# FLife

# Figs

## L Kell $\mathcal{C}$ A Tidd

28 September, 2018

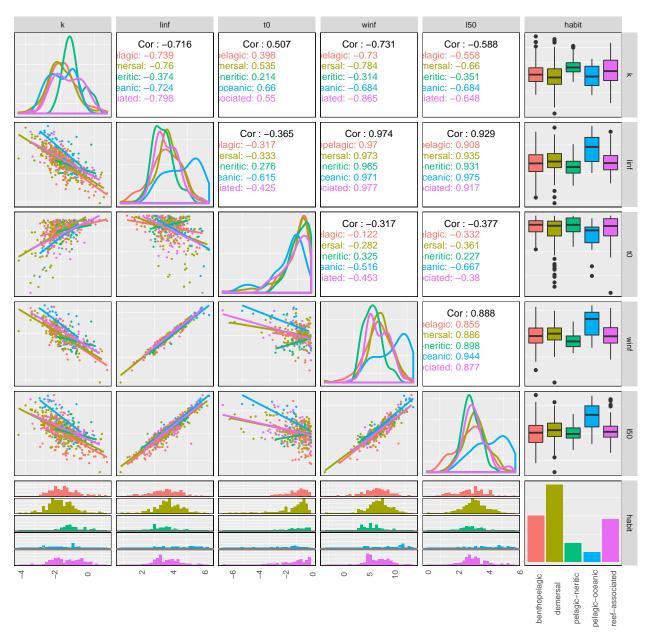


Figure 1 Life history relationships from Fishbase.

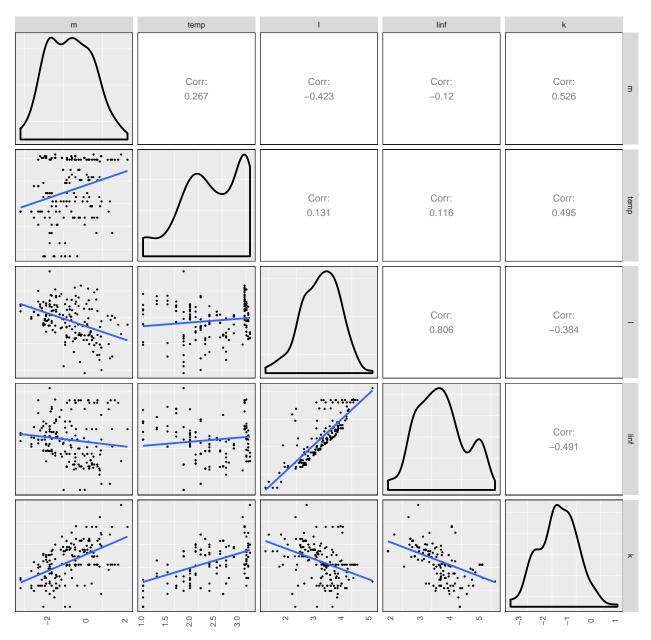


Figure 2 M from Gislason.

#### **Software Versions**

• R version 3.4.1 (2017-06-30)

FLCore: 2.6.9
FLBRP: 2.5.3
FLasher: 0.5.0
FLife: 3.2.1.9001
ggplotFL: 2.6.4.9002

• Compiled: Fri Sep 28 10:33:06 2018

#### **Author information**

 ${\bf Laurence~Kell.~laurie@seaplusplus.es}$ 

## Acknowledgements

This vignette and many of the methods documented in it were developed under the MyDas project funded by the Irish exchequer and EMFF 2014-2020. The overall aim of MyDas is to develop and test a range of assessment models and methods to establish Maximum Sustainable Yield (MSY) reference points (or proxy MSY reference points) across the spectrum of data-limited stocks.

# 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 LC\_MESSAGES=en\_US.UTF-8 [5] LC\_MONETARY=en\_GB.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: graphics grDevices utils [1] stats datasets methods base other attached packages: [1] FLife\_3.2.1.9001 ggplotFL\_2.6.4.9002 FLasher\_0.5.0 FLCore\_2.6.9 [4] FLFishery\_0.1.5 FLBRP\_2.5.3 [7] lattice 0.20-35 GGally\_1.4.0 reshape 0.8.7 [10] 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\_0.12.18 compiler\_3.4.1 pillar\_1.1.0 [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\_0.2.2 [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 reshape2\_1.4.3 purrr\_0.2.5 [28] magrittr\_1.5 codetools\_0.2-15 backports\_1.1.2 [31] scales\_1.0.0 htmltools 0.3.6 MASS\_7.3-47 [34] assertthat\_0.2.0 colorspace\_1.3-2 labeling\_0.3 [37] stringi\_1.2.3 lazyeval\_0.2.1 munsell\_0.5.0