

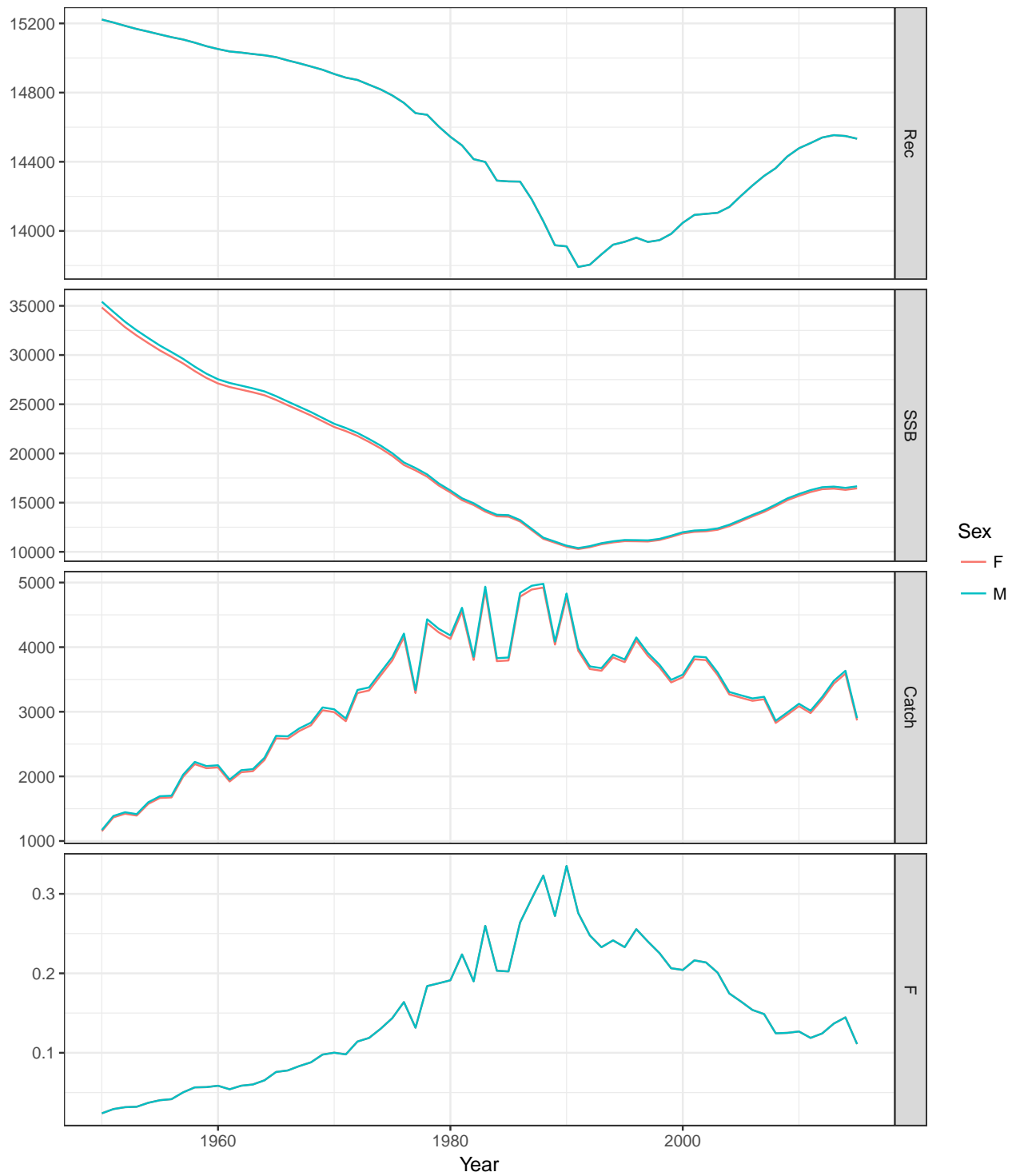
# Pollack

Operating Model

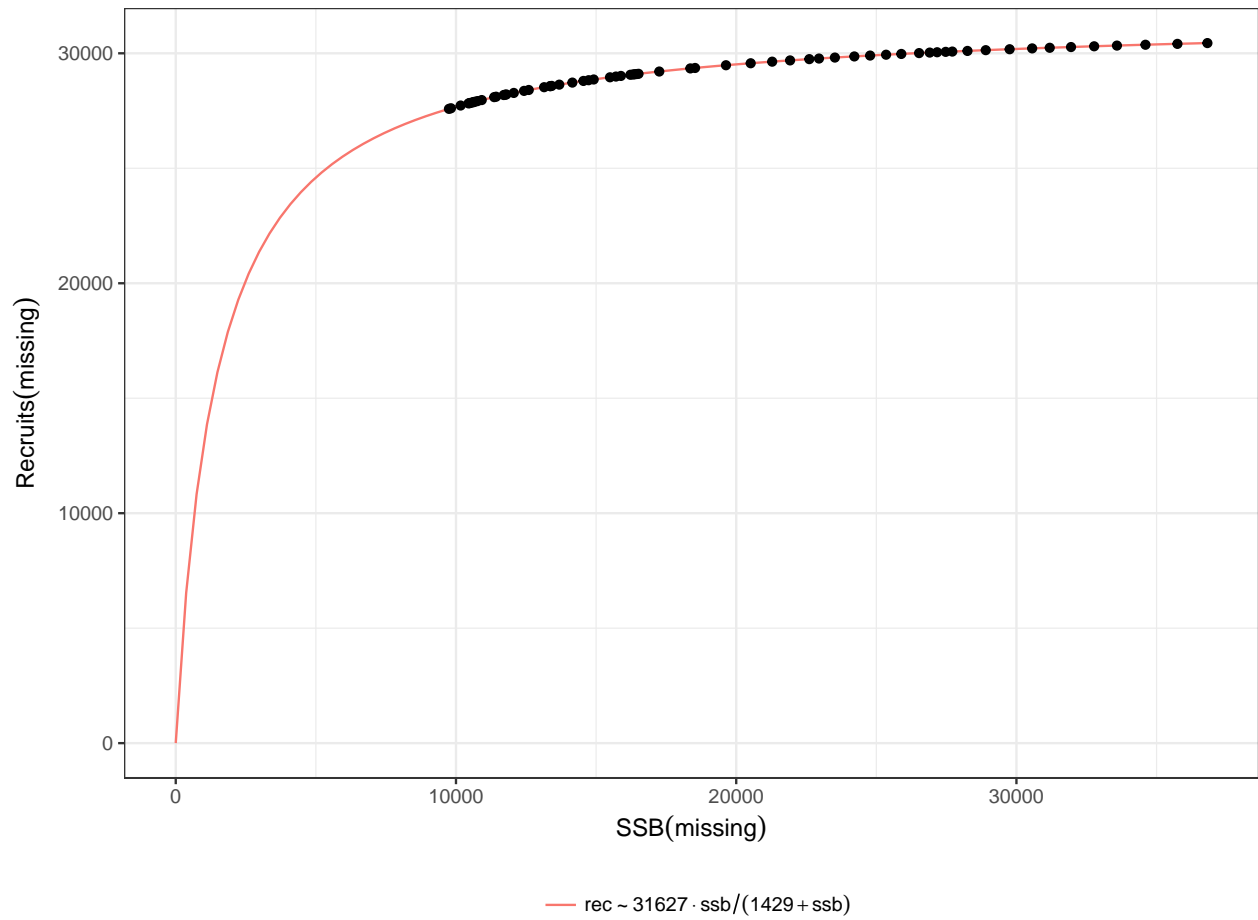
*Laurence Kell*

*09 June, 2018*

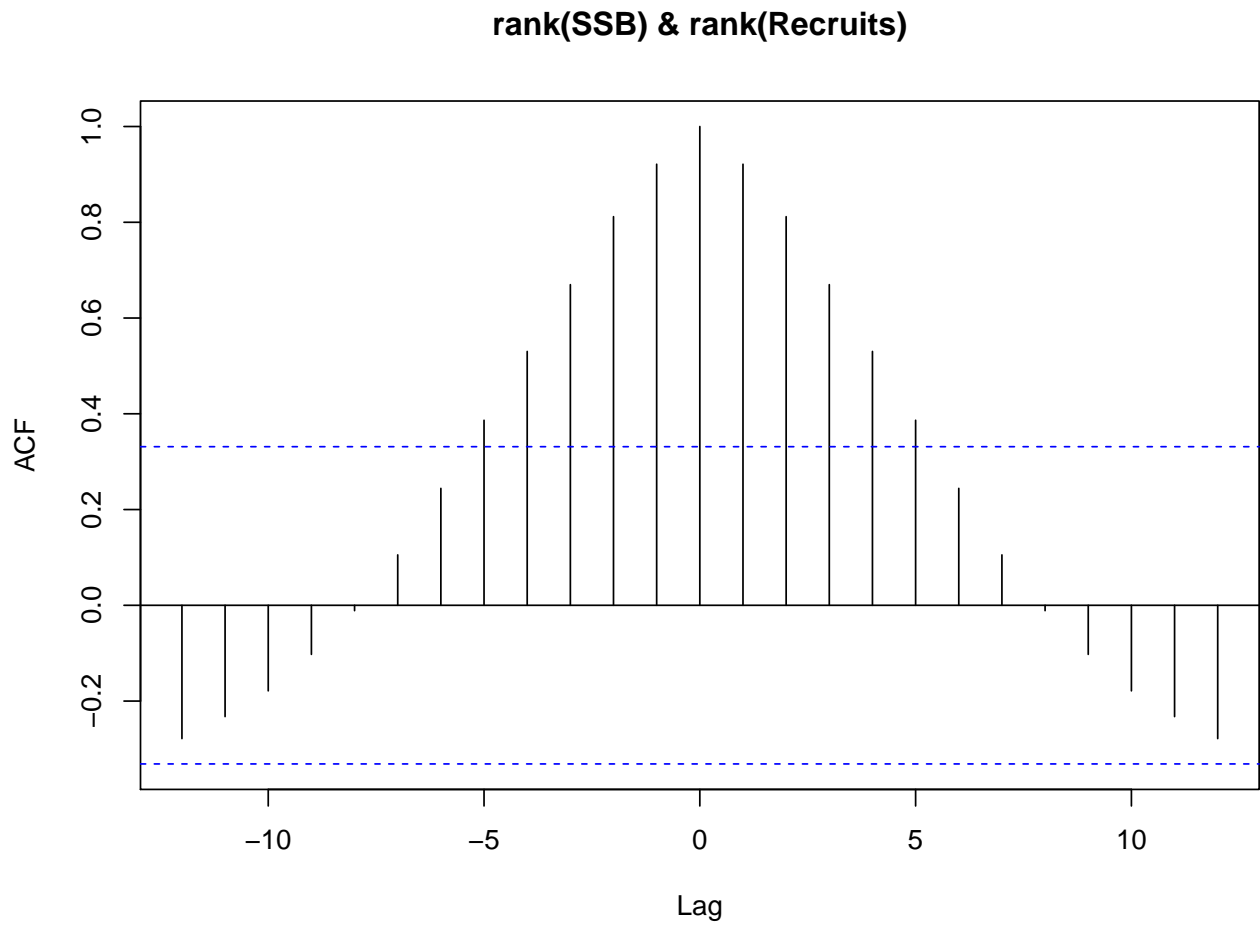
## Figures



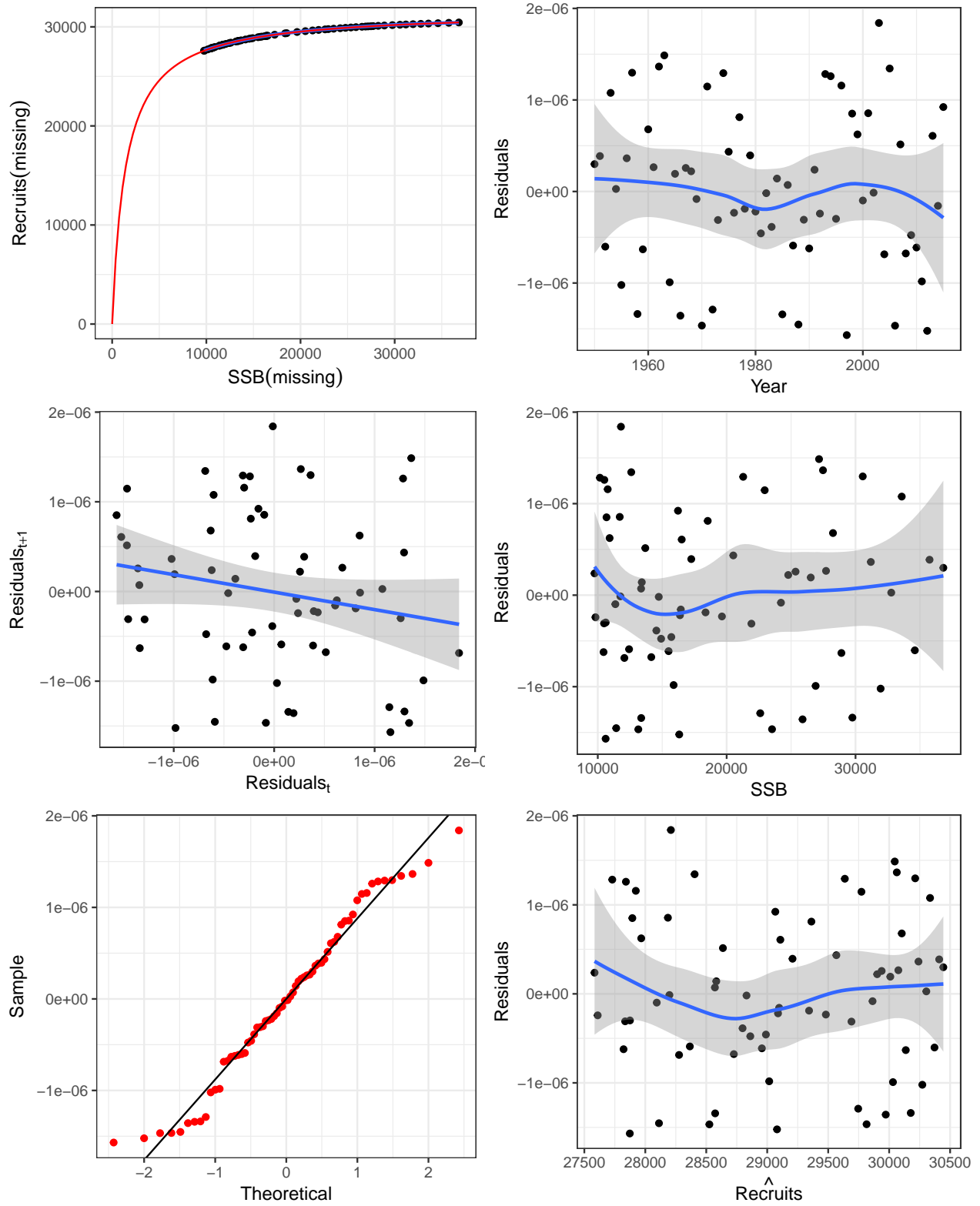
**Figure 1** Time series of recruitment, SSB, catch and fishing mortality.



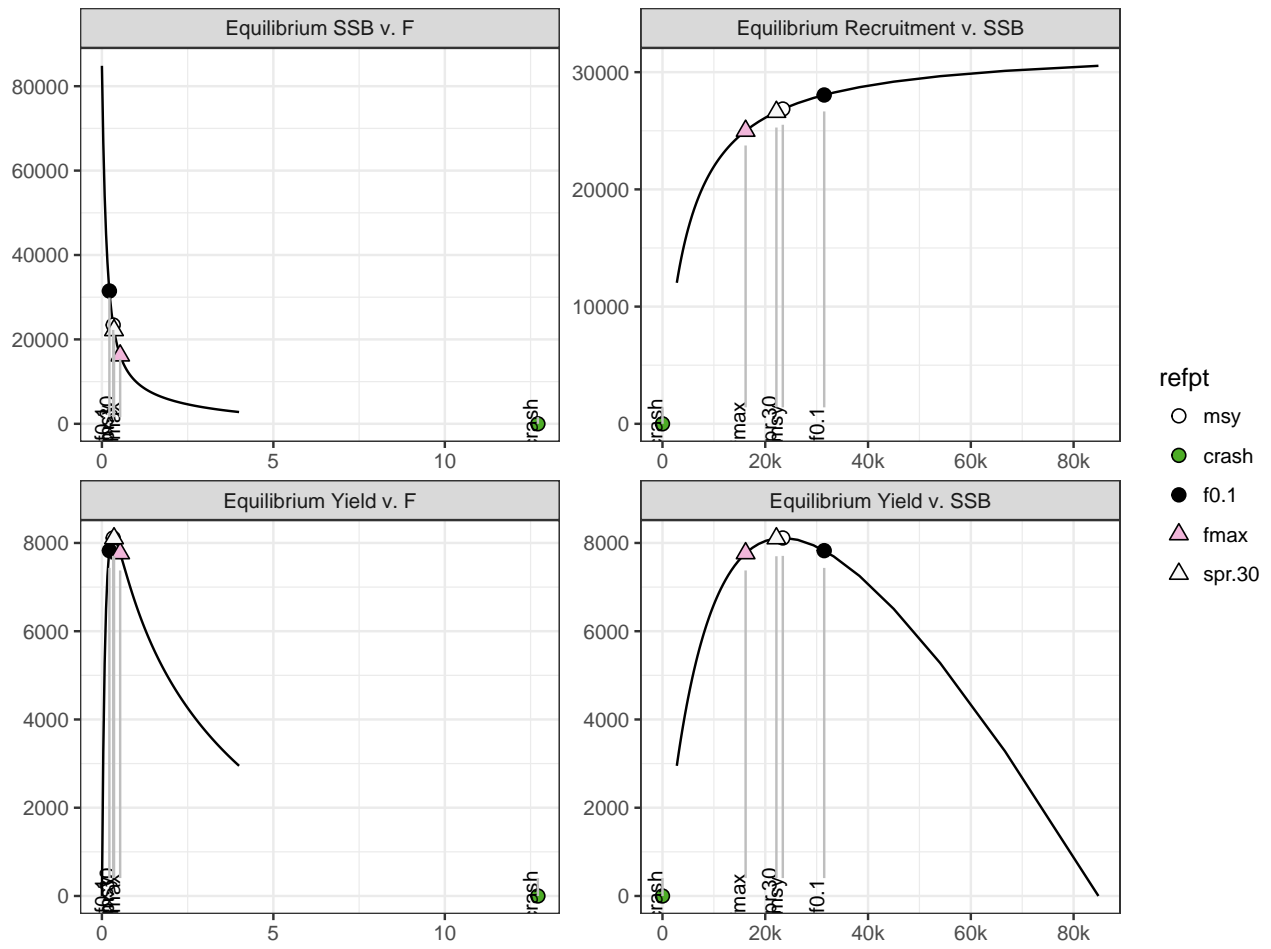
**Figure 2** Stock recruitment relationship as fitted by SS.



**Figure 3** Cross Spearman correlations between SSB and recruitment, a positive lag indicates that a stock-recruit relationship and a negative lag a recruit-stock relationship.



**Figure 4** Fit to stock recruitment relationship, with goodness of fit diagnostics.



**Figure 5** Equilibrium curves with reference points.

## Software

All analysis was conducted using R and FLR and the **diags** package which provides a set of common methods for reading these data into R, plotting and summarising them.(<http://www.flr-project.org/>)

- R version 3.4.1 (2017-06-30)
- FLCore: 2.6.8
- diags:
- ggplotFL:
- diags:
- r4ss:
- **Compiled:** Sat Jun 9 17:49:08 2018

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## References