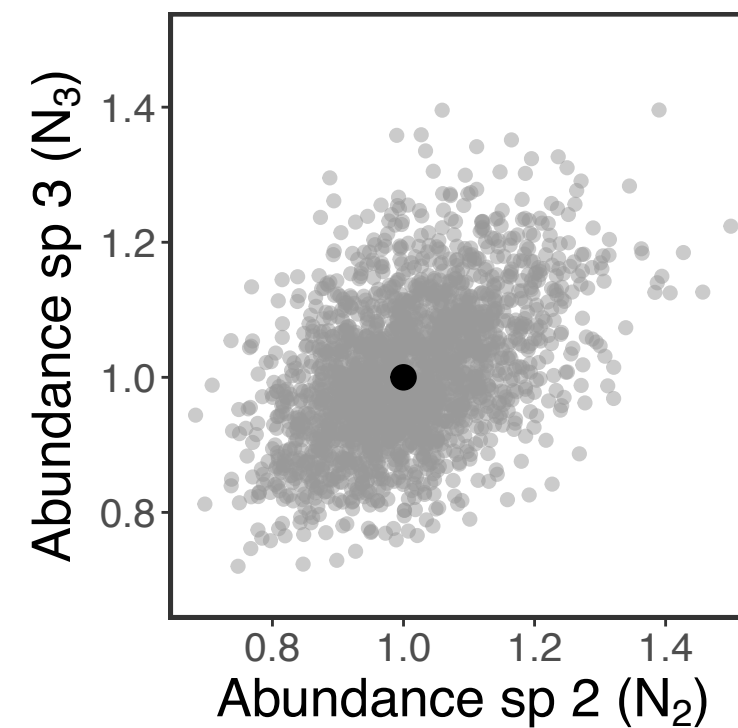
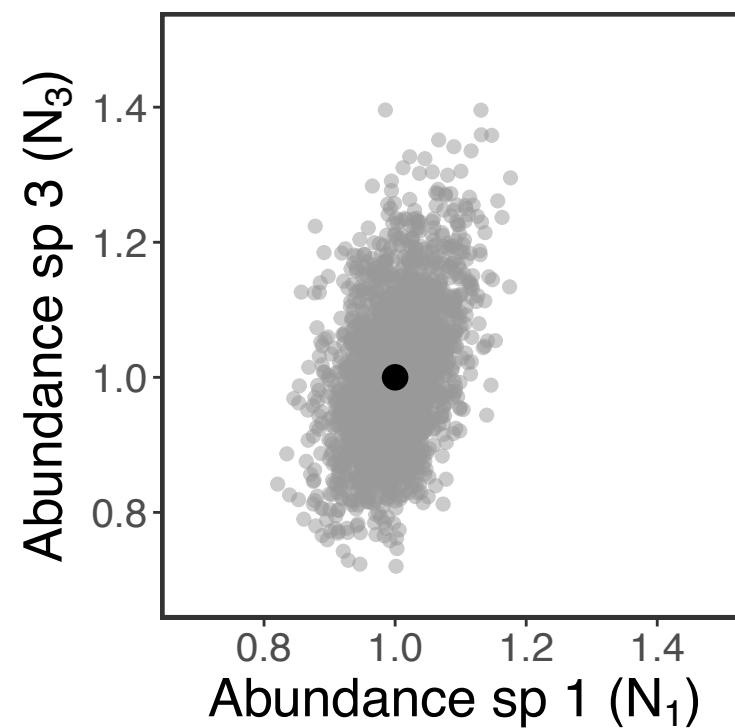
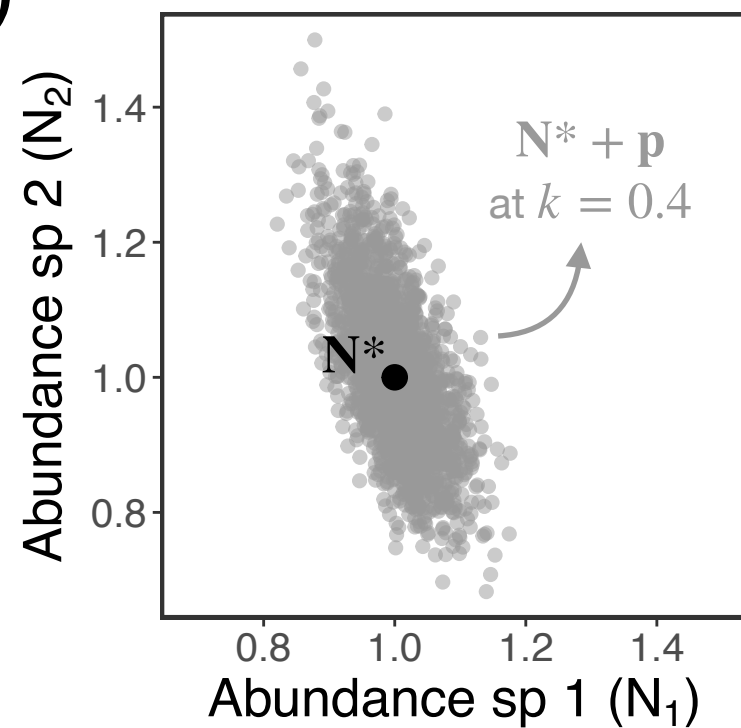


(a)**(b)**

$$\mathbf{J} = \begin{bmatrix} -4 & -3 & 2 \\ -2 & 1 & 2 \\ 5 & 2 & 0 \end{bmatrix}$$

$$\lambda_{1,2} = 2.0 \pm 0.7i, \lambda_3 = -7.0 + 0i$$

$$\mathbf{v}_{1,2} = \begin{bmatrix} -0.36 \\ 0.79 \\ 0.05 \end{bmatrix} + \begin{bmatrix} 0.19 \\ 0 \\ 0.45 \end{bmatrix} i$$

$k = 0.1$ $k = 0.2$ $k = 0.3$ $k = 0.4$ $k = 0.5$

Expected
sensitivity
ranking:

sp 2	sp 2	sp 2	sp 2	sp 2
sp 3	sp 3	sp 3	sp 3	sp 3
sp 1	sp 1	sp 1	sp 1	sp 1

Eigenvector
ranking:

sp 2
sp 1
sp 3

(c)