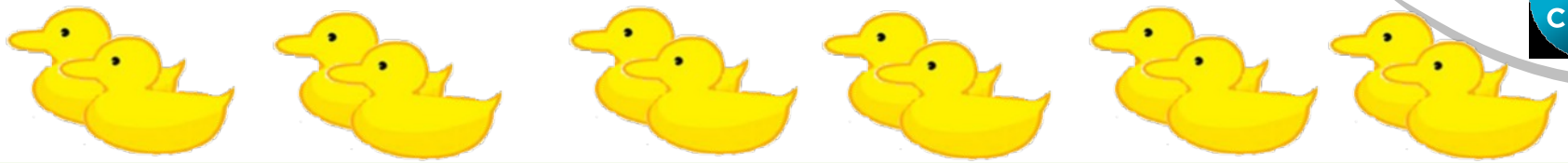
Cartoon revisited: Cobalt Squarehead

Mark Bravington, CSIRO: June 2021



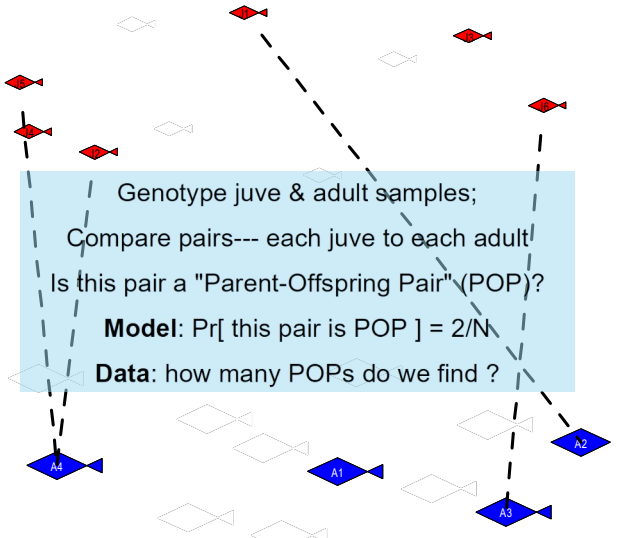
Cartoon: Cobalt Squarehead *Rhombichthys cyanorosea*

1 adult and 1 juve cohort

Biology / sampling: listen!

How does “obvious” answer relate to “The Framework” ?

What could *possibly* go wrong?



$$\hat{N}_{\text{ad}} = \frac{2 \times \#\text{comps}}{\#\text{POPs}}$$

“Pop dyn model”: $N_{♀\text{ad}} \neq N_{♂\text{ad}}$

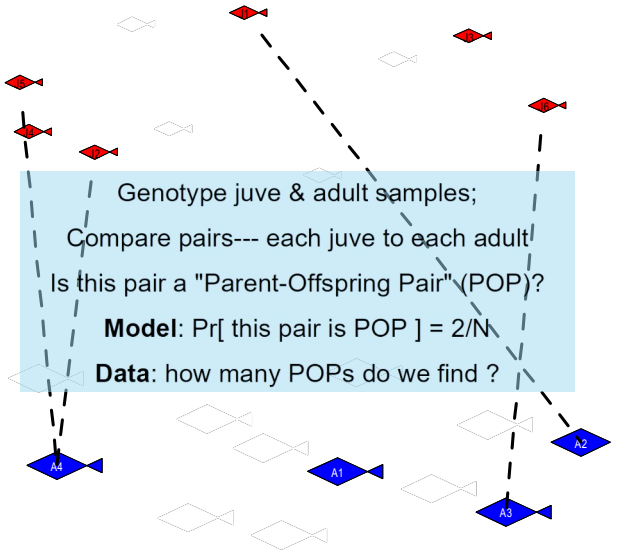
Cartoon: Cobalt Squarehead *Rhombichthys cyanorosea*

#1 Derwent Estuary

Net fishery

Unselective Male/Female

Sex measured



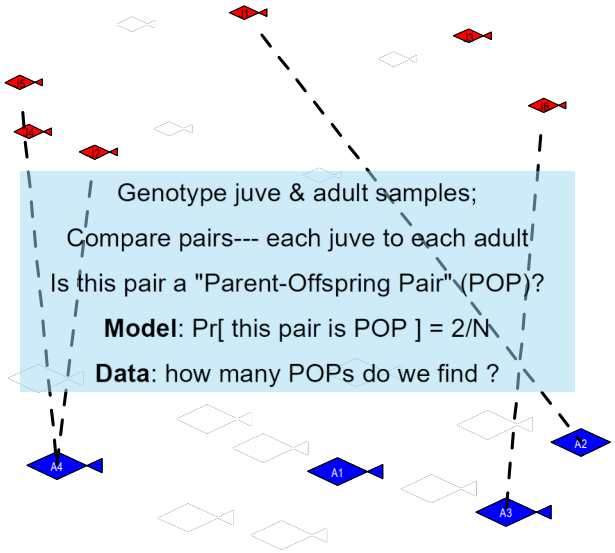
"Pop dyn model": $N_{♀\mathrm{ad}} \neq N_{♂\mathrm{ad}}$

Cartoon: Cobalt Squarehead *Rhombichthys cyanorosea*

Takehomes from Derwent River

1. It works, unsurprisingly
2. Interpretation of
3. Strong Co effect on Male ERRO

    - but not on adult sel prob, so OK

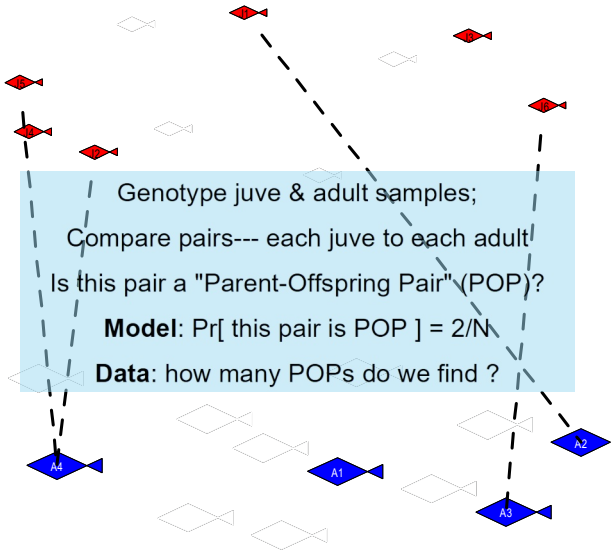


Cartoon: Cobalt Squarehead *Rhombichthys cyanorosea*

#2 Whyalla

Selective fishery...

look at code now!



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Takehomes from Whyalla

1. Covariate effect on ERRO can be est'ed
2. N_{equiv} can be est'ed
3. ... but "census N" requires "selectivity est"
   - from reference (unsel) sample?
   - or some other way...