

Analysis Masters Summary

Stephanie Bland, B00728385

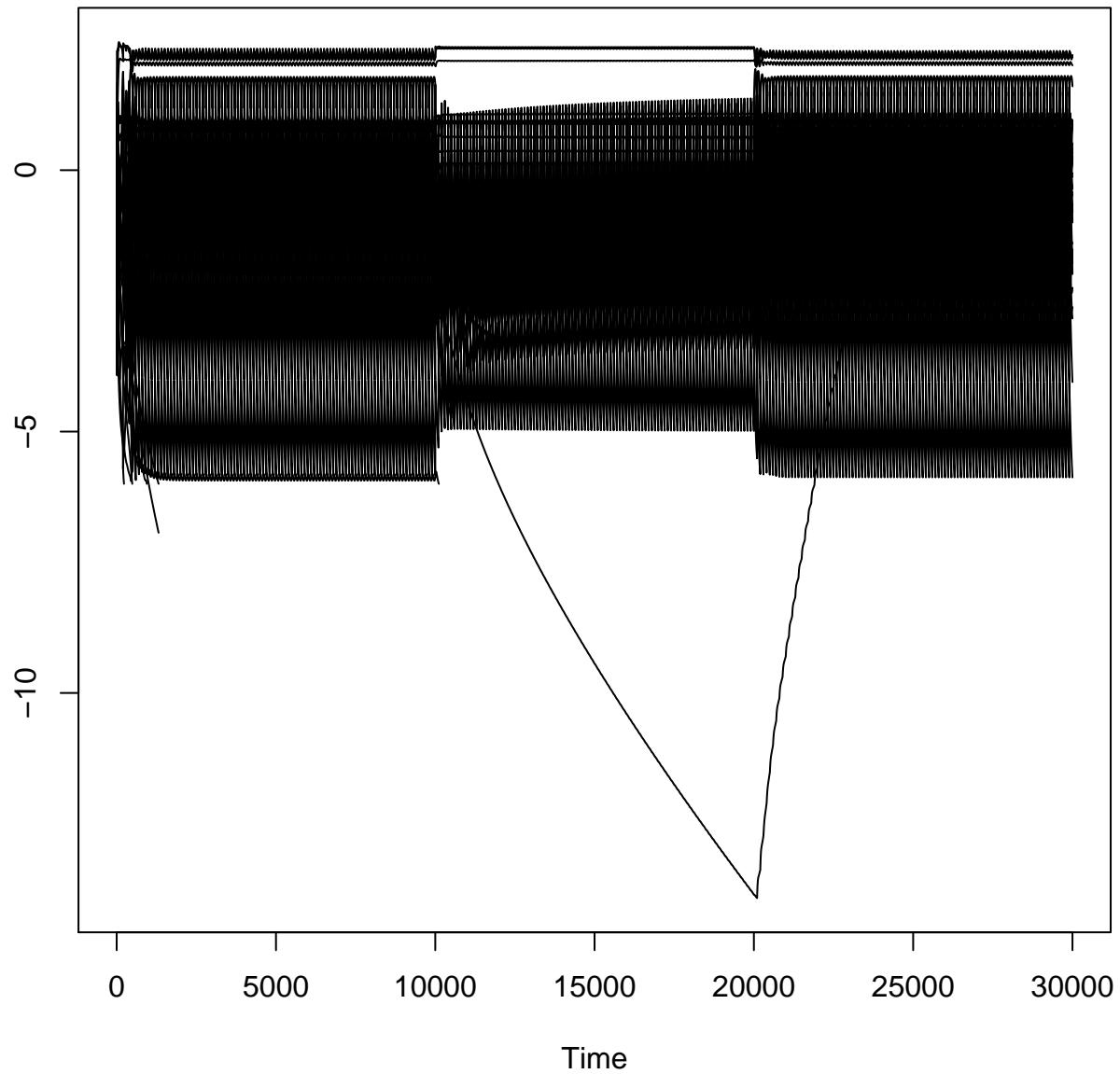
April 11, 2017

```
read_chunk('Analysis.R')
```

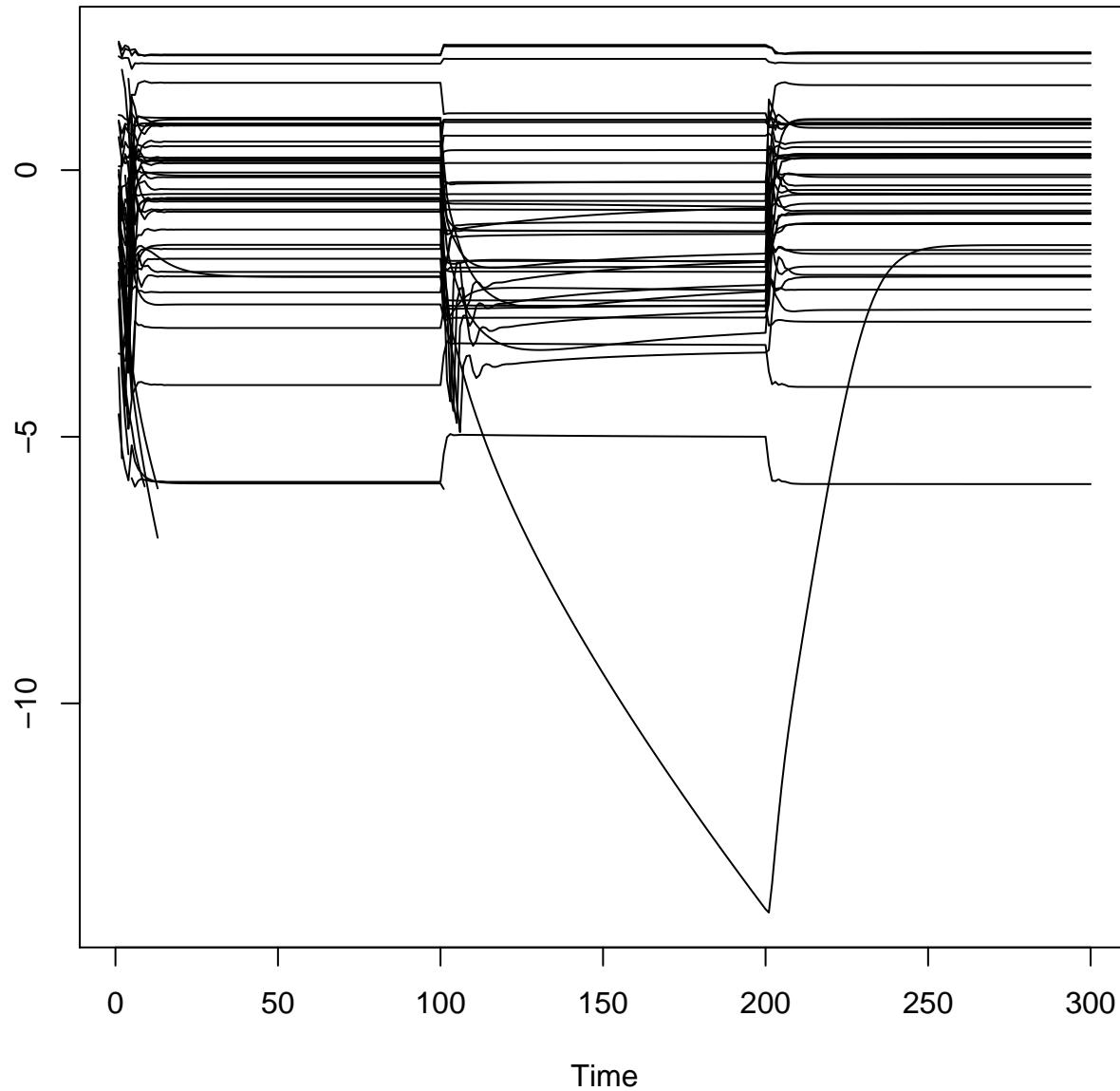
```
rm(list=ls())
setwd("/Users/JurassicPark/Google_Drive/GIT/Analysis")
library(R.matlab)
library(matrixStats)
library(RColorBrewer)
library(codyn)
library(knitr)
library(reshape2)
library(dplyr)
sim_data=readMat("Complete_1.mat")
names(sim_data)
## [1] "Adj.Rsq"          "AllCatch"
## [3] "B"                "B0"
## [5] "B.end"            "B.orig"
## [7] "B.year.end"      "Bsd"
## [9] "E"                "E0"
## [11] "Effort"           "F50"
## [13] "K"                "K.param"
## [15] "L.year"           "Mass"
## [17] "Mvec"             "N.stages"
## [19] "N.years"          "R.squared"
## [21] "S.0"               "T1"
## [23] "T2"               "TrophLevel"
## [25] "W.scalar"         "W.scaled"
## [27] "Z"                "abort.sim"
## [29] "aging.table"      "ans"
## [31] "assim"             "basalsp"
## [33] "c"                "ca"
## [35] "calc.n.val"       "cannibal.invert"
## [37] "catchrate"        "co"
## [39] "connectance"      "cont.reprod"
## [41] "day"               "delta.biomass"
## [43] "effic"             "evolv.diet"
## [45] "evolve"            "ext.thresh"
## [47] "extended.n"       "extended.web"
## [49] "f.a"               "f.m"
## [51] "fecund.table"     "fish.gain.tot"
## [53] "fishing.scenario" "full.sim"
## [55] "full.t"            "func.resp"
## [57] "harv"              "hmax"
## [59] "i"                 "int.growth"
## [61] "is.split"          "isfish"
## [63] "leslie"            "lifehis"
## [65] "lifestage"         "lin.regr"
## [67] "lstages.BoratedR" "lstages.linked"
## [69] "masscalc"          "max.assim"
## [71] "meta"               "meta.N.stages"
## [73] "meta.scale"        "mu"
## [75] "n.years.in.phase" "nan.error"
## [77] "niceweb"           "nicewebsize"
## [79] "num.years"         "orig"
## [81] "p.a"               "p.b"
## [83] "phase"              "prob.mat"
## [85] "q"                  "r.i.max"
## [87] "r.i.mean"          "r.i.min"
## [89] "r.i.std"            "reorder.by.size"
## [91] "reprod"             "rescalemass"
## [93] "shifted.web"        "simnum"
## [95] "species"            "surv.fish"
## [97] "surv.fish.stages" "surv.sp"
## [99] "t"                  "t.days"
## [101] "t.final"           "t.init"
## [103] "t.year"            "x"
## [105] "year.index"
```

```
attach(sim_data)
#x11()
logB=log10(B)
logB.year.end=log10(B.year.end)
B_saved=B
```

```
#Plot everything in simplest manner possible
ts.plot(logB)#Plot everything
```



```
ts.plot(logB.year.end)#Plot year ends
```



```
#Plot Invertebrates first
type=t(species)*isfish

## Error in t(species): object 'species' not found
matplot(matrix(rep(day,sum(type==0)),ncol=sum(type==0)),logB[,type==0],type='l',col=1,lty=1)#Plot each invertebrate
and autotroph separately

## Error in matrix(rep(day, sum(type == 0)), ncol = sum(type == 0)): object 'day' not found
matlines(matrix(rep(day,length(basalsp)),ncol=length(basalsp)),logB[,basalsp],type='l',col=2,lty=1)#Plot each
autotroph separately

## Error in matrix(rep(day, length(basalsp)), ncol = length(basalsp)): object 'day' not found
ts.plot(rowSums(logB[,type==0]))#Plot all invertebrate biomass (summed)

## Error in is.data.frame(x): object 'type' not found
invert_no_fish=isfish

## Error in eval(expr, envir, enclos): object 'isfish' not found
invert_no_fish[basalsp]=1

## Error in invert_no_fish[basalsp] = 1: object 'invert_no_fish' not found
```

```
ts.plot(cbind(rowSums(logB[, invert_no_fish==0]), rowSums(logB[, basalsp])), col=1:2, lty=1) #Plot all invertebrate
biomass (summed)

## Error in is.data.frame(x): object 'invert_no_fish' not found
darkcols <- brewer.pal(8, "Dark2")
color_i=0
xkcd=species[isfish==1]

## Error in eval(expr, envir, enclos): object 'species' not found
xkcd=unique(xkcd)

## Error in unique(xkcd): object 'xkcd' not found
for (i in xkcd){
  color_i=color_i+1
  for (j in 1:max(lifestage)){
    single_lifestage=(t(type==i)*lifestage==j)
    #matlines(t(day),logB[,single_lifestage],type='l',col=darkcols[color_i],lty=1+j,lwd=2)
  }
  #matlines(t(day),rowSums(logB[,type==i]),type='l',col=darkcols[color_i],lwd=2)
}

## Error in eval(expr, envir, enclos): object 'xkcd' not found
```