BauchRhoMFig

Sophie Wulfing

27 September, 2023, 12:34

Figures:

Movement: Show right panels of Movement Rho Tests of each analysis. Shows that movement only matters with assymetry. Doesn't have an affect when asymetrical

Influence: Show comparison of affect on d vs rho. I guess try with symmetrical vs not by putting these two in same graphs as other

Also have fig showing how rho on its own dampens oscillations (extend analysis to until scale of d)

Next: Read bauch and thampi to find other analyses

Table 1: Parameter values used in this analysis

Parameter	Population_1	Population_2	Def
r	0.16	0.16	Fish net growth
S	0.8	0.8	Supply and demand
h	0.25	0.25	Harvesting efficiency
k	0.17	0.17	Social learning rate
w	1.44	1.44	Conservation cost
\mathbf{c}	0.5	0.5	Rarity valuation
d	0.3	0.3	Social norm strength (within pop)
m	0	0	Fish movement (from opposite patch)
$_{ m rho}$	0	0	Social norm strength (opposite pop)

Come up with 4 bullet points: Movement only matters with asymmetry Portfolio effect Movement dampens cycles Do overharvesting scenario

Start with bullet points and figures and really hash out paper's "story"

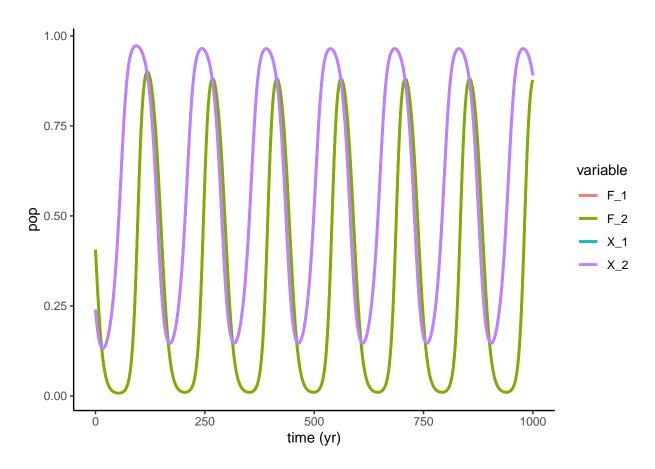


Figure 1: New Model with default paramters

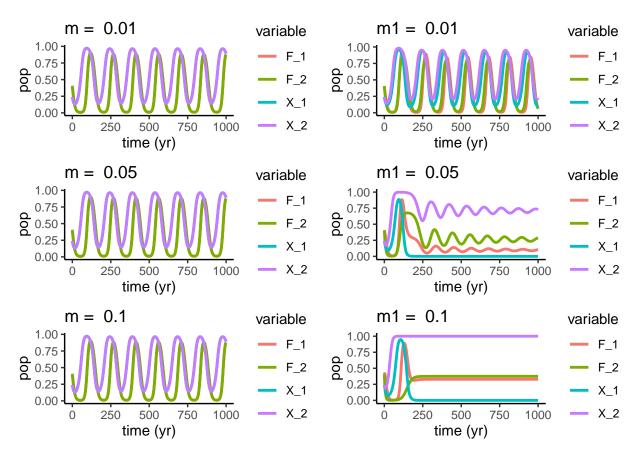


Figure 2: Showing that movement only matters when there is asymmetry. This can be asymmetry in other params

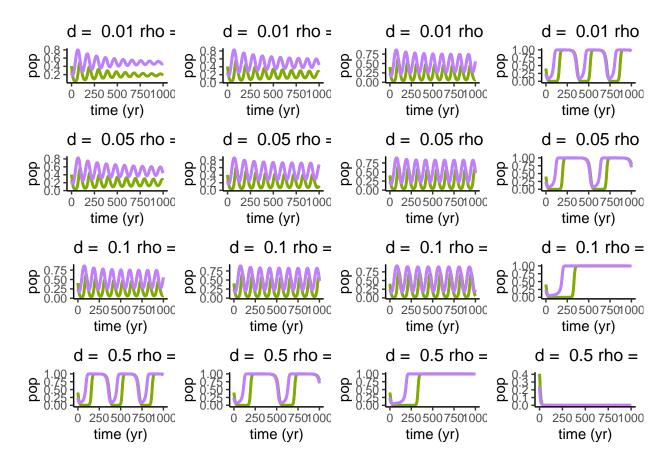


Figure 3: This is just demonstrating that with symmetry in conditions, d and rho actually have the same affect

High rho/d ruin cu=ycles. Weak influences = rapid cycling. One or the other strong = long term cycles. Delayed reactions to pressure?

Appendix

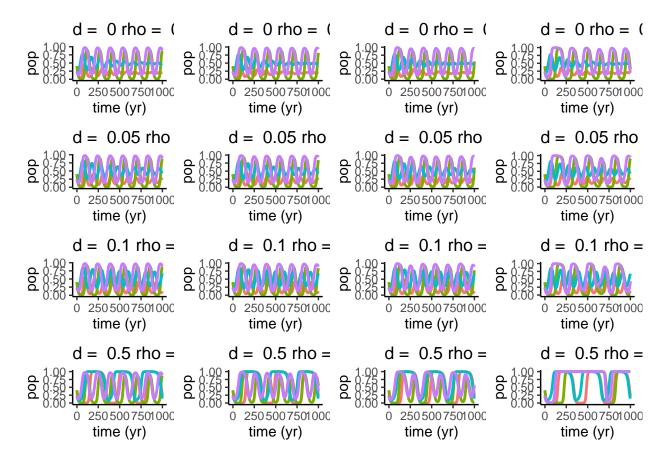


Figure 4: This shows the difference between a pop 1 listening to themselves vs. other pop. Looking at red line (which is fish in pop 1), it's only improved by listening to respective pop as opposed to increases in listening to your own

Useful to listen to outsiders. If pops aren't synchronized could take in different forms of info leading to more stability. Portfolio effect: many stocks not in sync can smooth over variation and have a more stable overall dynamics.

