

FLs generate mating pairs

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```
rm(list = ls())
# setwd("Documents/research/projects/Lsax_fertilisation_time/")
library(dplyr)

##
## Attaching package: 'dplyr'

## The following objects are masked from 'package:stats':
##
##   filter, lag

## The following objects are masked from 'package:base':
##
##   intersect, setdiff, setequal, union

dt = read.csv("../data/FLs_size_mm_sex.csv")
ecotype = "crab"
# head(dt)
dt_sex = split(dt[dt$ecotype==ecotype, ], dt[dt$ecotype==ecotype, "sex"])

nrow(dt_sex$female)%3

## [1] 1
min(dt_sex$female$size_mm)

## [1] 7
sum(dt_sex$female$size_mm>7)

## [1] 27

dt_sex$female = filter(dt_sex$female, size_mm > min(dt_sex$female$size_mm))
dt_sex$female$fgroup = c("G1", "G5", "G30")

for (f in 1:nrow(dt_sex$female)) {
  dt_sex$male$row_ID <- 1:nrow(dt_sex$male)
  success <- FALSE
  i <- 1
  f_log <- log(dt_sex$female$size_mm[f])
  while (!success) {
    if (i == 20) {
      success <- TRUE
    } else {
      m_row = sample_n(dt_sex$male, size = 3)
      m_idx = m_row$row_ID
    }
  }
}
```

```

# m_idx = which(dt_sex$male$snail_ID==m_row[, "snail_ID"])
m_log = log(m_row[, "size_mm"])
or = round(f_log - m_log, 1)
# cat(or, "\n")
success <- sum(or >= 0 & or <= 0.4)>=2
# cat(i, "\n")
if (sum(or >= 0 & or <= 0.4)>=2) {
  cat("Female ID", as.character(dt_sex$female$snail_ID)[f], "matched with male ID", as.character(
    dt_sex$male = dt_sex$male[-m_idx,]
  ) else {
    i = i + 1
    # cat(i, "\n")
  }
}
}
}
}

```

```

## Female ID K50 matched with male ID FT151 FT102 FT176 ( 0 -0.2 0 ) in time group G1
## Female ID K00 matched with male ID FT163 FT126 FT101 ( 0 0.1 -0.4 ) in time group G30
## Female ID H00 matched with male ID FT181 FT185 FT106 ( 0.1 0.3 -0.3 ) in time group G1
## Female ID K51 matched with male ID FT175 FT120 FT157 ( 0 0 -0.2 ) in time group G1
## Female ID K01 matched with male ID FT150 FT111 FT177 ( 0 -0.2 0 ) in time group G5
## Female ID J51 matched with male ID FT169 FT146 FT127 ( 0.1 0 -0.1 ) in time group G30
## Female ID H51 matched with male ID FT128 FT124 FT171 ( 0.1 -0.2 0 ) in time group G5
## Female ID H01 matched with male ID FT158 FT103 FT112 ( 0.1 -0.5 0.1 ) in time group G30
## Female ID K52 matched with male ID FT156 FT178 FT184 ( -0.1 0 0.2 ) in time group G1
## Female ID H04 matched with male ID FT117 FT164 FT148 ( -0.1 0.2 0.2 ) in time group G1
## Female ID H05 matched with male ID FT138 FT137 FT104 ( 0.1 0.4 0.4 ) in time group G5
## Female ID H06 matched with male ID FT145 FT113 FT133 ( 0.3 0 0.3 ) in time group G30
## Female ID H07 matched with male ID FT134 FT108 FT139 ( 0.2 0.2 0.2 ) in time group G1
## Female ID H08 matched with male ID FT109 FT118 FT144 ( 0 0 0.3 ) in time group G5
## Female ID H09 matched with male ID FT155 FT105 FT149 ( 0.1 0 0.4 ) in time group G30
## Female ID H10 matched with male ID FT136 FT161 FT166 ( 0 0.3 0.3 ) in time group G1
## Female ID H11 matched with male ID FT160 FT135 FT143 ( 0.3 0.1 -0.1 ) in time group G5
## Female ID H12 matched with male ID FT110 FT168 FT186 ( 0.2 0.3 0.2 ) in time group G30
## Female ID H13 matched with male ID FT142 FT121 FT172 ( -0.1 0.2 0.1 ) in time group G1
## Female ID H14 matched with male ID FT153 FT131 FT152 ( 0 -0.3 0.2 ) in time group G5
## Female ID H15 matched with male ID FT115 FT182 FT173 ( -0.2 0.4 0.1 ) in time group G30

```