ADMB, R and knitr

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Getting data from admb

- write text files from admb
  - fine small number of files

- parse admb report file
  - may conflict with other tools
  - fragile

admb2R

- my preferred approach
  - place admb2r.cpp on PATH
  - add 2 statememts to tpl
  - create cxx file with desired elements
  - creates an *.rdat file that can be read directly into R using dget()

admb2R Basic Syntax

- scalars
- vectors
- matrices

ADMButils

- collection of R-functions for working with admb:
  - readpar()
  - readstd()
  - readcxx()
  - readmcmc()
  - writepin()
  - writedat()

- other options exist - R2admb, admbGLMM might be worth considering

readpar()

- return contents of par file as a named list including gradient and objective function

- example

readstd()

- return named list of values in std file produced by admb
- values returned as "x" and "x.se"

- example

readcxx()

- a convience wrapper calls:
  - readpar()
  - readstd()
  - dget()

- returns named list that includes contents of cxx, par and std file

readmcmc()

- reads in results of mcmc simulations from admb
- returns an coda mcmc object
- default input csv file with header
- numerous options to accomodate legacy approaches

- example

writepin() and writedat()

- they take a list of arguments
- create pin and dat files can be read by admb

- example
  start <- list(Linf, k, t0) write.pin(start, "VonB.pin")
  data <- list(nobs, wfdata) write.pin(data, "VonB.dat")

calling admb from R

- possible to use R to call admb executable
  - write dat and pin file
  - call admb executable
  - read results and analyse in R
  - copy results to archive directory
  - repeat