## FLife: Operating Model Conditioning

Thornback Ray L Kell 24 May, 2018

## Life history parameters

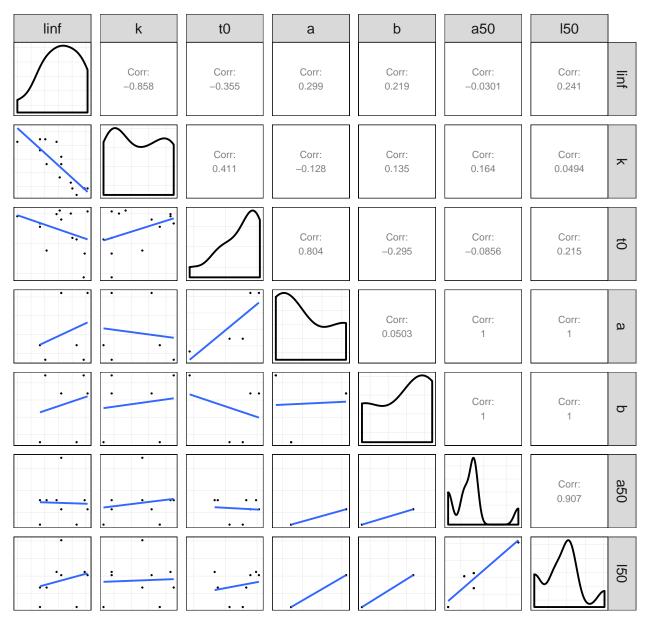
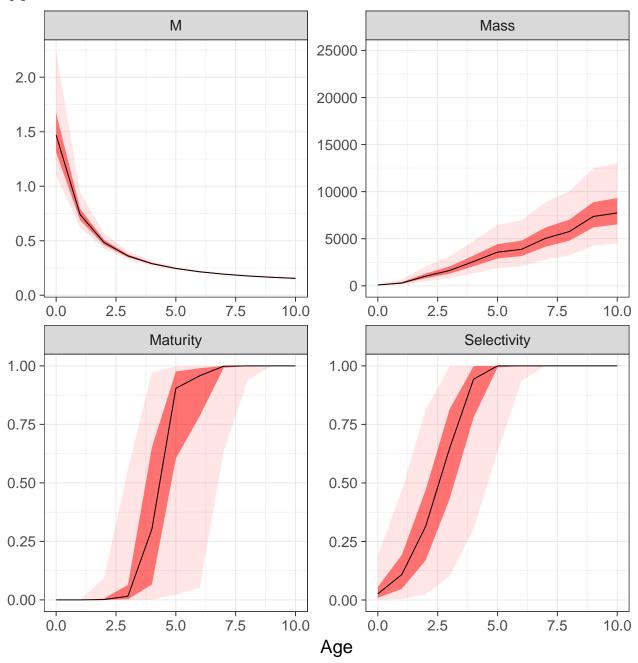


Figure 1 Pairwise scatter plots of life history parameters.

## Equilibrium dynamics

The parameters are then used by lhEql to simulate the equilibrium dynamics by combining the spawner/yield per recruit relationships with a stock recruiment relationship.

[1] 1



 ${\bf Figure~2~Vectors}.$ 

## Population dynamics

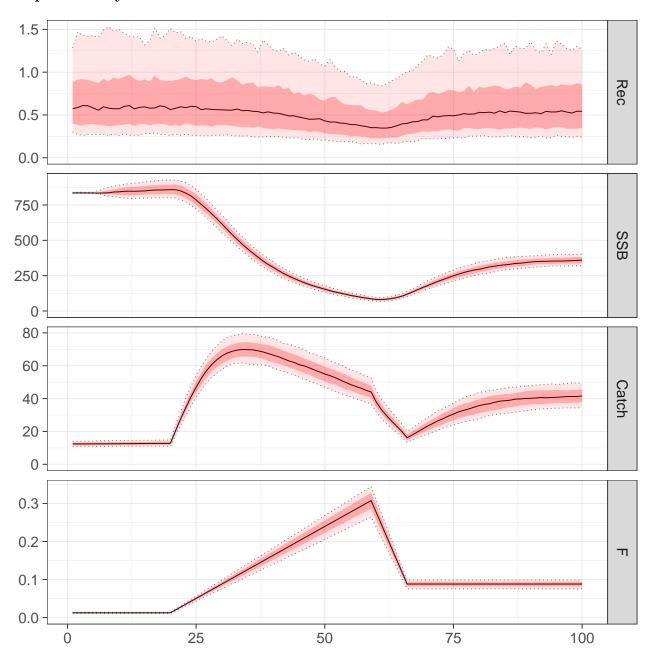


Figure 3 Time series for thornback ray.