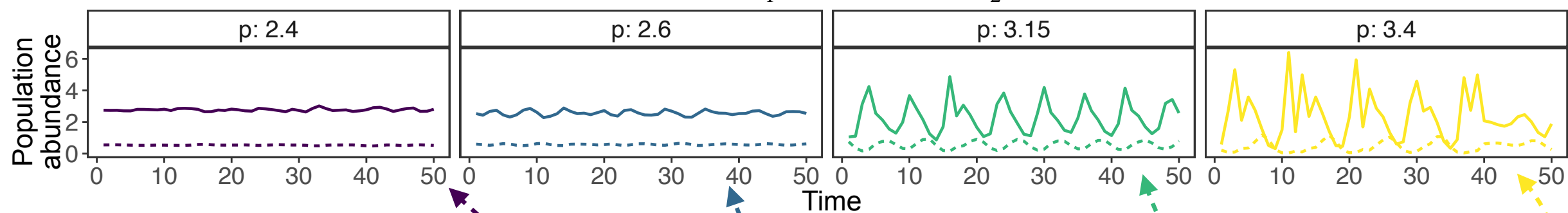


A**Observed time-series data and levels of environmental driver**— Prey (x_1) - - Predator (x_2)**B****Train GP-EDM model to learn**

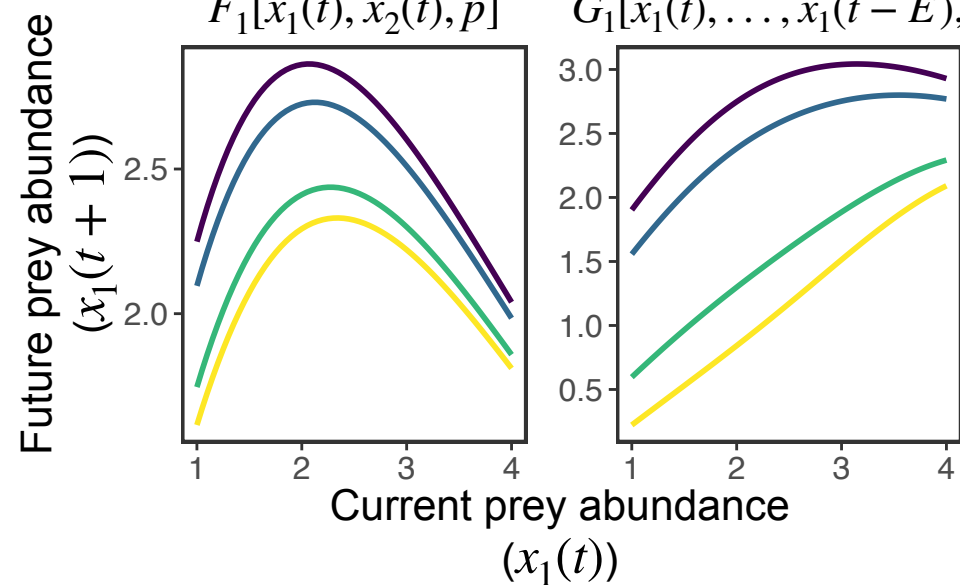
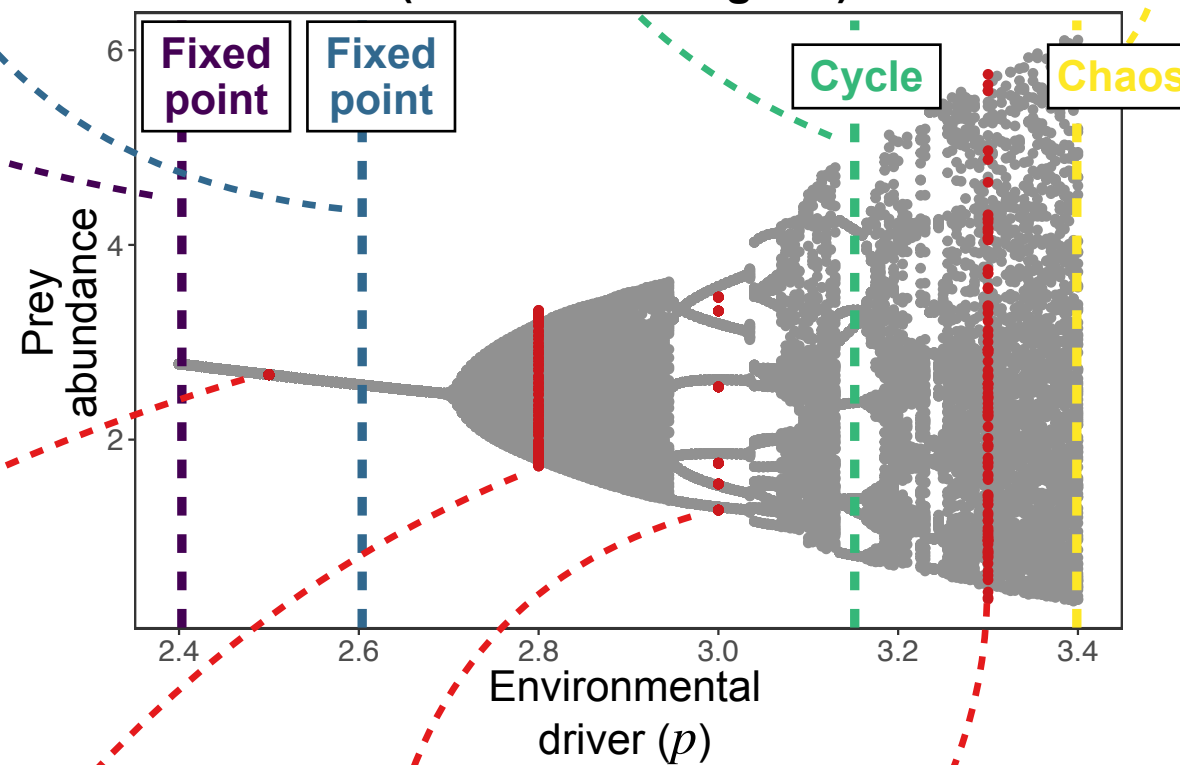
$$x_1(t+1) = G_1[x_1(t), \dots, x_1(t-E), p]$$

Analytical

$$F_1[x_1(t), x_2(t), p]$$

Inferred

$$G_1[x_1(t), \dots, x_1(t-E), p]$$

**C****Dynamical regimes over multiple driver levels (bifurcation diagram)****D****Extrapolate GP-EDM model to reveal unseen dynamical regimes**