FLife: Operating Model Conditioning

Razors

L Kell & A Tidd

22 July, 2018

Life history parameters

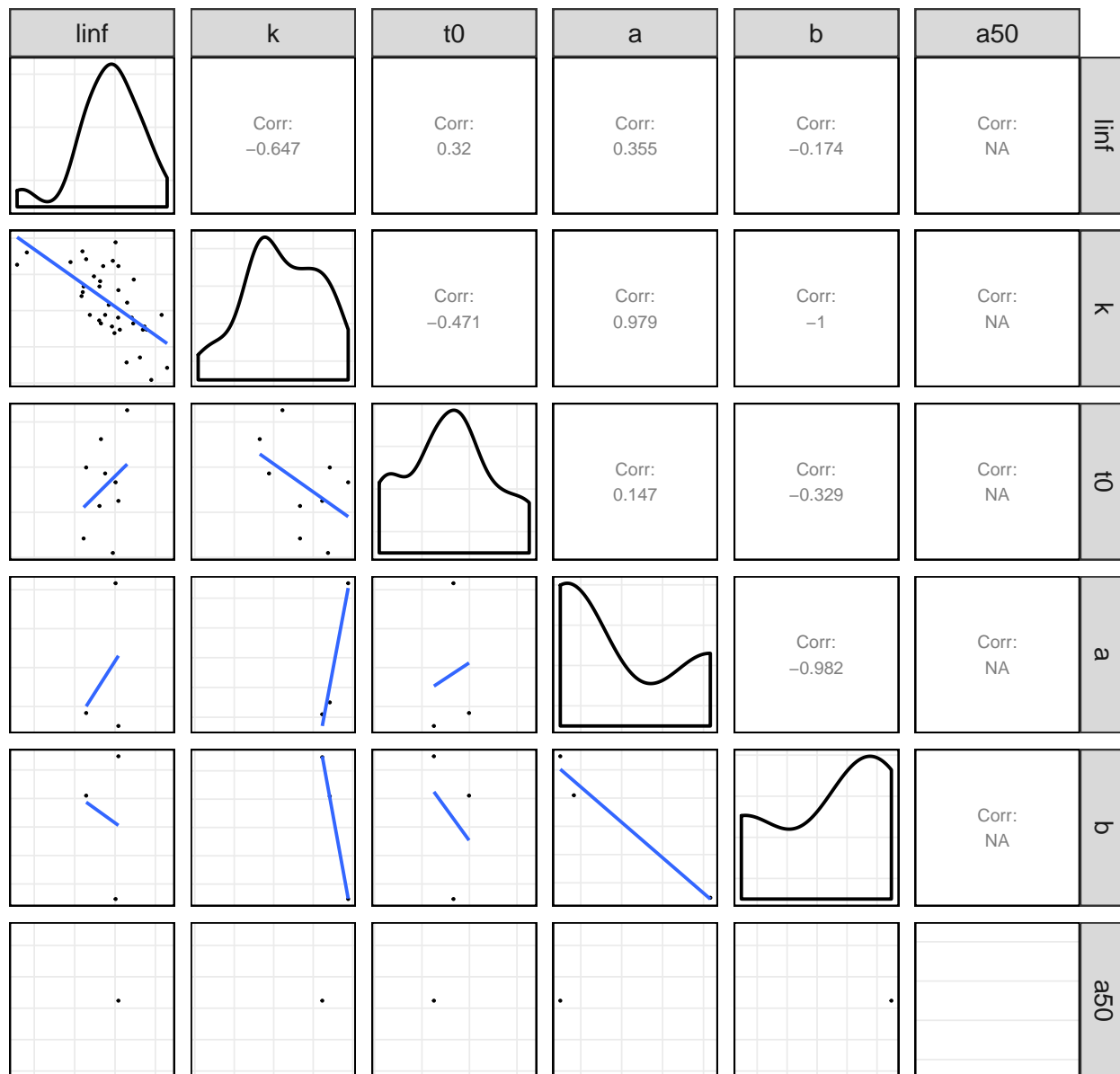| linf	k	t0	a	b	a50	
	Corr: −0.647	Corr: 0.32	Corr: 0.355	Corr: −0.174	Corr: NA	linf
		Corr: −0.471	Corr: 0.979	Corr: −1	Corr: NA	k
			Corr: 0.147	Corr: −0.329	Corr: NA	t0
				Corr: −0.982	Corr: NA	a
					Corr: NA	b
						a50

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.
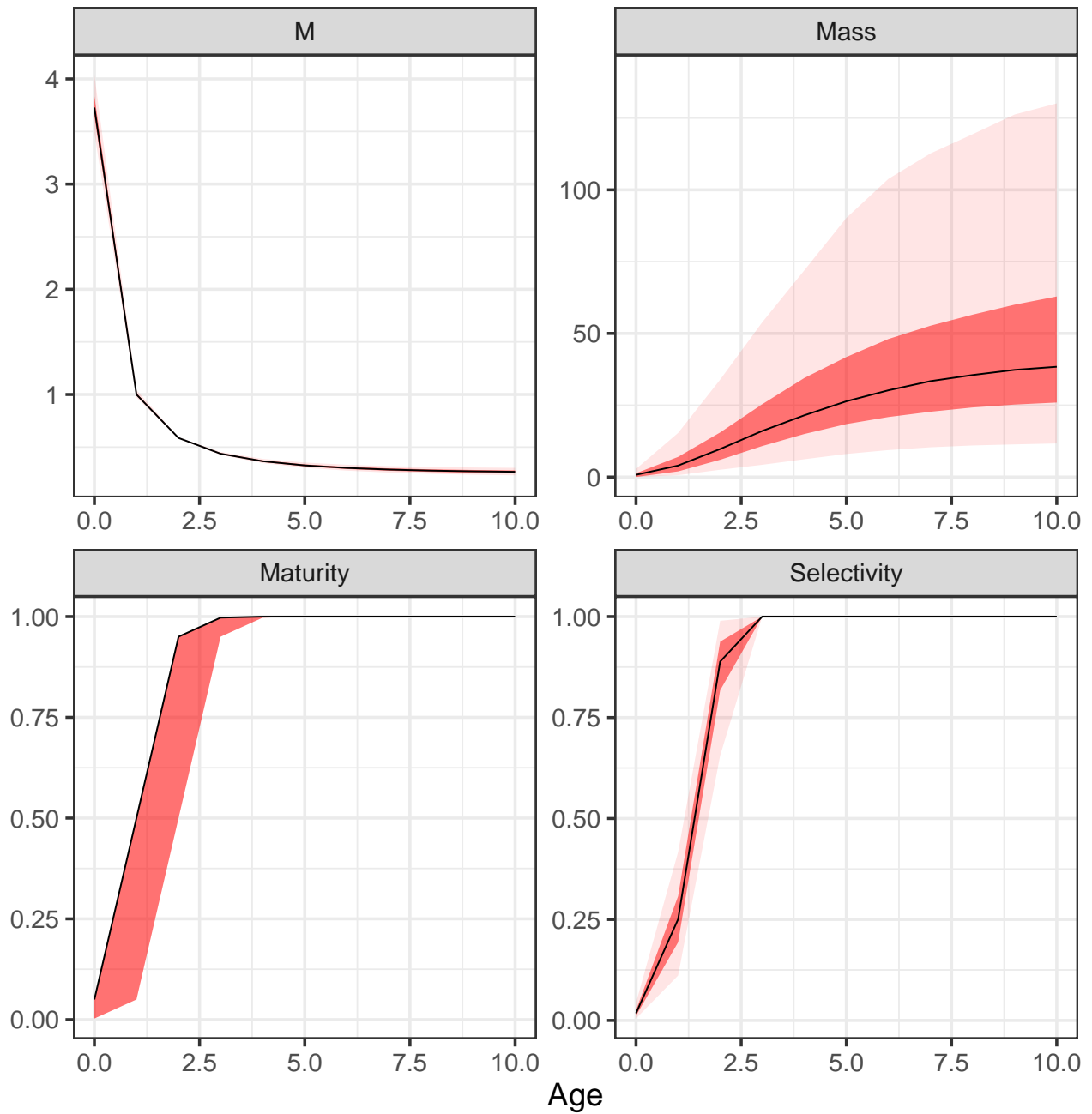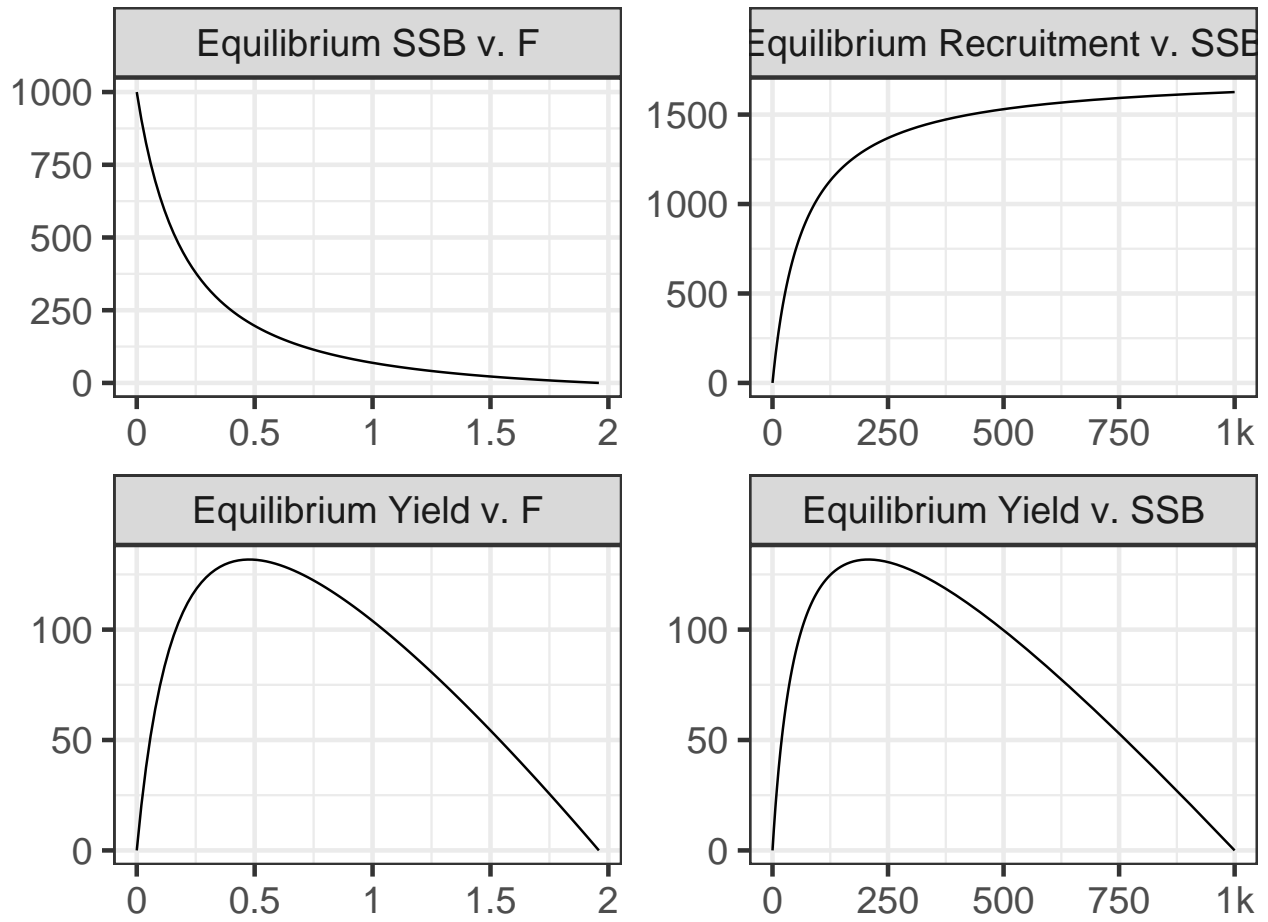

Figure 2 Vectors.

Figure 3 Example equilibrum Curve.
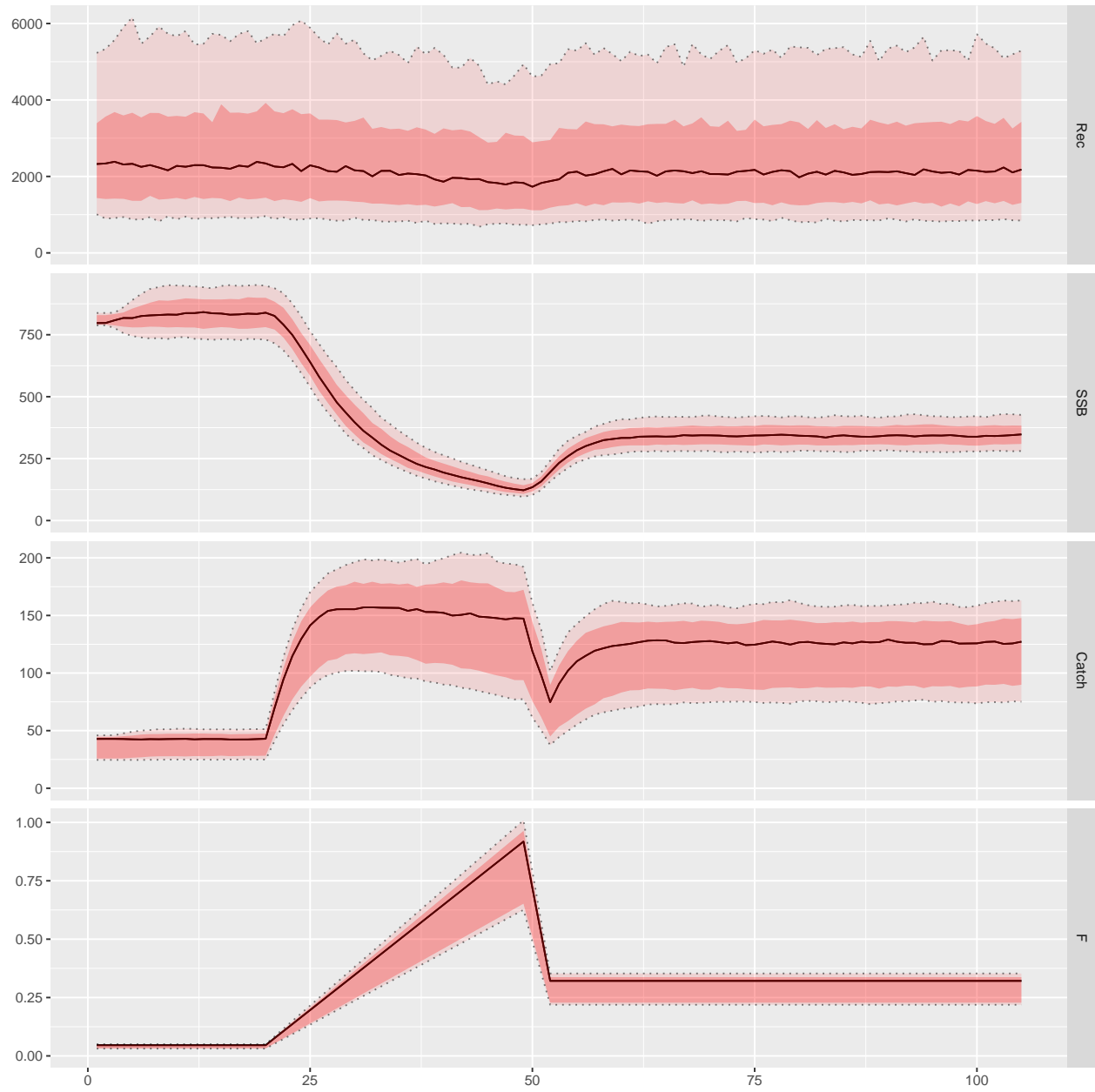
Population dynamics

Figure 4 Time series.

Software Versions

- R version 3.4.1 (2017-06-30)
- FLCore: 2.6.8
- FLBRP: 2.5.3
- FLasher: 0.1.0
- FLife: 3.2.0
- ggplotFL: 2.6.4
- **Compiled**: Sun Jul 22 17:04:54 2018

Author information

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Acknowledgements

References

Session Info

```
R version 3.4.1 (2017-06-30)
Platform: x86_64-pc-linux-gnu (64-bit)
Running under: Ubuntu 16.04.2 LTS

Matrix products: default
BLAS: /usr/lib/libblas/libblas.so.3.6.0
LAPACK: /usr/lib/lapack/liblapack.so.3.6.0

locale:
 [1] LC_CTYPE=en_US.UTF-8       LC_NUMERIC=C
 [3] LC_TIME=en_GB.UTF-8        LC_COLLATE=en_US.UTF-8
 [5] LC_MONETARY=en_GB.UTF-8    LC_MESSAGES=en_US.UTF-8
 [7] LC_PAPER=en_GB.UTF-8       LC_NAME=C
 [9] LC_ADDRESS=C               LC_TELEPHONE=C
[11] LC_MEASUREMENT=en_GB.UTF-8 LC_IDENTIFICATION=C

attached base packages:
[1] stats     graphics  grDevices utils     datasets  methods   base

other attached packages:
 [1] FLife_3.2.0     ggplotFL_2.6.4  FLasher_0.1.0   FLFishery_0.1.4
 [5] FLBRP_2.5.3     FLCore_2.6.8    lattice_0.20-35 GGally_1.4.0
 [9] reshape_0.8.7   dplyr_0.7.6     plyr_1.8.4      ggplot2_3.0.0
[13] knitr_1.20

loaded via a namespace (and not attached):
 [1] Rcpp_0.12.17       pillar_1.1.0      compiler_3.4.1
 [4] RColorBrewer_1.1-2 bindr_0.1.1       tools_3.4.1
 [7] digest_0.6.15      evaluate_0.10.1   tibble_1.4.2
[10] gtable_0.2.0       pkgconfig_2.0.1   rlang_0.2.1
[13] Matrix_1.2-10      yaml_2.1.18       bindrcpp_0.2.2
[16] gridExtra_2.3      withr_2.1.2       stringr_1.3.1
[19] stats4_3.4.1       rprojroot_1.3-2   grid_3.4.1
[22] tidyselect_0.2.4   glue_1.2.0        R6_2.2.2
[25] rmarkdown_1.9      FLRP_1.0.1.9002   reshape2_1.4.3
[28] purrr_0.2.5        magrittr_1.5      backports_1.1.2
[31] scales_0.5.0       codetools_0.2-15  htmltools_0.3.6
[34] MASS_7.3-47        assertthat_0.2.0  colorspace_1.3-2
[37] labeling_0.3       stringi_1.2.3     lazyeval_0.2.1
[40] munsell_0.5.0
```