

Ricker Steps

$$R = \alpha P e^{-\beta P}$$

- Regress $\ln(R/P)$ on P , run regression
- Estimate α from intercept and β from abs value of slope
- Using appropriate range, plot solutions for curve using α and β (above)
- MSY from formula, $(1 - \beta P) \alpha e^{-\beta P} = 1$

Beverton Holt Steps

$$R = 1 / \{ \alpha + (\beta / P) \}$$

- Regress $1/R$ on $1/P$, run regression
- Estimate α as intercept and β as slope
- Fit curve by transforming data with inverse of parents and recruits for each stock
- $MSY = \frac{(1 - \sqrt{\beta})^2}{\alpha}$