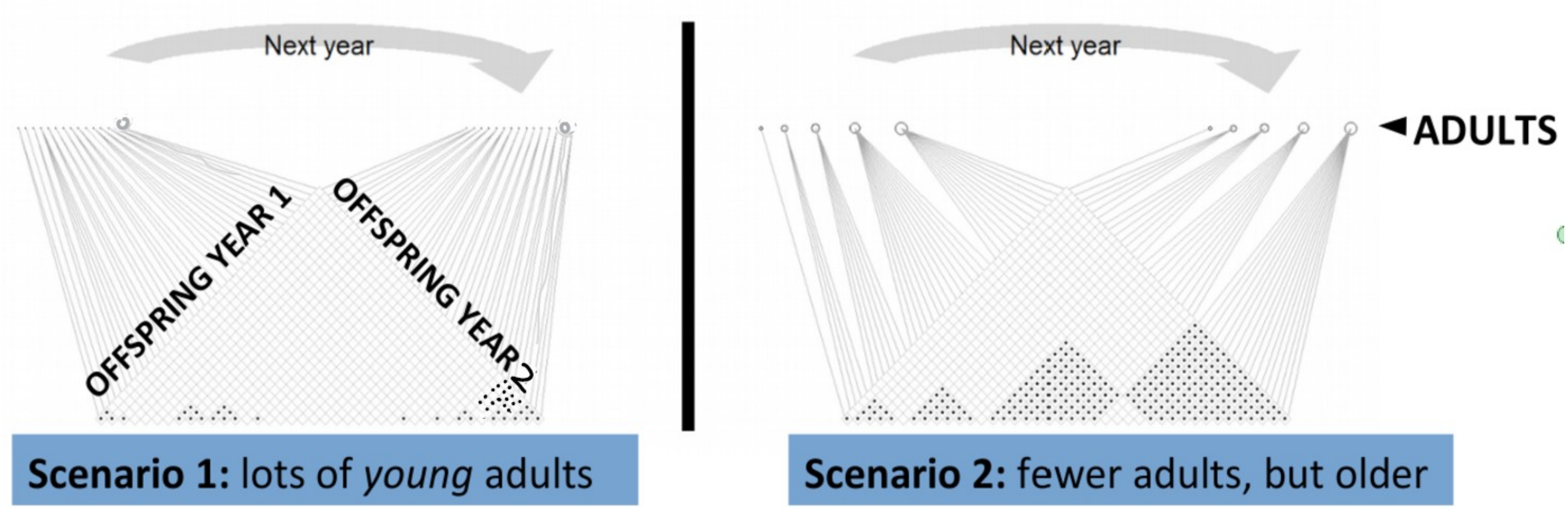
3. Back-project from (~5) quantiles of that distro

HSPs & POPs: filling the holes

These two populations have *same* TRO... 100 offspring each per year

POP rates given adult size:

~ 1/100 for *smallest*; ~8/100 for *mid-size*;

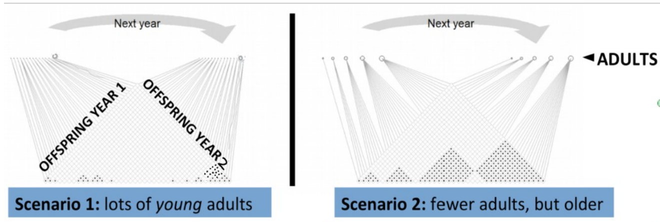


... but *very different* HSP rates !

On RHS, #HSP => "average adult must be largeish"

... thx2 *quadratic* fec term in HSPs

Nequiv again



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A-specific stuff
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TRO of J-likes

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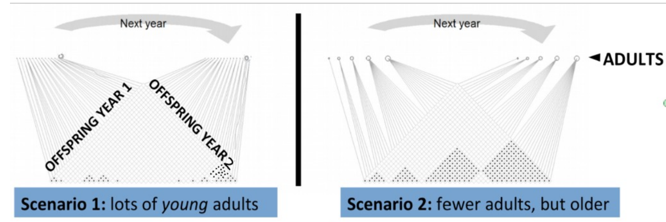

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Units of TRO are up to us!

So, after allowing for time-gap stuff the *observed* rate for that AJ-category tells us:

numerical abundance Nequiv of parents of *all* J-likes, *if* all parents A-like

HSPs: Nequiv of J-like's parents if all were *average parents*;

NB average *parent* ≠ average *adult* except in "mammals"