Description

Mutualism_Coexistence_Theory_Code.nb is a Mathematica notebook for producing the plots presented in Figure 2 and Appendix S5: Figure S1. The files can be run on Wolfram Mathematica with a commercial license or can be viewed on the free Wolfram Player. A PDF is also included, which shows the code and outputs. System requirements and installation instructions for Wolfram Player are given below as well as a demo and instructions for running the codes. Users with Mathematica should use it to run the codes rather than Wolfram Player.

System Requirements

Wolfram Player (v. 12.1) runs on Windows, Mac, and Linux. Wolfram Player takes about 3 GB of space and has been tested on a Mac (Catalina v. 10.15).

Installation
- Go to https://www.wolfram.com/player/, chose the operating system, and press 'Start Download'
- Follow installation instructions (installation takes about 10 minutes)
- Download Datura_wrightii_Code.nb and Datura_discolor_Code.nb

Demo and Instructions for Use
- In Wolfram Player, select 'Open…' and chose the directory containing the downloaded codes.
- The code as well as certain outputs can then be viewed.
- Outputs include ecological equilibria, ESSs, and Figures showing ecological parameter spaces, evolutionary isoclines, ESSs and initial trait values, direction of selection, and trait evolution trajectories as described in the Figure legends in the manuscript.
- Users with Mathematica can run cells by clicking on the right-hand side brackets and pressing 'shift + enter' or 'enter' on the num pad.
- Expected runtime varies from seconds to a few hours depending on the cell. Cells with long run times are noted in the code comments. Users who wish to skip these cells for the sake of time can proceed to latter cells that generate key Figures presented in the manuscript in a few seconds.
- Quantitative results presented in the paper can be reproduced by running the appropriate cells or by running the full code by pressing 'Ctrl + a' and then 'shift + enter' or 'enter' on the num pad.