Notes on comparing the dataset from Hugues to what I obtain from the RV database

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read in the Excel spreadsheet from Hugues

```
library(readxl)
xl.fn <- "from-Hugues-Benoit-abundundance_Crosstab_edited.xls"
hugues.df1 <- read_xls(xl.fn, sheet=1)
hugues.df2 <- read_xls(xl.fn, sheet=2, n_max = 36)

hugues.to.compare <- hugues.df2
## recode some species to match the data provided by dan
names(hugues.to.compare)[34] <- '880'
names(hugues.to.compare)[43] <- '503'
names(hugues.to.compare)[51] <- '598'
names(hugues.to.compare)[53] <- '712'
hugues.to.compare <- as.data.frame(hugues.to.compare)
```

read in the CSV file from Dan

```
csv.fn <- "sGSL-RV-data-for-Elise-2021-10-12-C-stratified-matrix.csv"
t.df <- read.csv(csv.fn)
dan.df <- as.data.frame(t(t.df[,2:51]))
names(dan.df) <- as.character(t.df[,1])
dan.df$year <- 1971:2020
species <- as.character(names(hugues.to.compare)[2:53])
dan.to.compare <- dan.df[,c("year",species)]

setdiff(names(hugues.to.compare)[2:53], names(dan.df)[1:52])
```

```
## character(0)
```

```
dim(dan.to.compare)
```

```
## [1] 50 53
```

```
dim(hugues.to.compare)
```

```
## [1] 35 53
```

compare the stratified estimates from Hugues and Dan

```
## keep only the same years
dan.to.compare <- dan.to.compare[1:35,]
```

```
dim(dan.to.compare) == dim(hugues.to.compare)
```

```
## [1] TRUE TRUE
```

```
names(dan.to.compare) == names(hugues.to.compare)
```

```
##  [1] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [16] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [31] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [46] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
```

```
dan.matrix <- as.matrix(dan.to.compare[,2:52])
hugues.matrix <- as.matrix(hugues.to.compare[,2:52])

difference <- dan.matrix - hugues.matrix
range(difference)
```

```
## [1] -176.5167  663.7609
```

```r
for(i in 1:length(species))
{

  plot(dan.to.compare[,i+1],
       hugues.to.compare[,i+1],
       main=paste0("Species ", species[i], "-", species.str(species[i])),
       pch=19,
       xlab="Dan estimate", ylab="Hugues estimate")
  abline(a=0,b=1)
}
```

Species 10–Atlantic cod
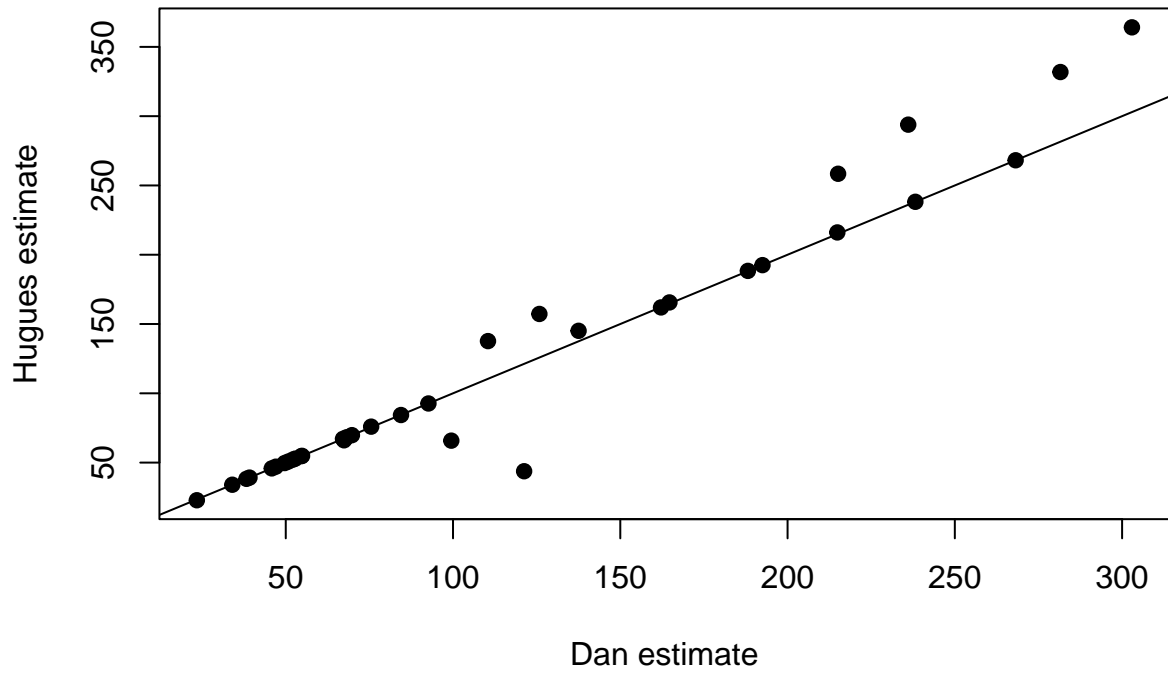
Species 11−Haddock
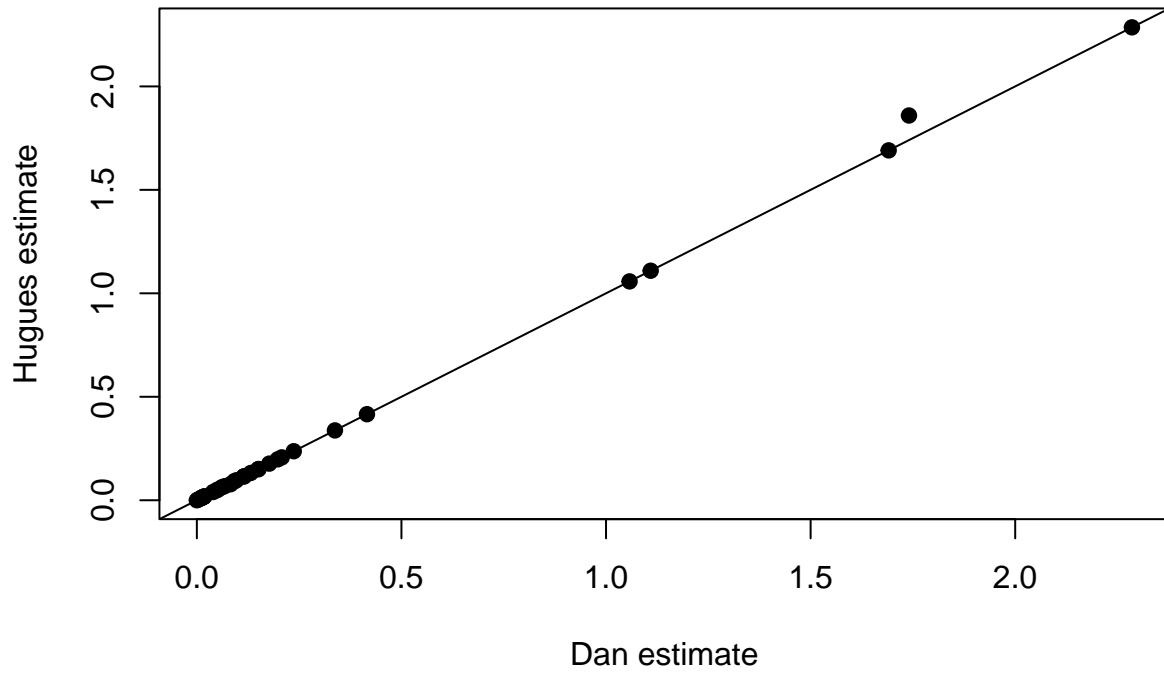
Species 12−White hake
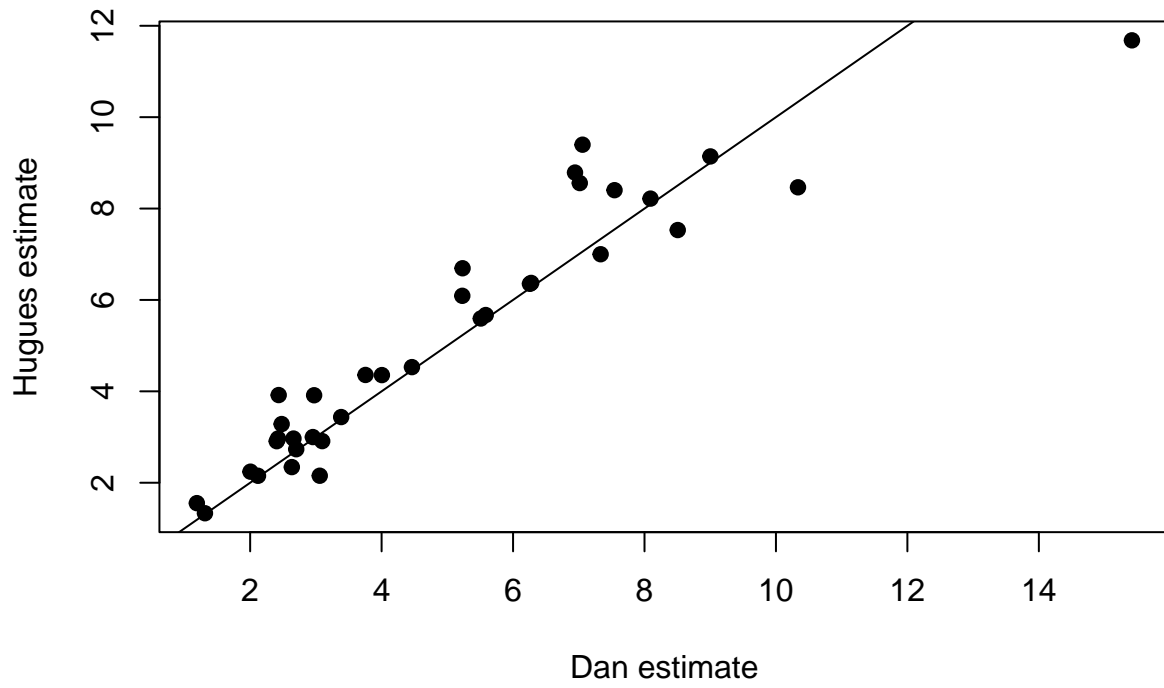
Species 14–Silver hake
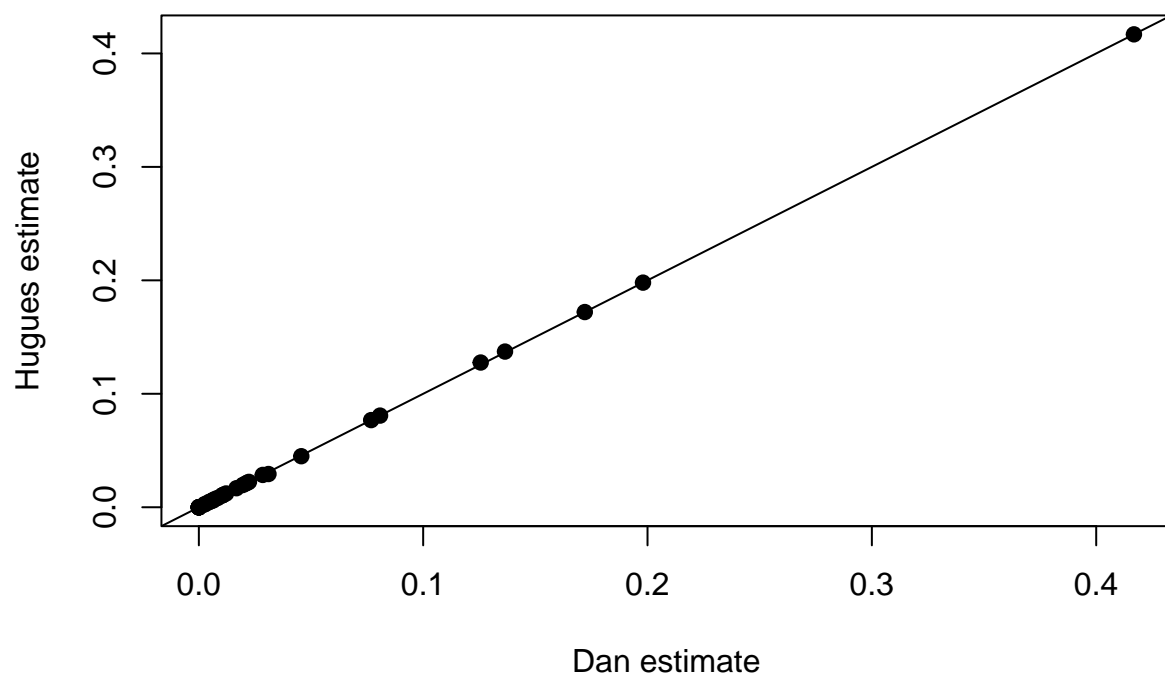
Species 16−Pollock
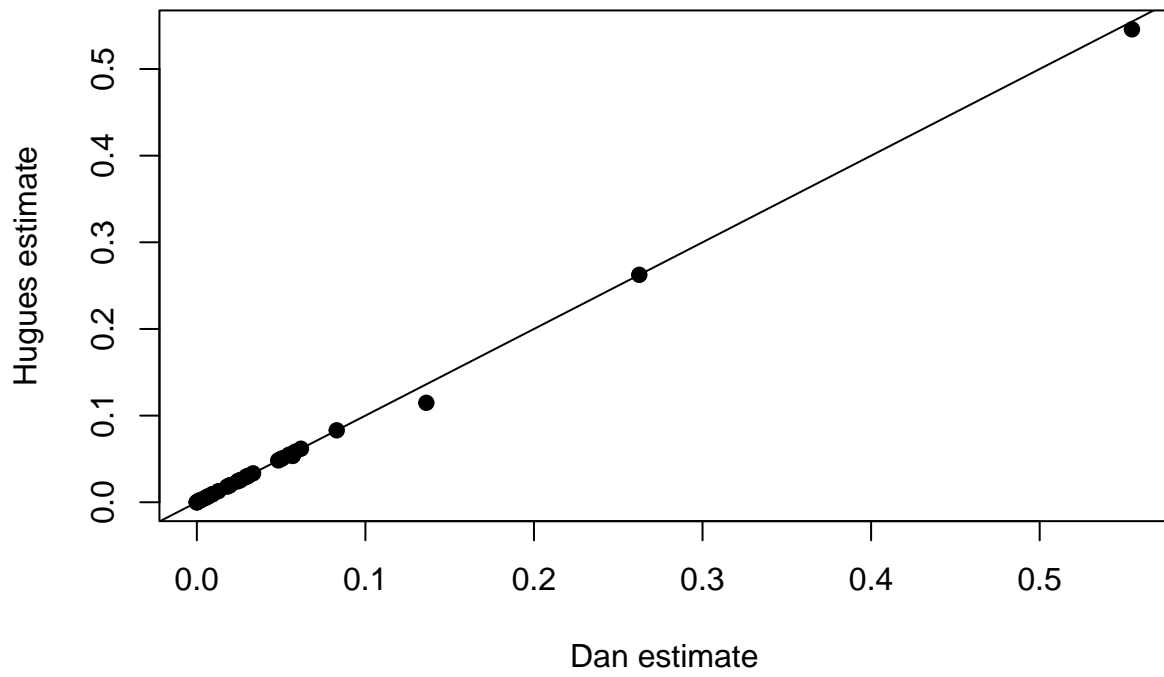
Species 23–Redfish unidentified
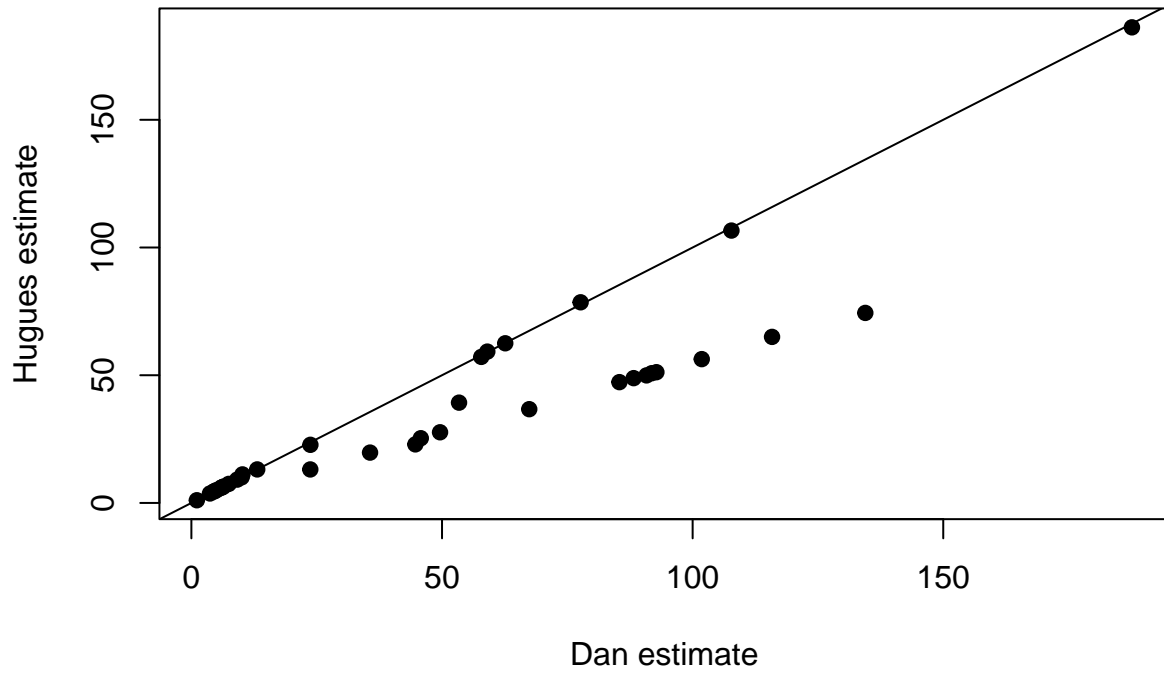
Species 30–Atlantic halibut
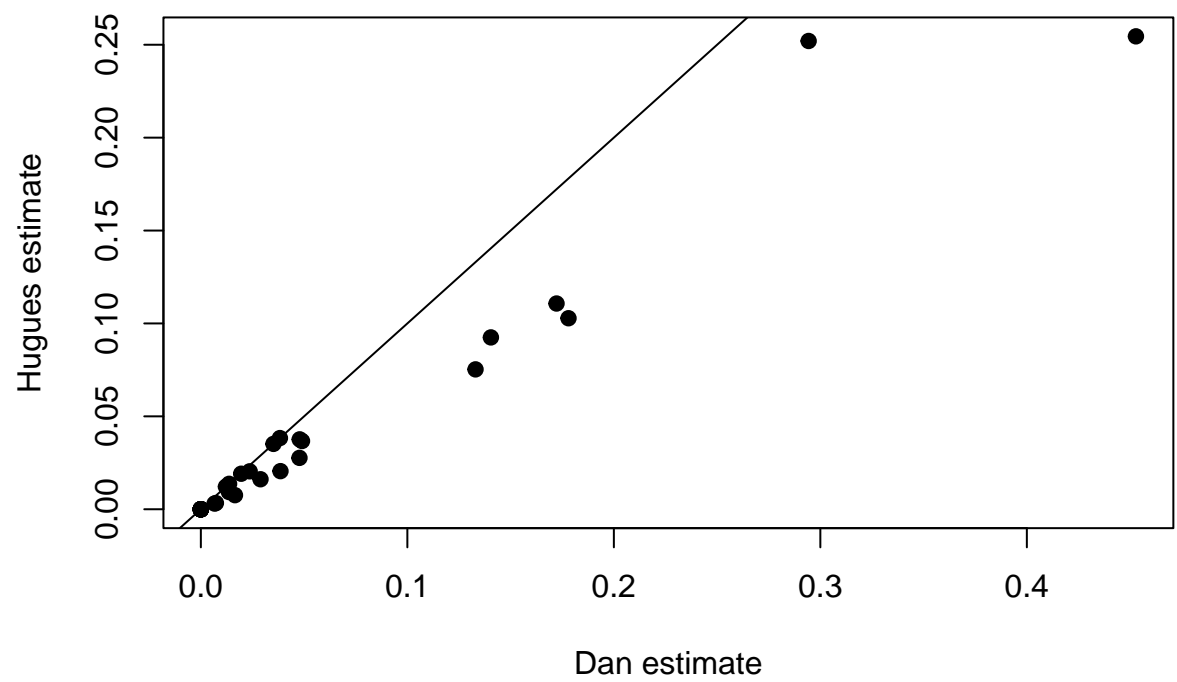
Species 31–Greenland halibut
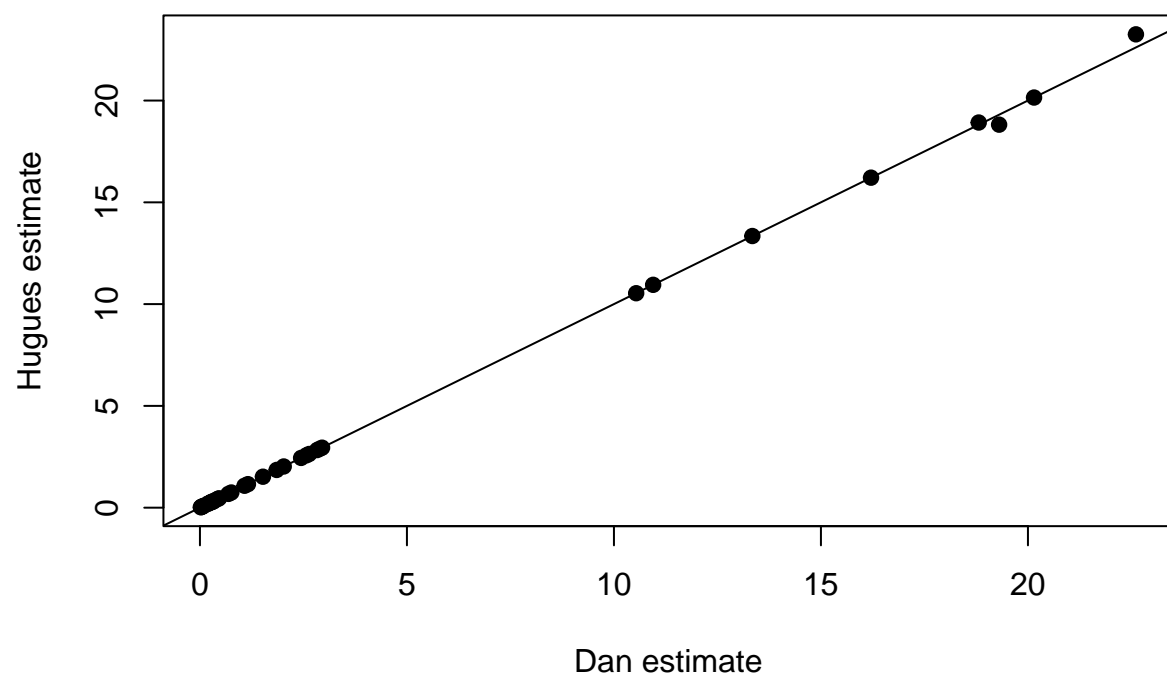
Species 40−American plaice
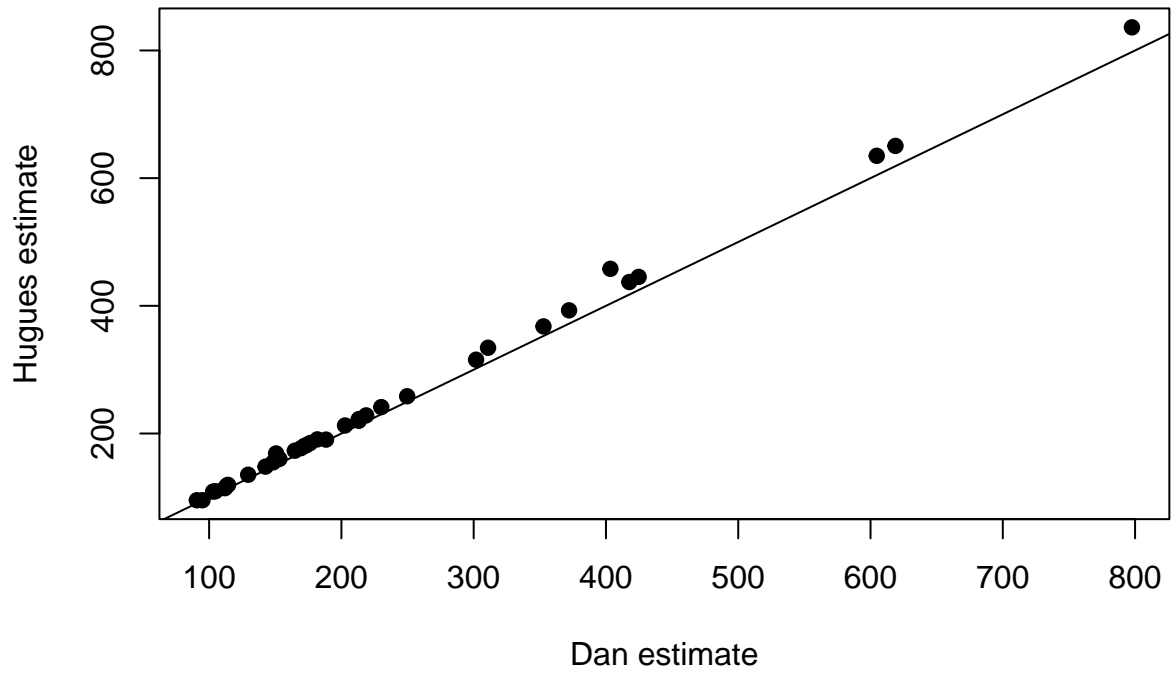
Species 41−Witch flounder
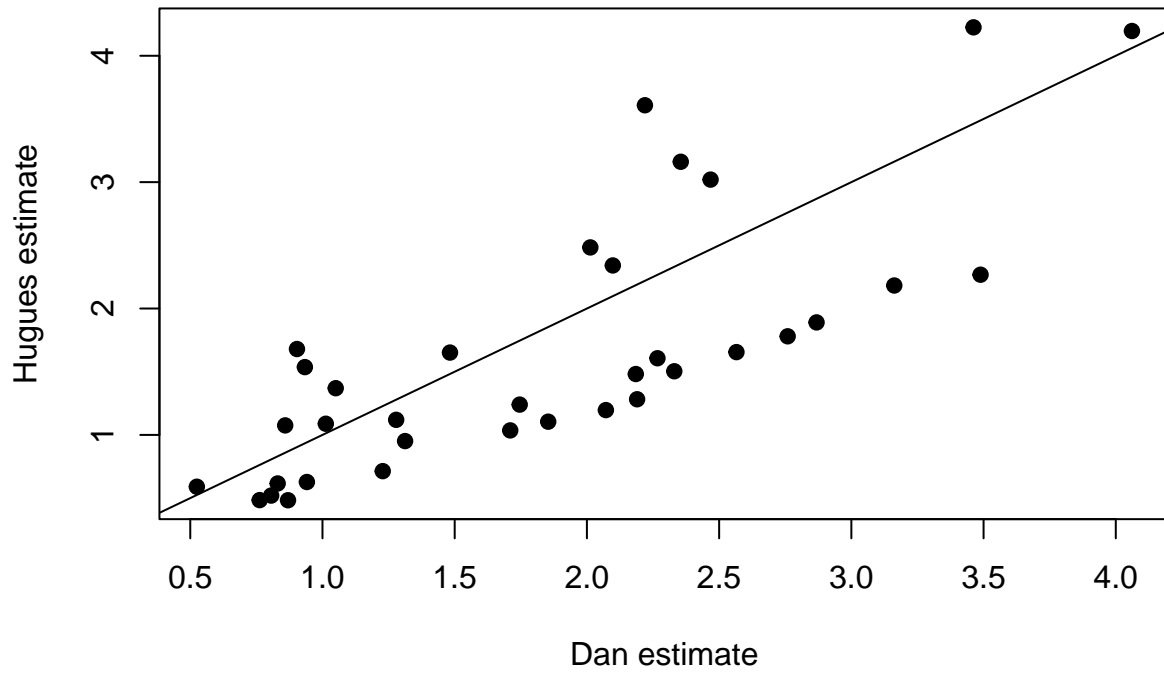
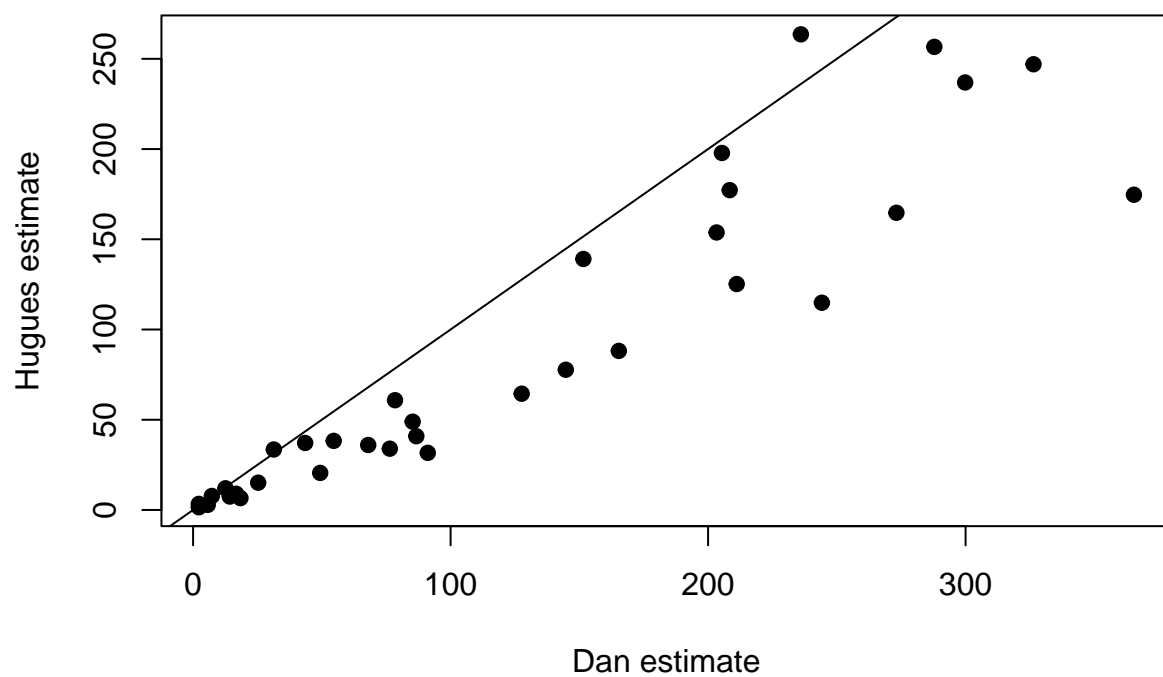# Species 42–Yellowtail flounder

Hugues estimate

Dan estimate
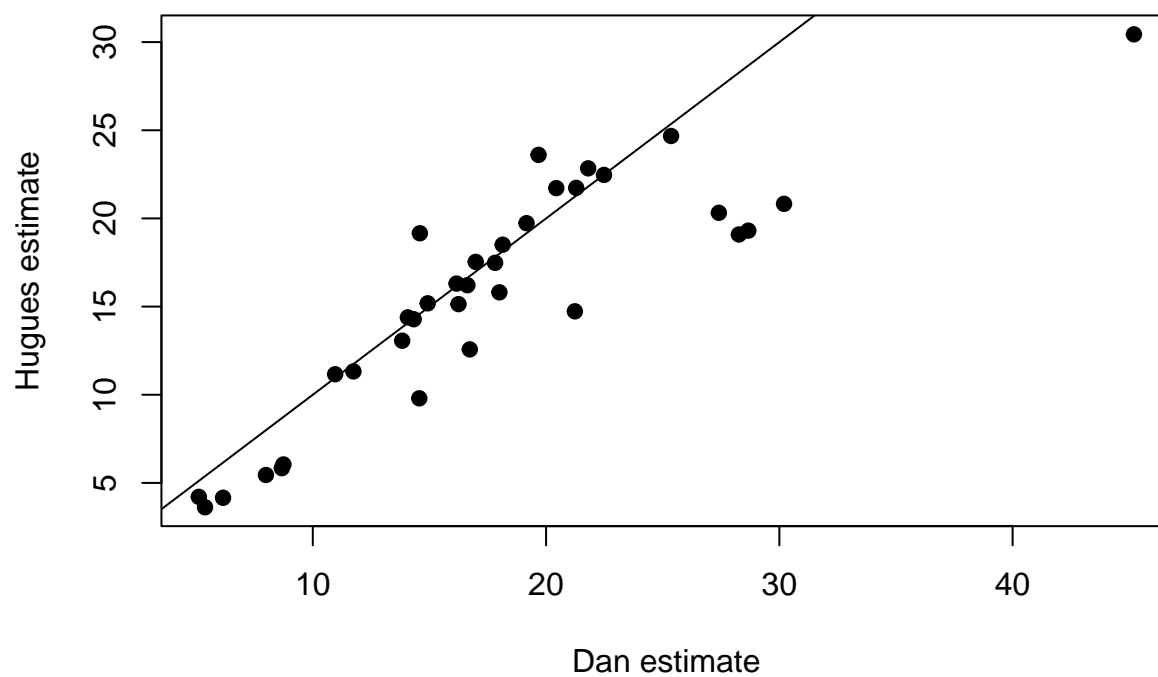
Species 43−Winter flounder
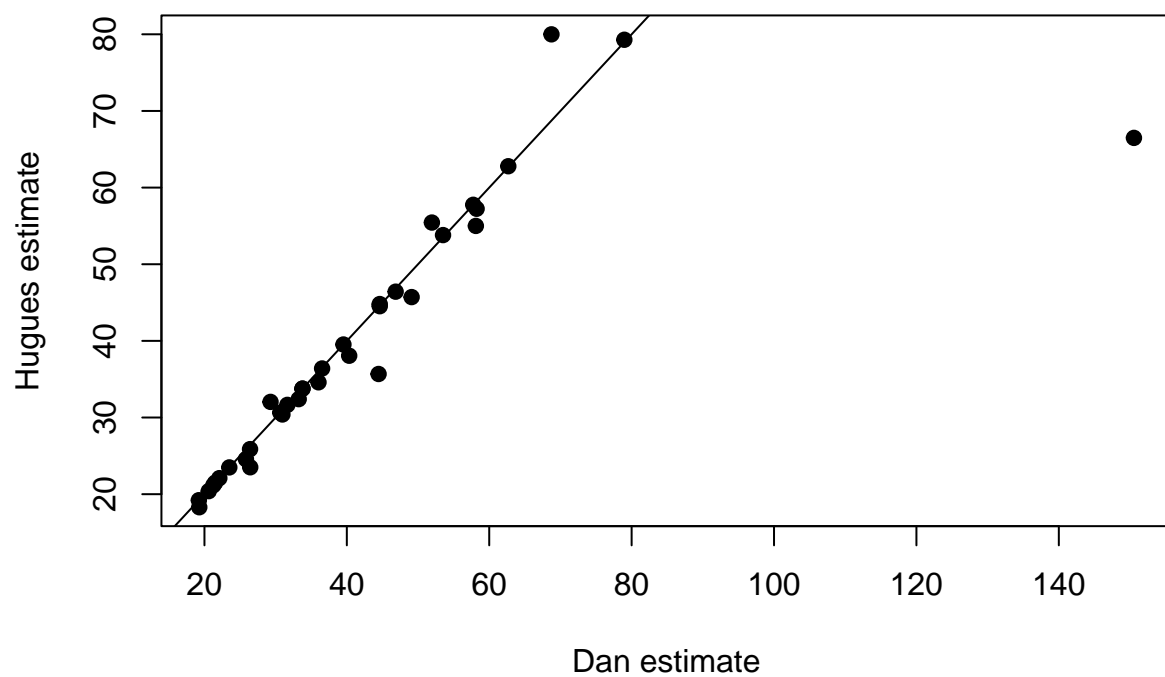
Species 50−Atlantic wolffish
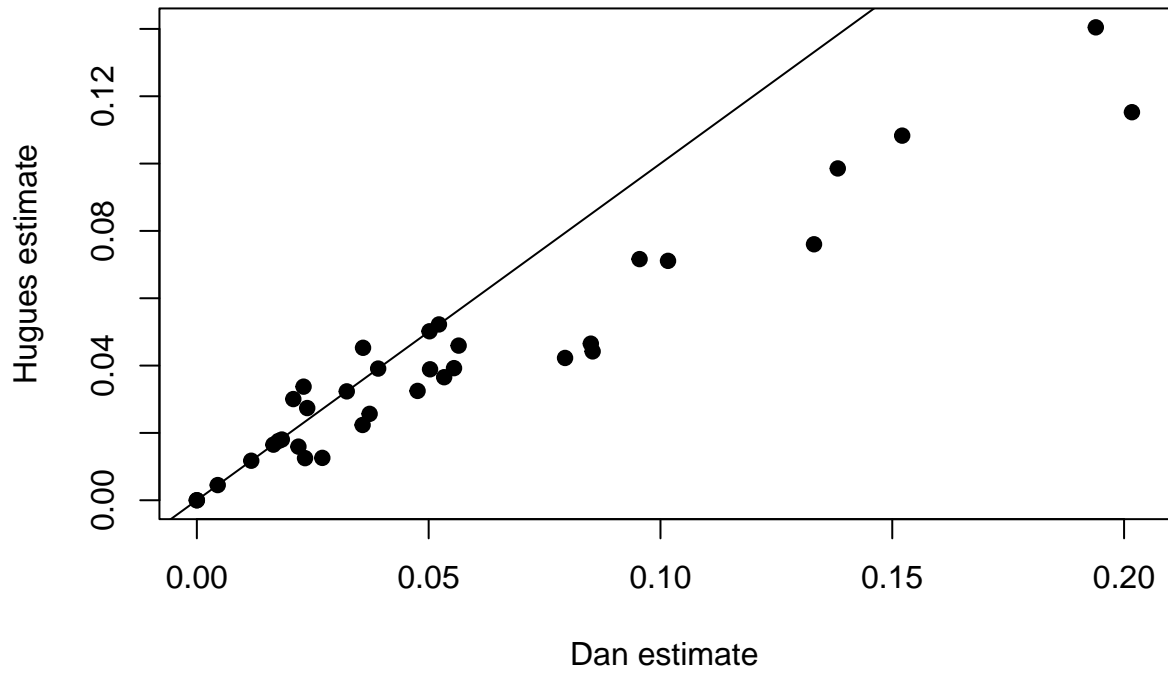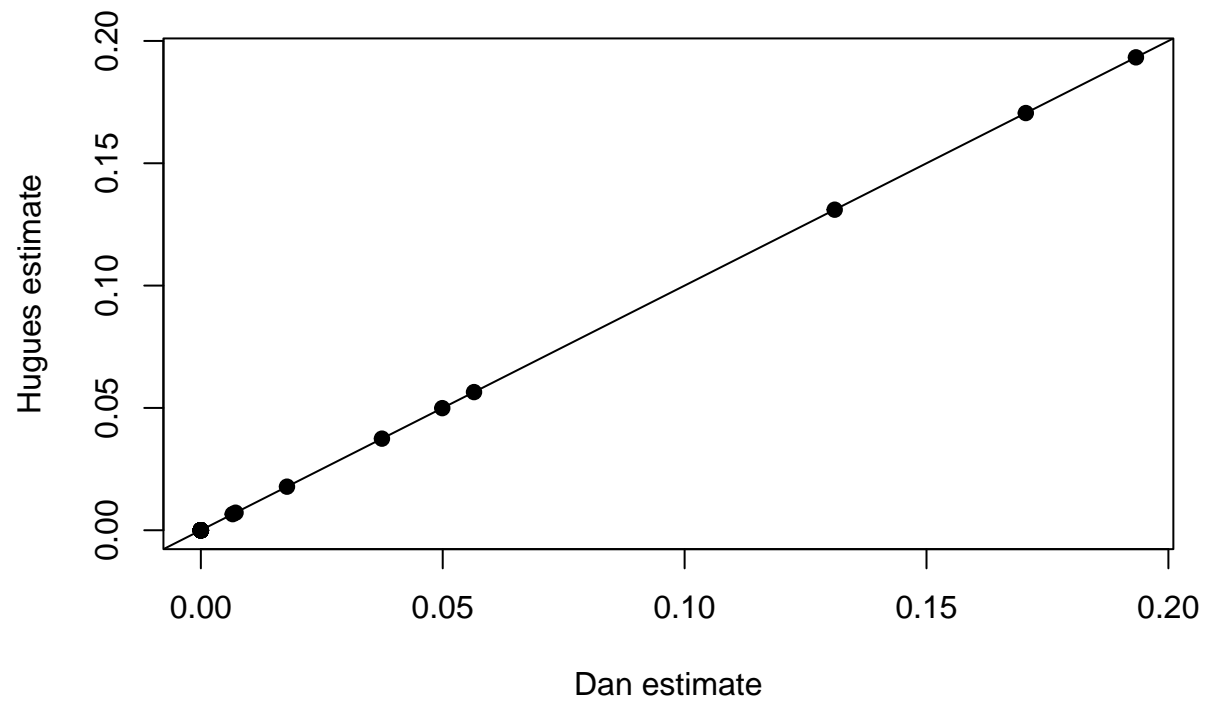
Species 60–Atlantic herring

Species 62–Alewife
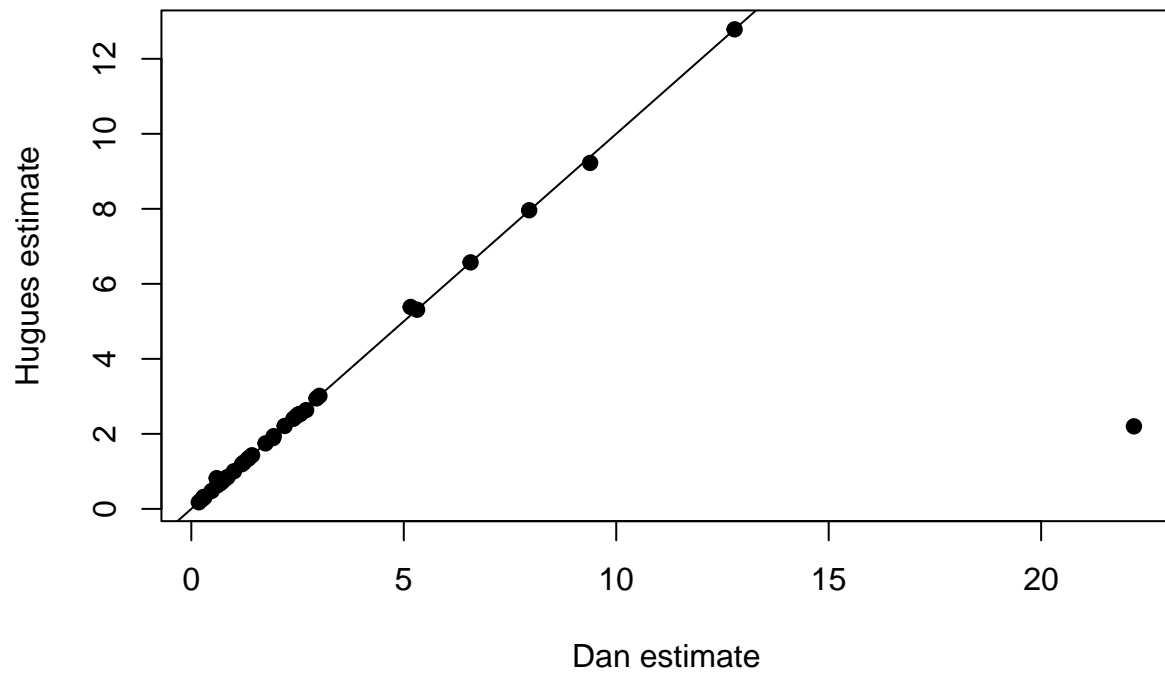
Species 63–Rainbow smelt

Species 64–Capelin

Dan estimate

Species 110–Arctic cod

Hugues estimate (y-axis) vs Dan estimate (x-axis)
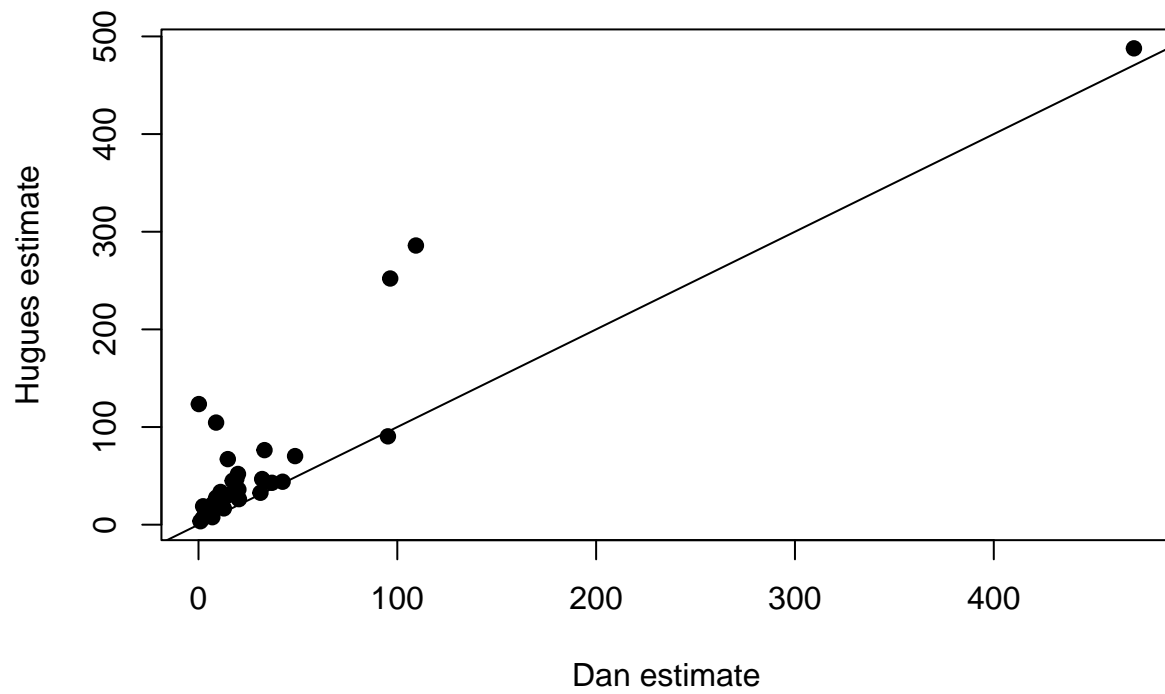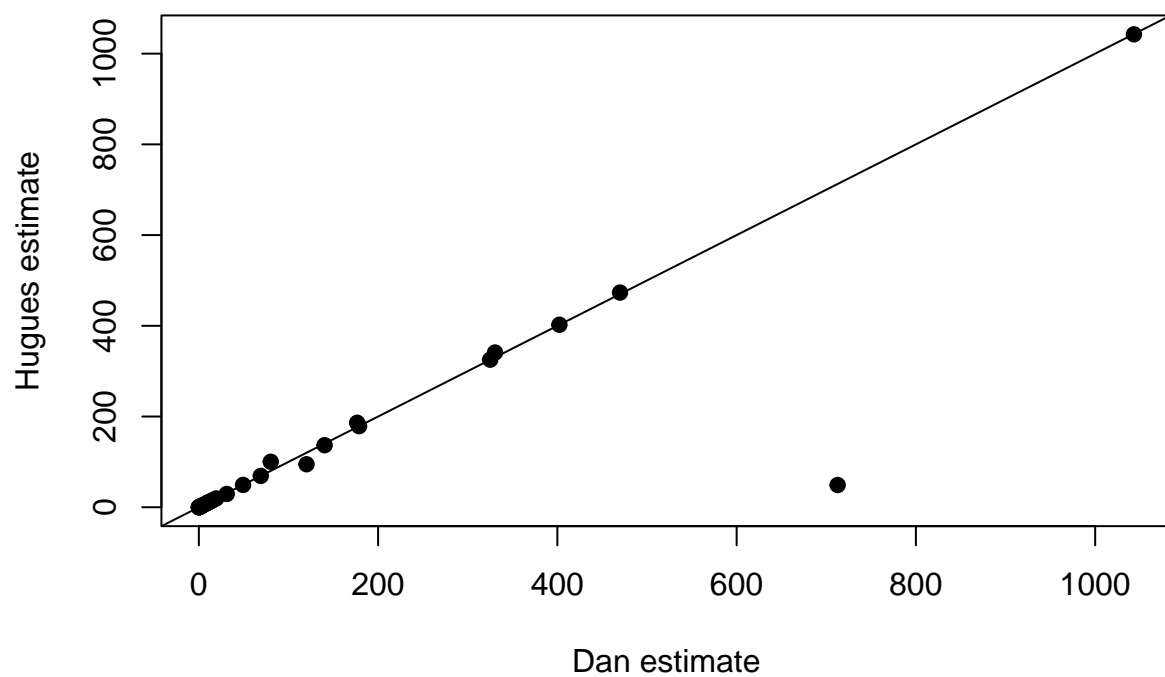
Species 112–Longfin hake
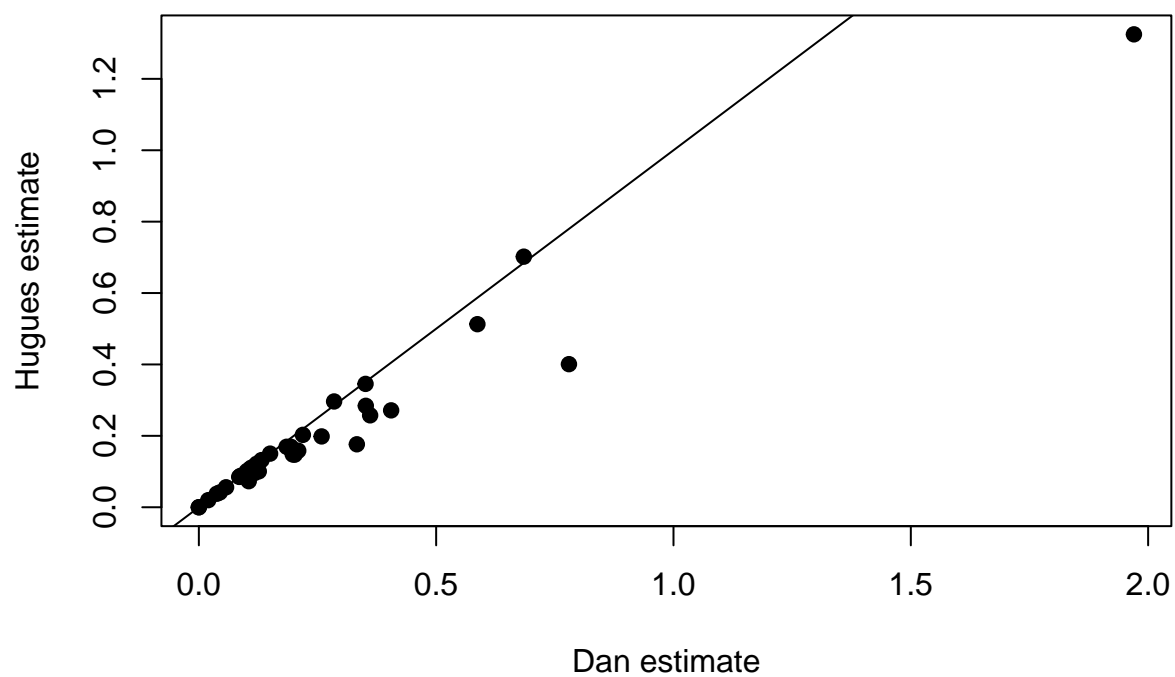
Species 114–Fourbeard rockling
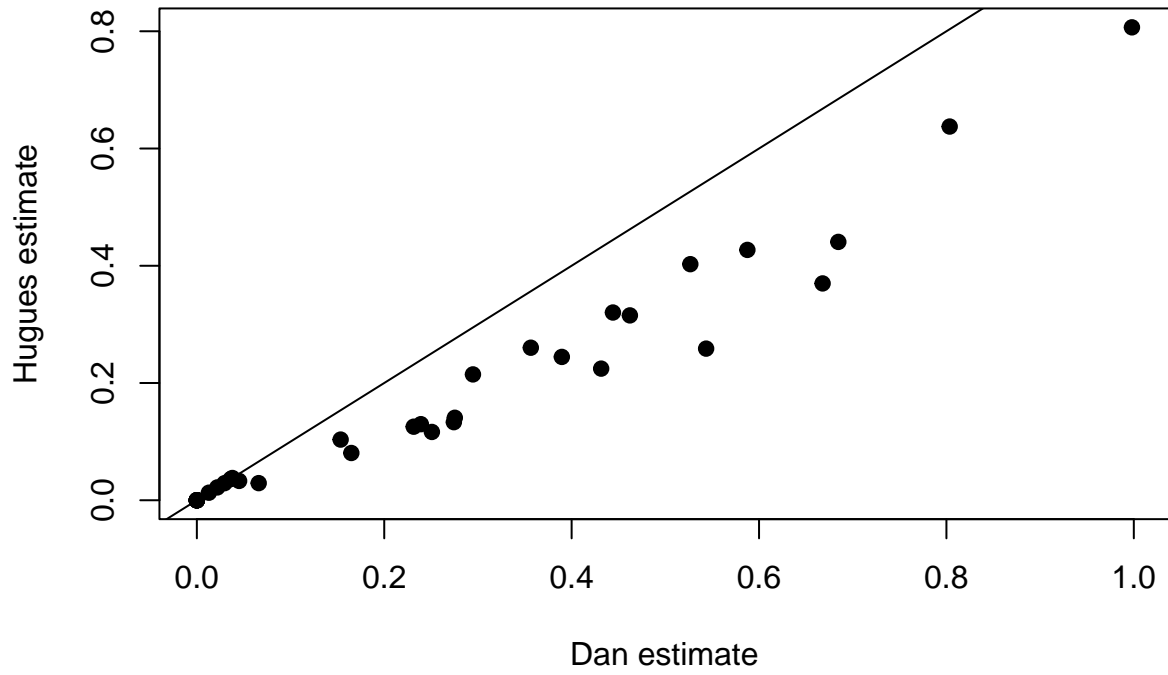
Species 118–Greenland cod
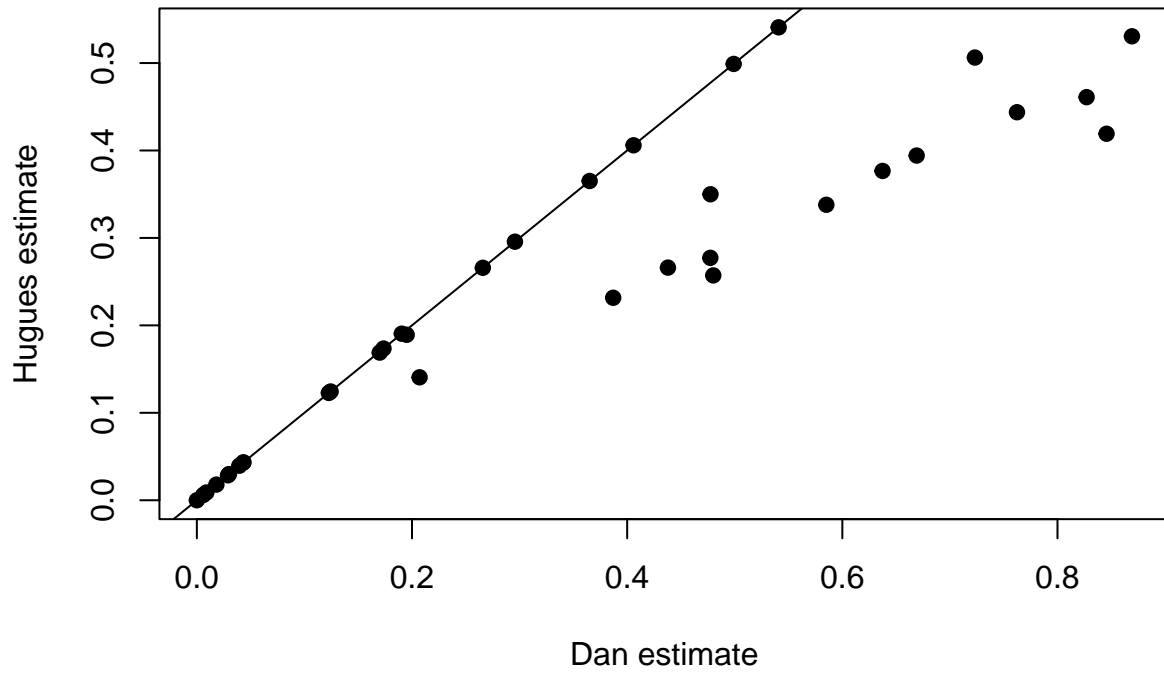
Species 122–Cunner
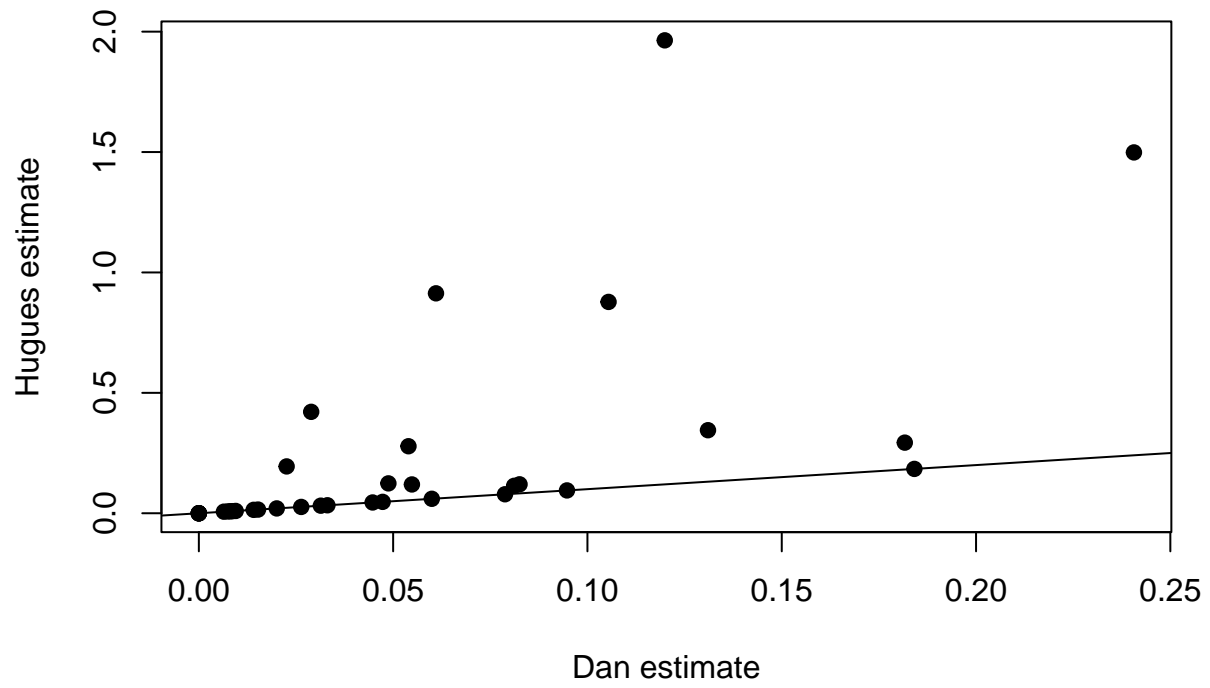
Species 143–Windowpane flounder
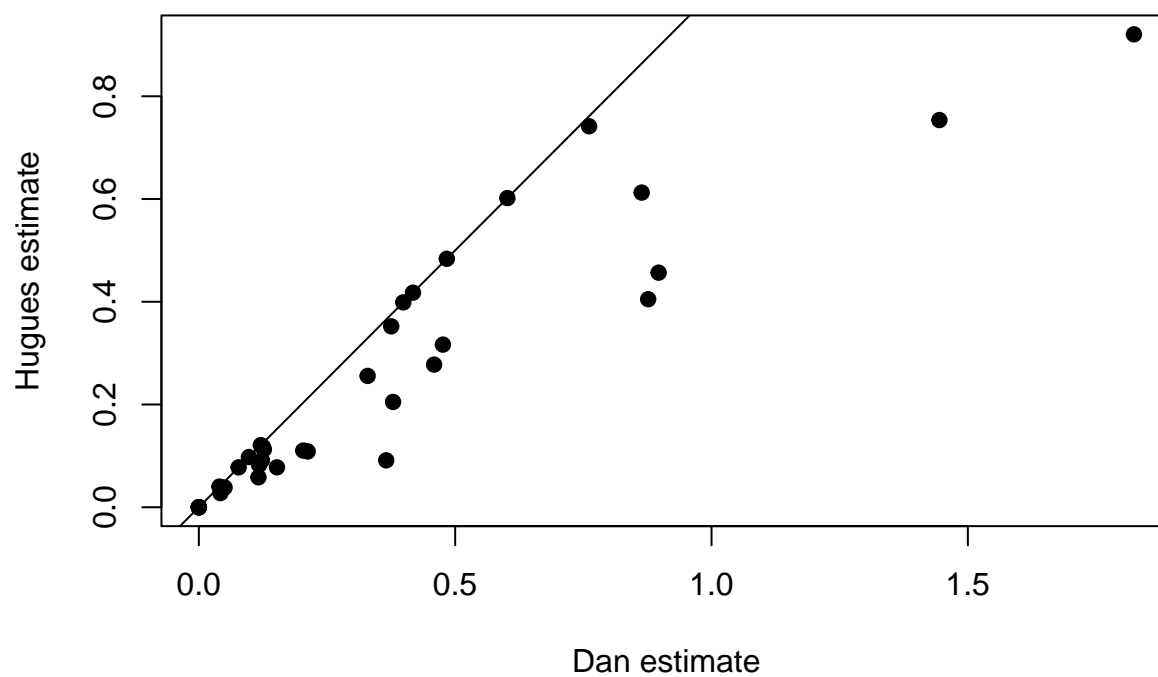
Species 201−Thorny skate
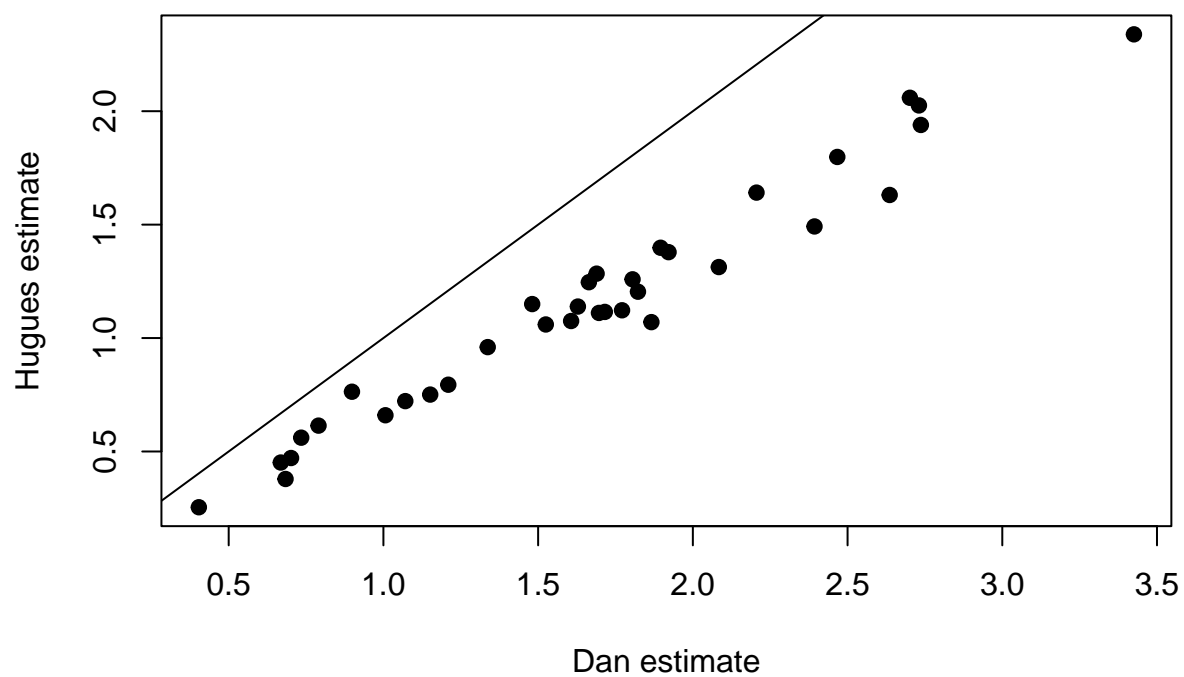
Species 202–Smooth skate
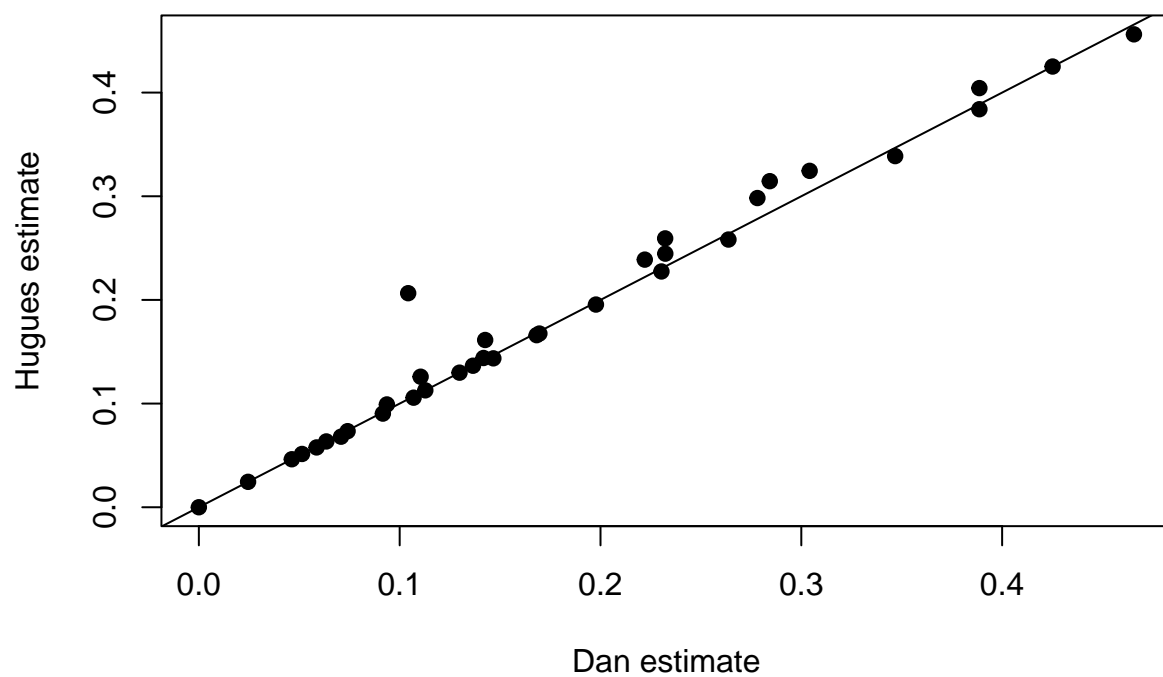
Species 204–Winter skate

Dan estimate

Hugues estimate
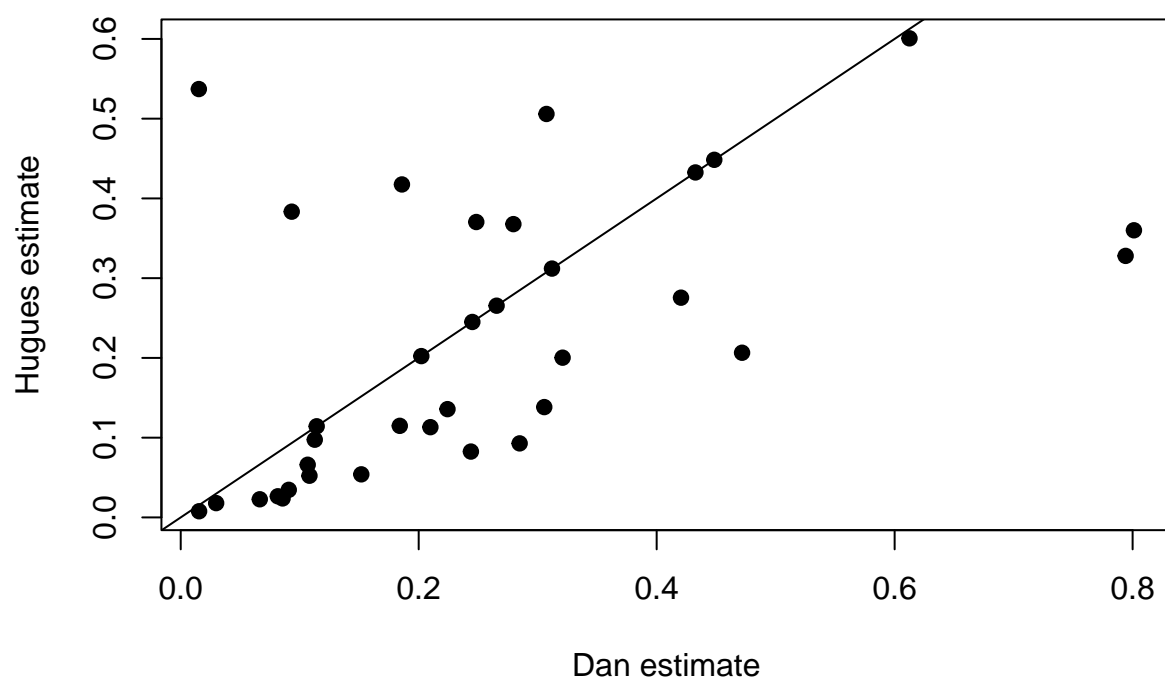
Species 220–Spiny dogfish
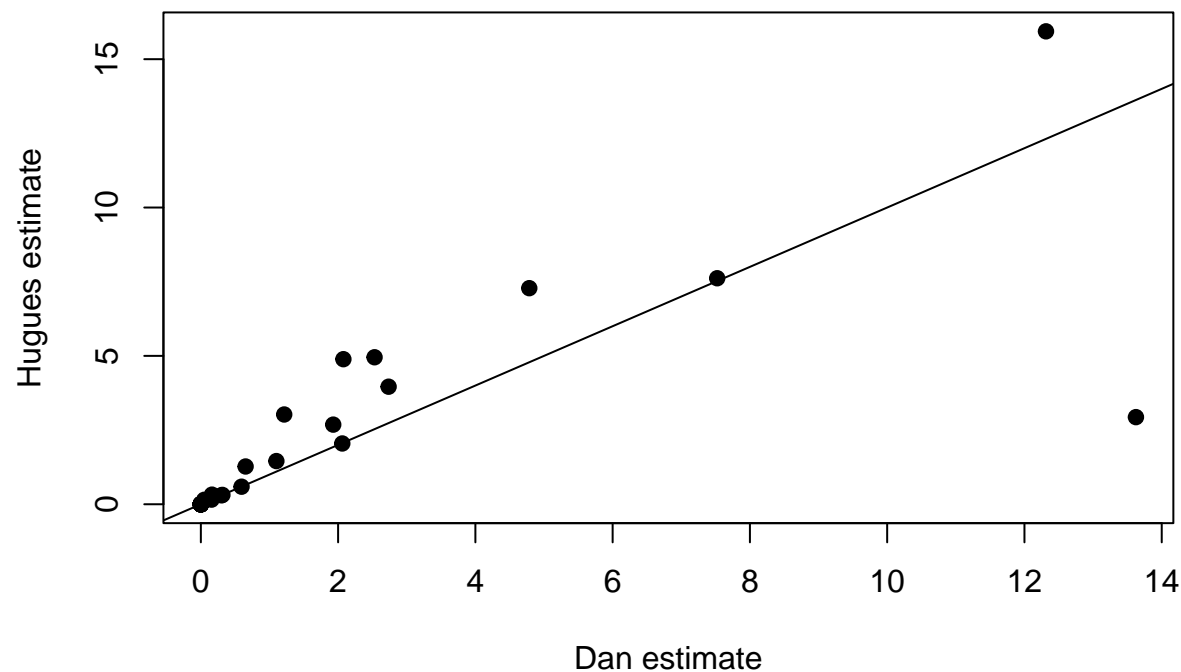
Species 221−Black dogfish
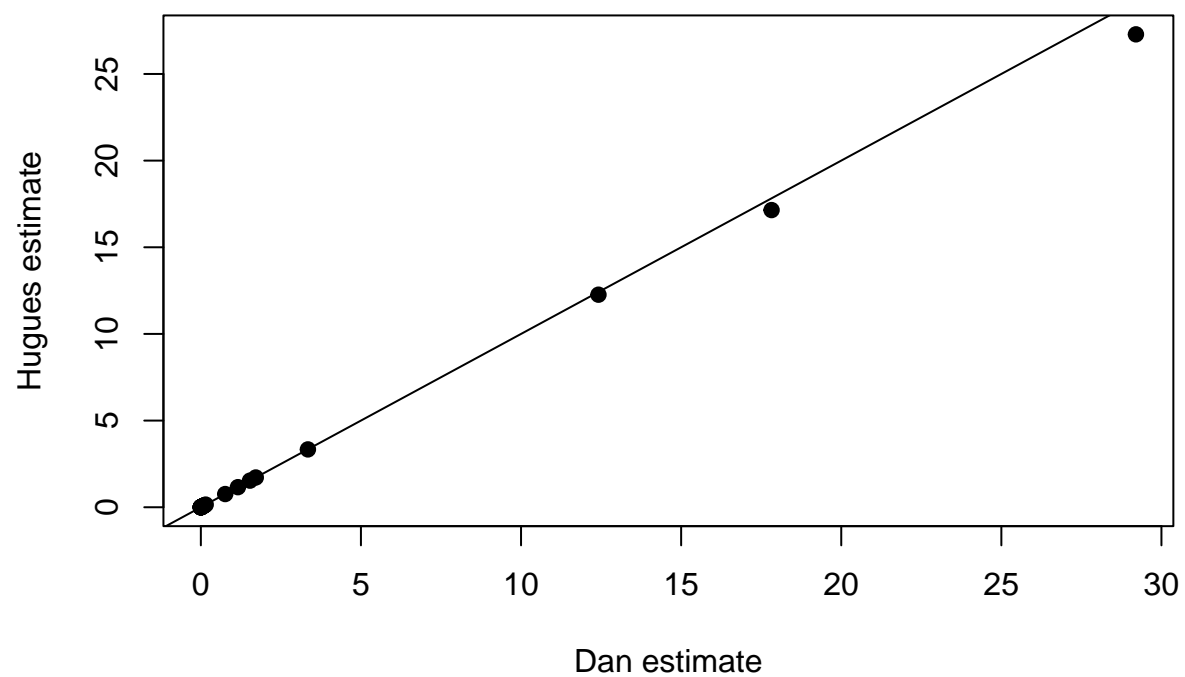
Species 241–Atlantic hagfish
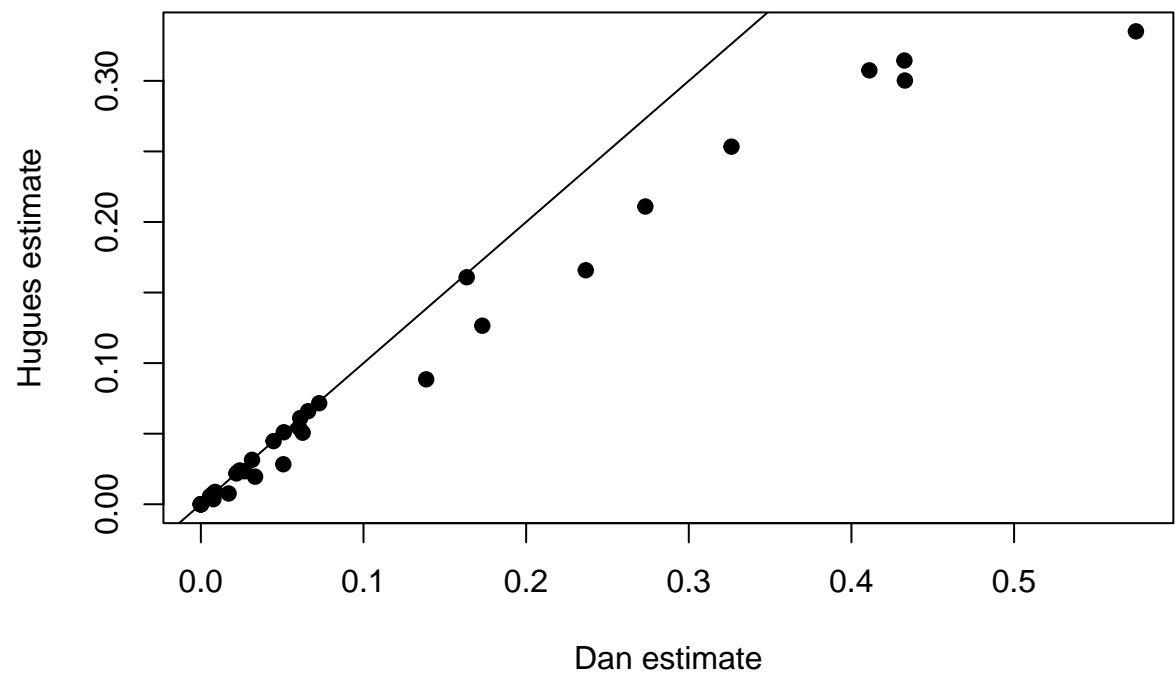
Species 300−Longhorn sculpin
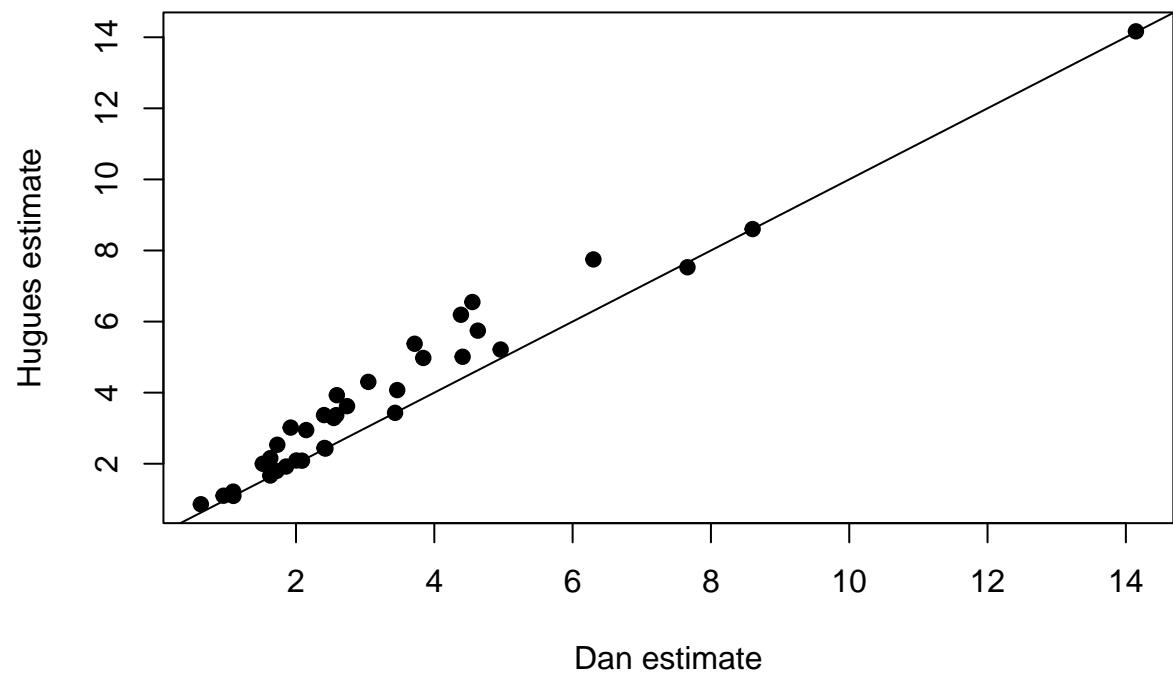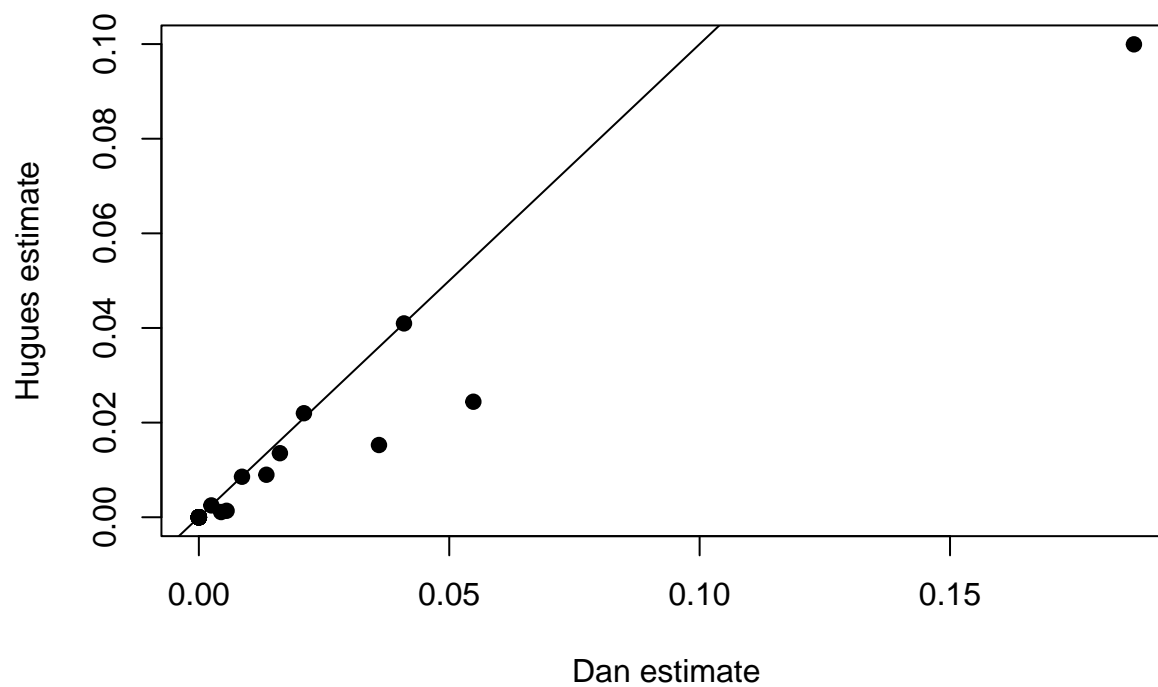
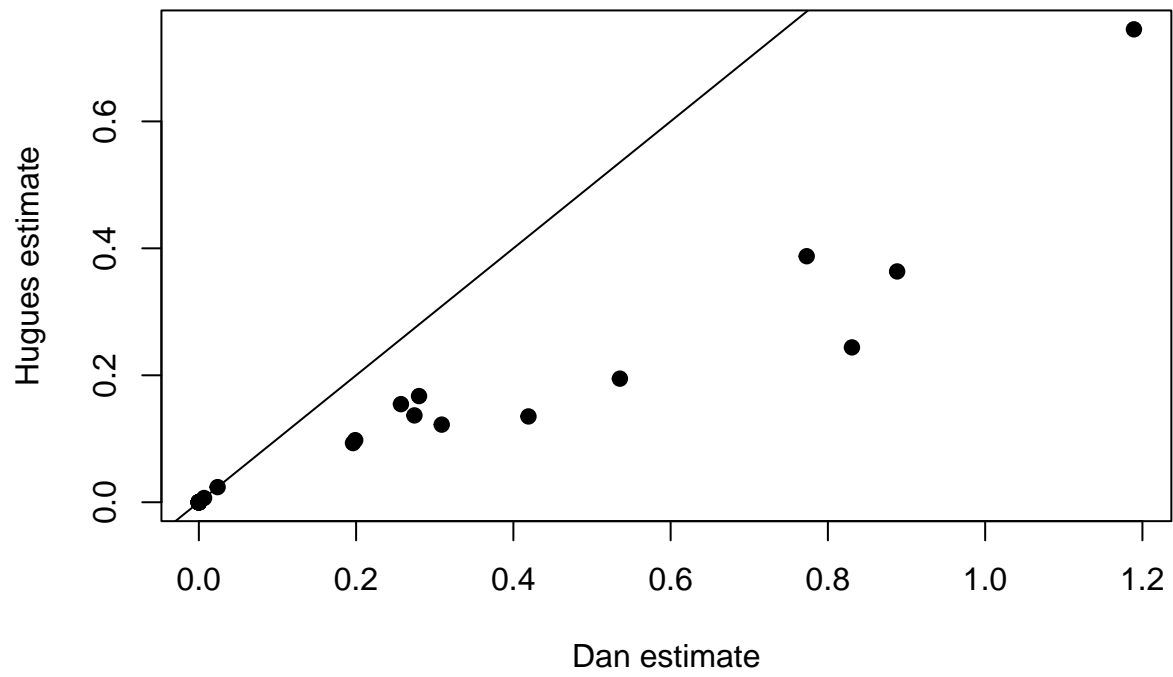# Species 301−Shorthorn sculpin
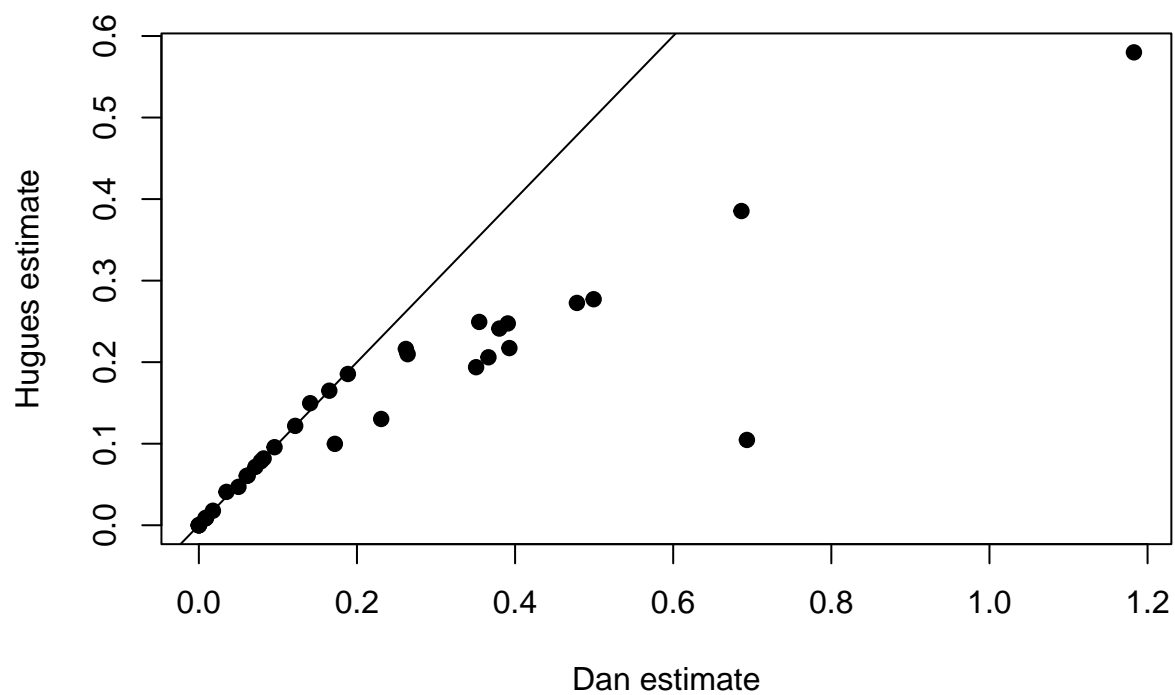
Species 304–Moustache sculpin

Dan estimate

Hugues estimate
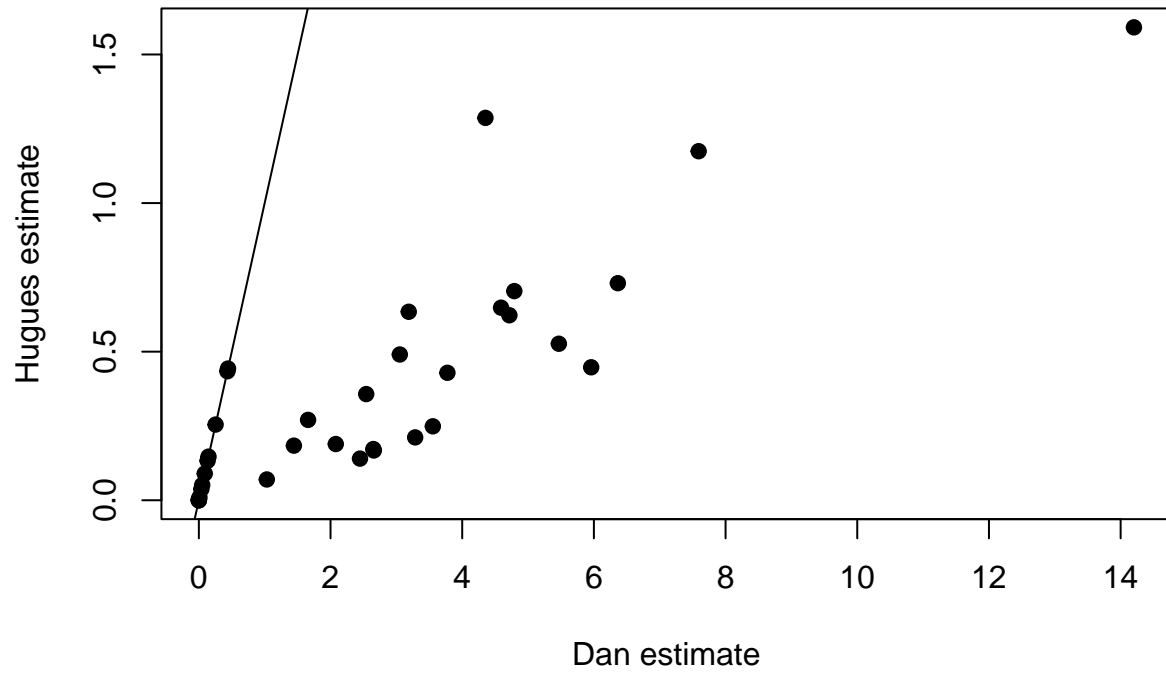
Species 880–Atlantic hookear sculpin
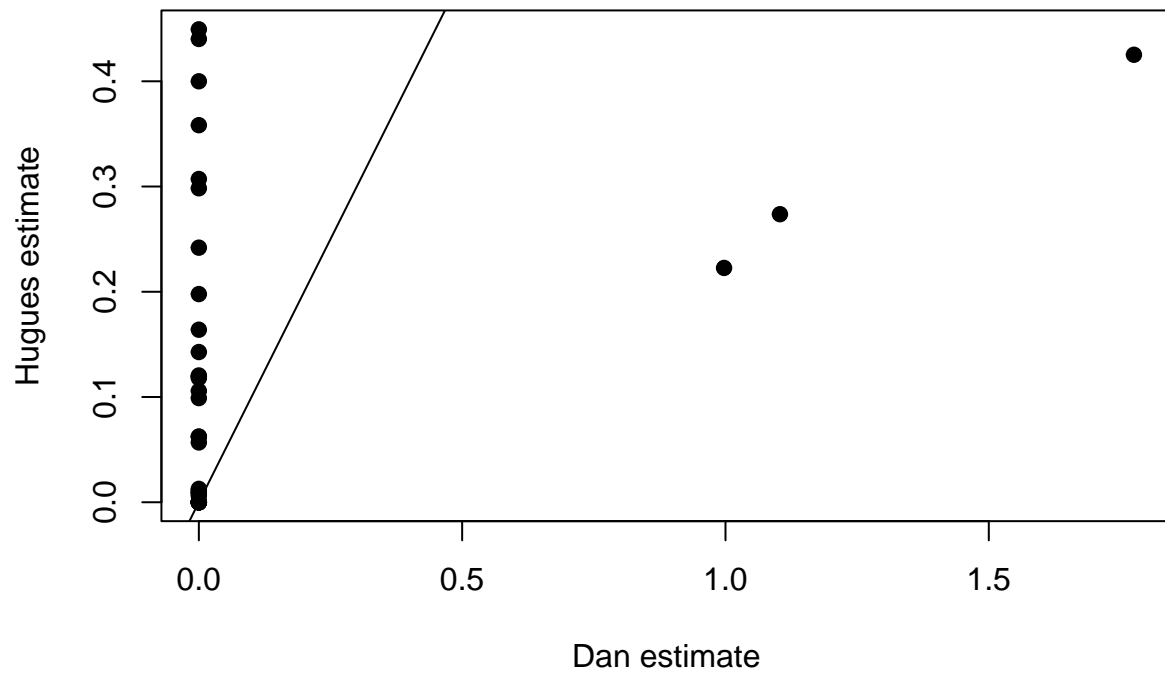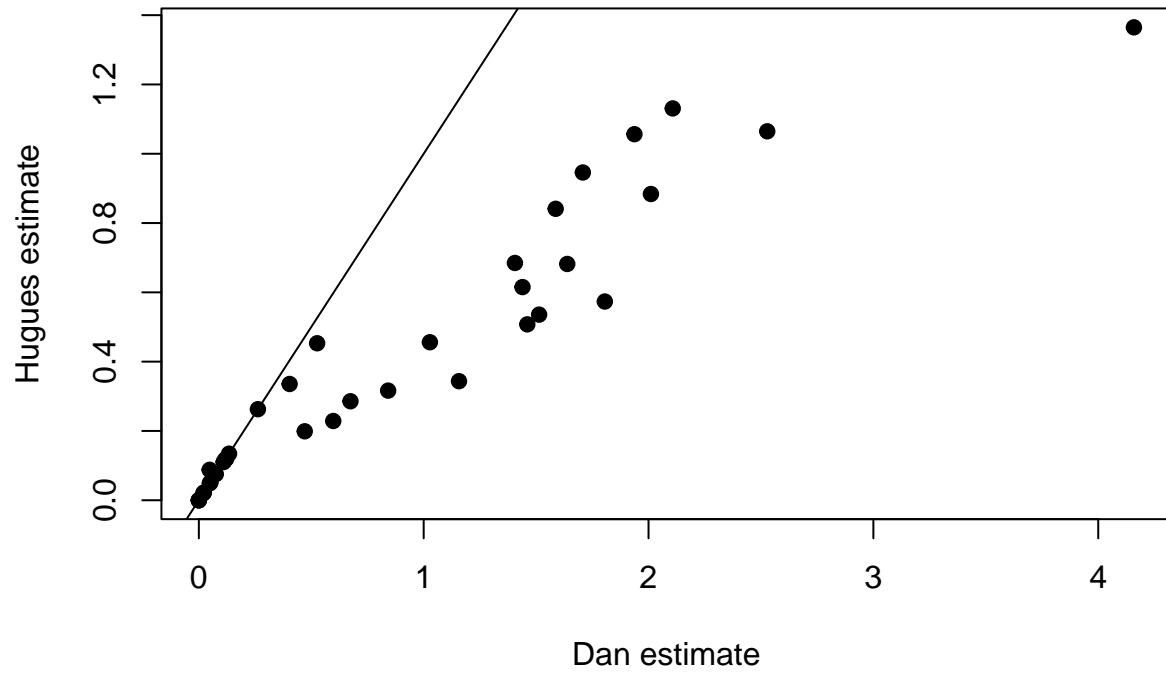
Species 307–Polar sculpin

Species 314–Spatulate sculpin
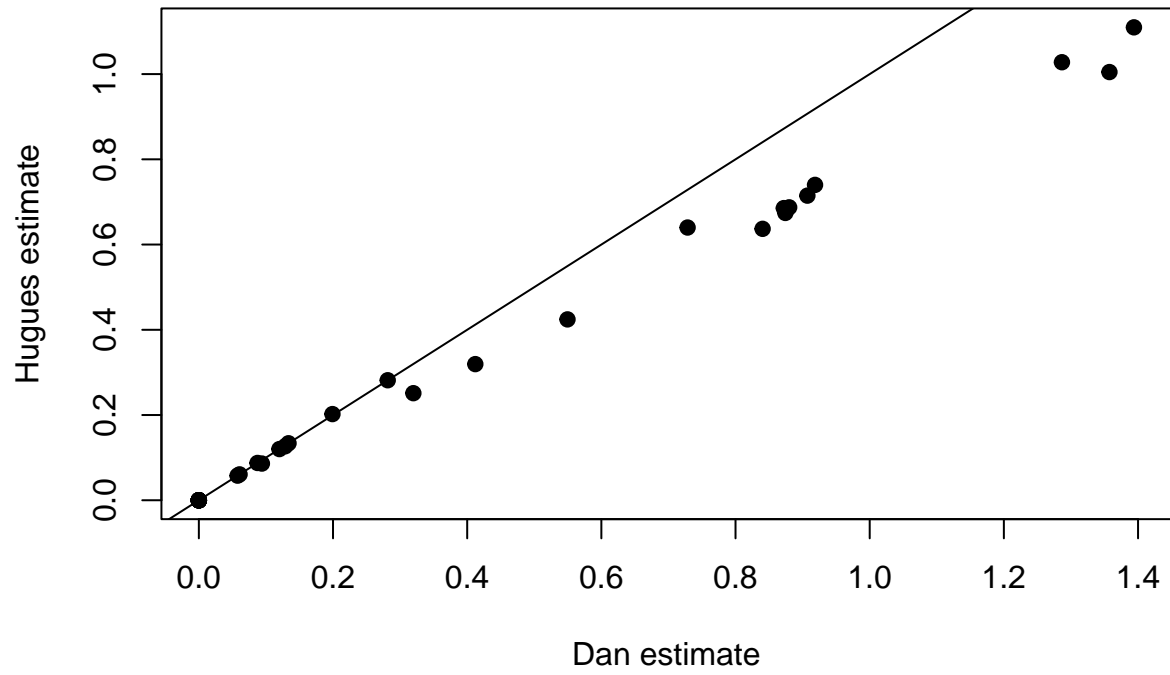
Species 316–Arctic sculpin
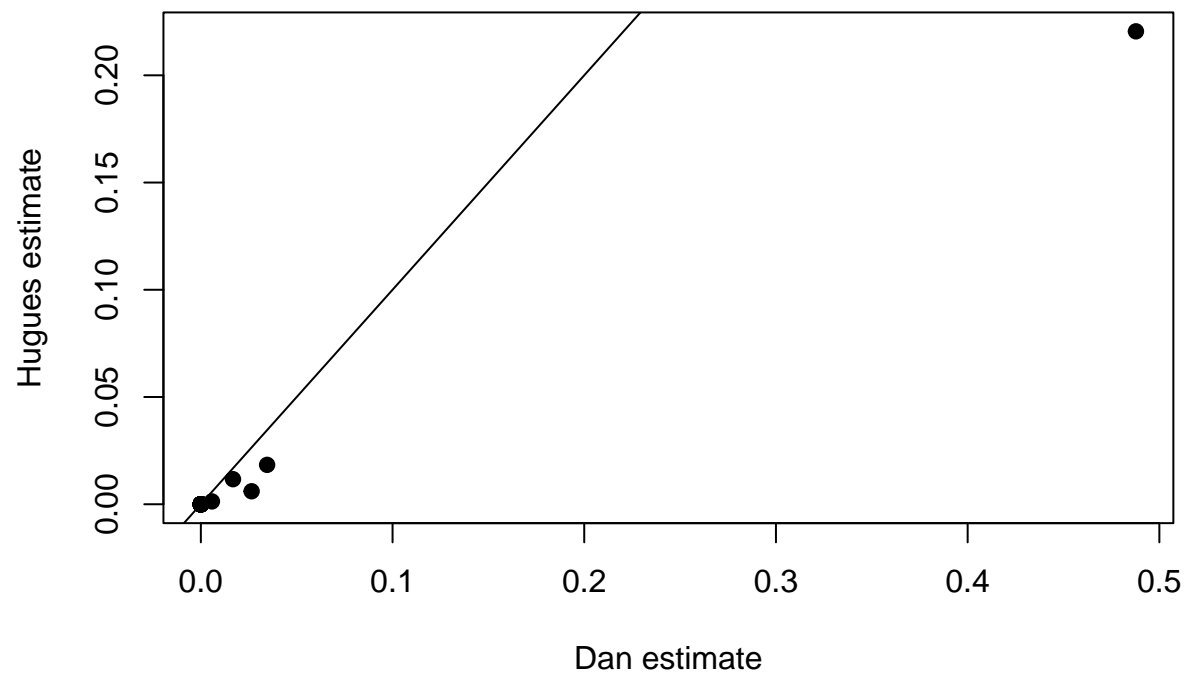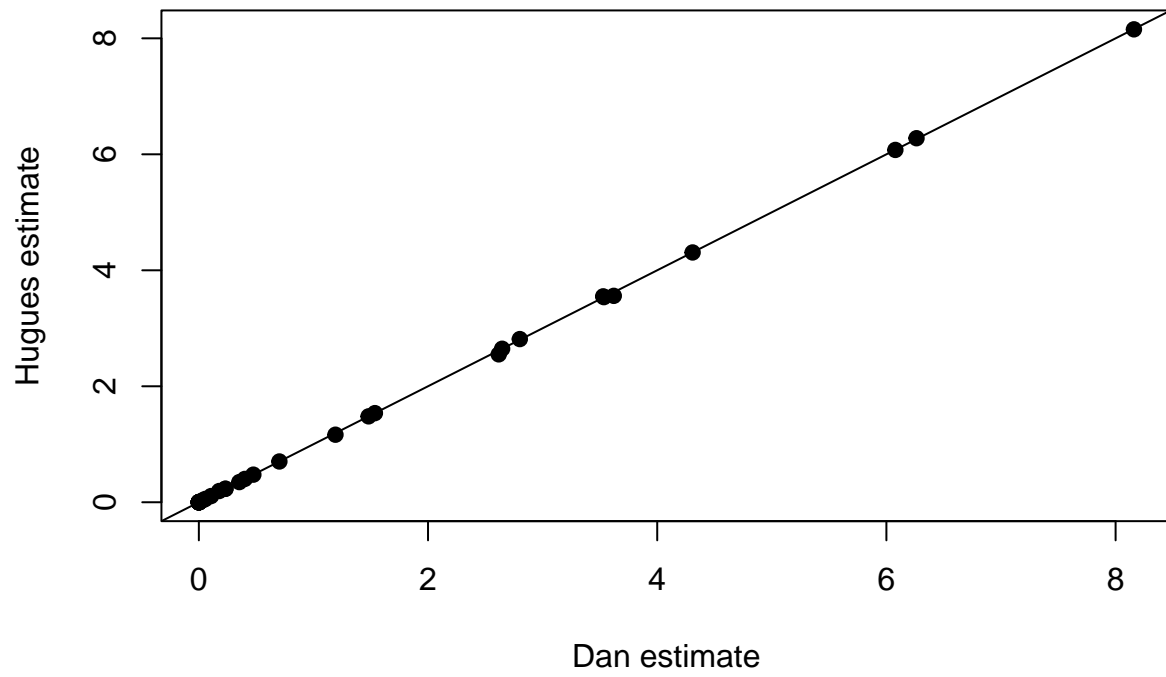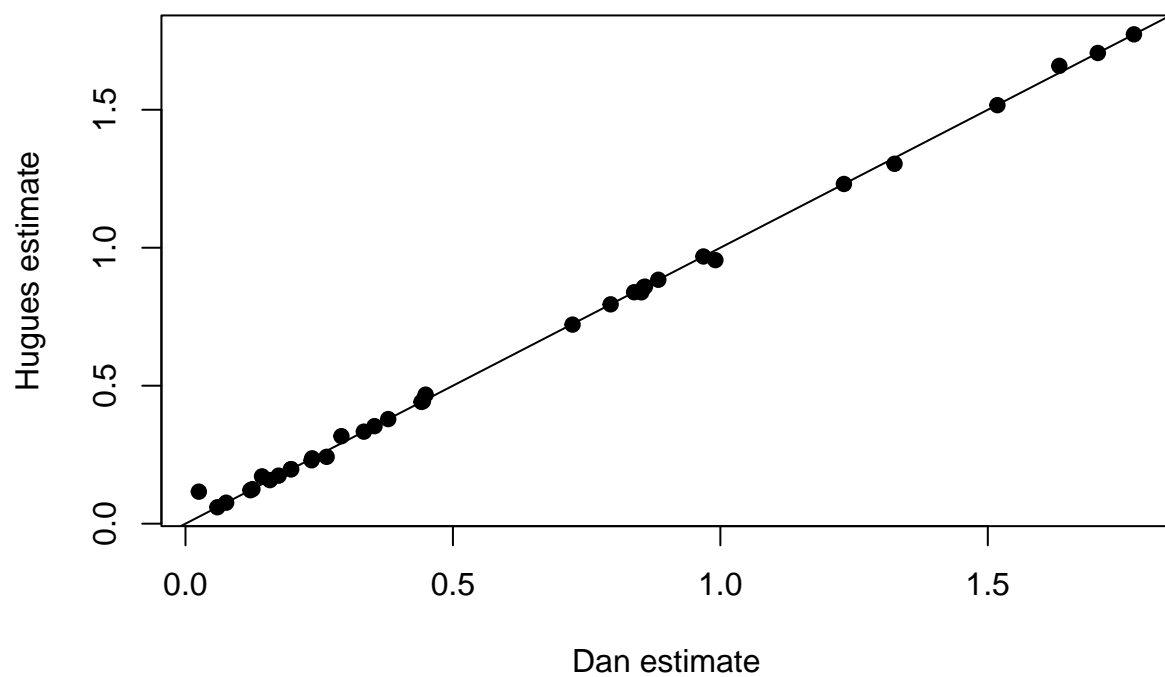
Species 320−Sea raven
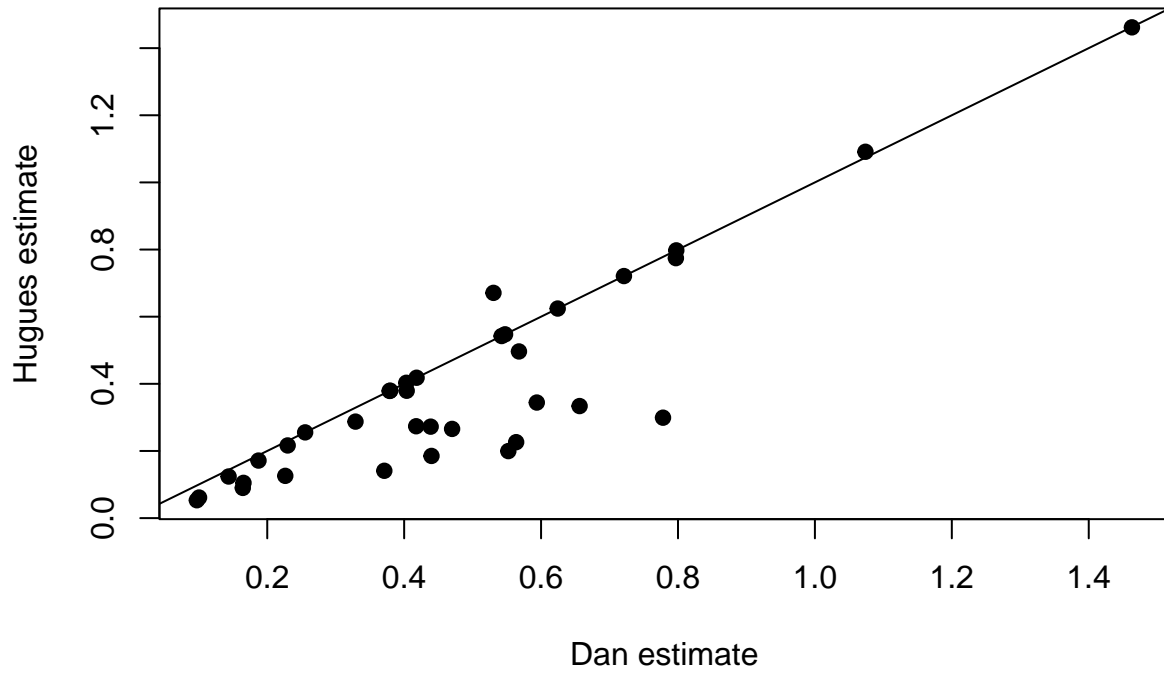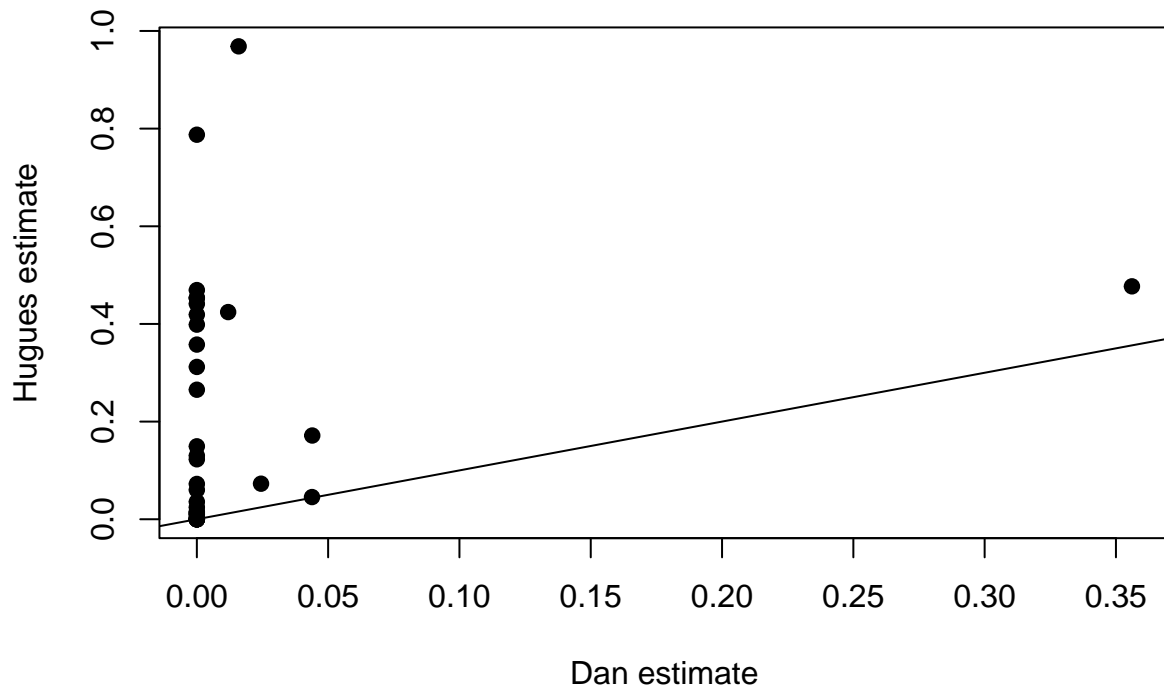
Species 340–Alligatorfish

Species 350–Atlantic poacher

Species 361–Three–spined stickleback

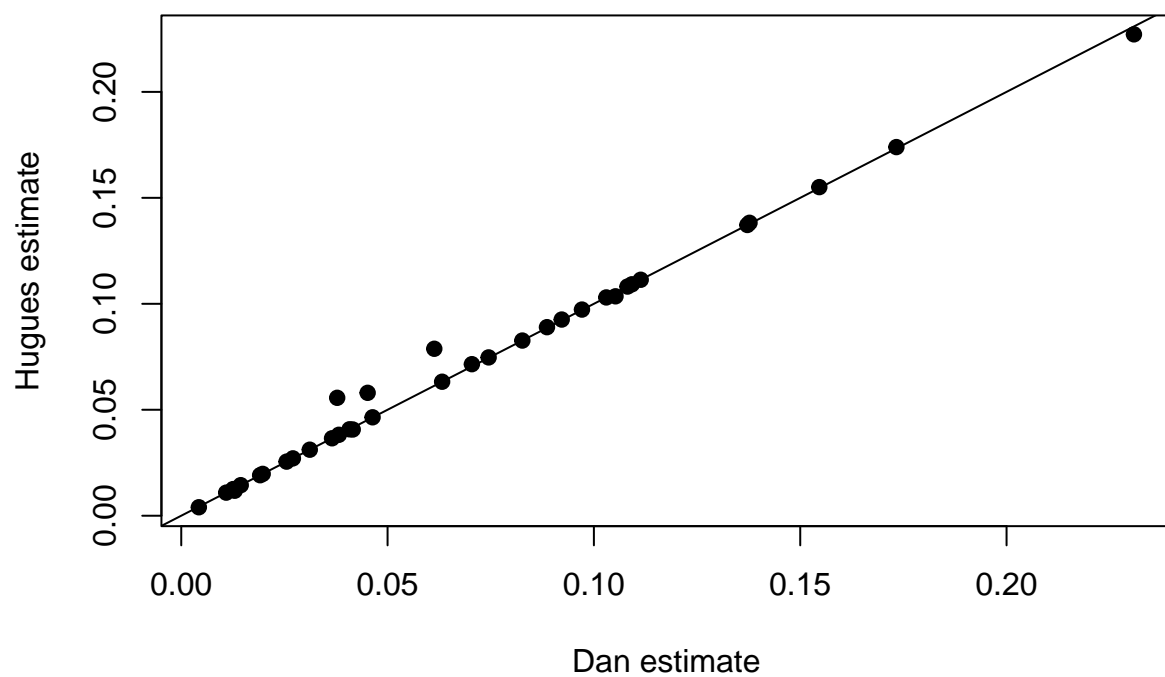# Species 410–Marlin–spike grenadier

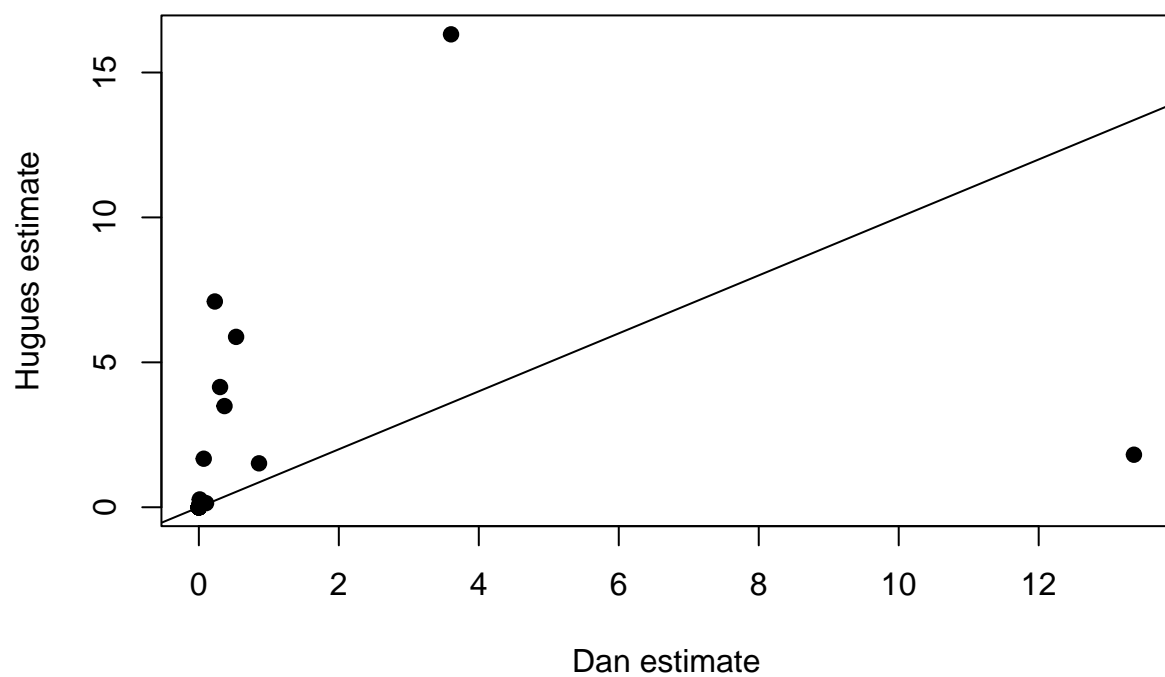# Species 503–Atlantic seasnail

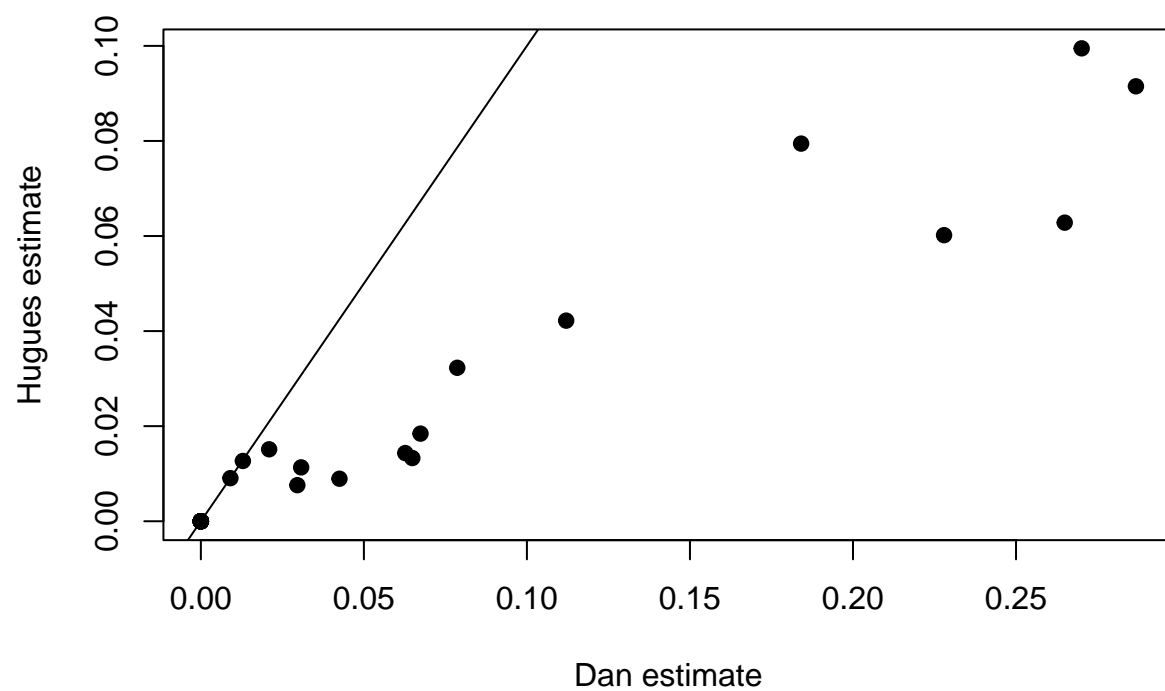# Species 501−Lumpfish
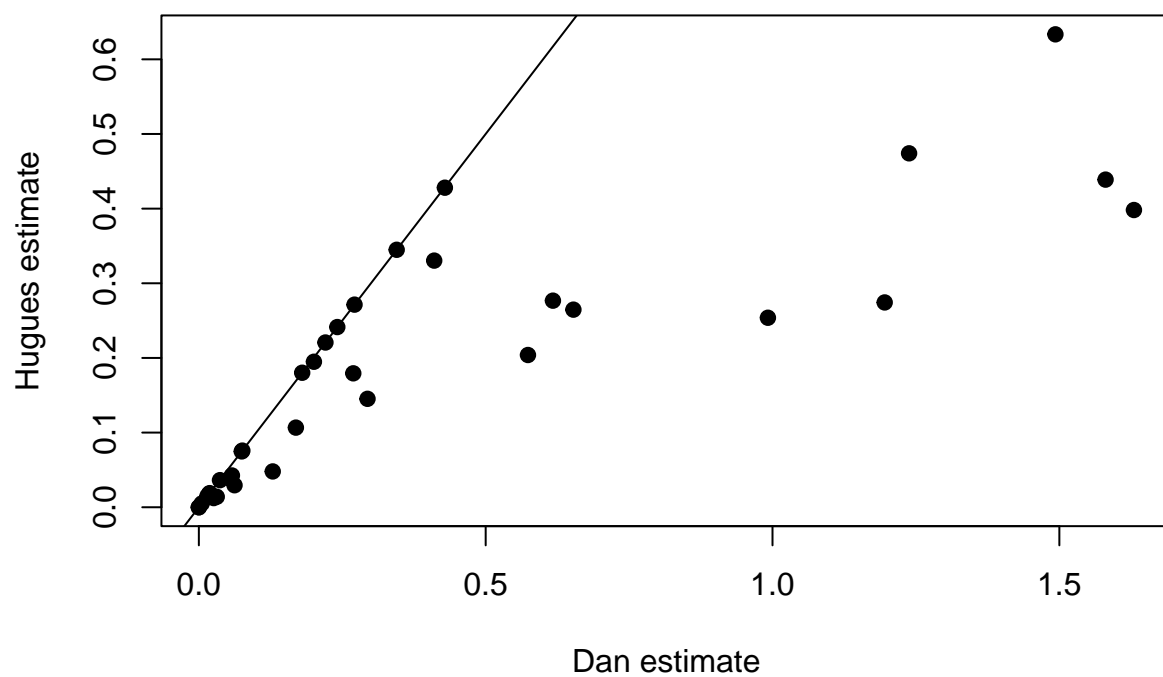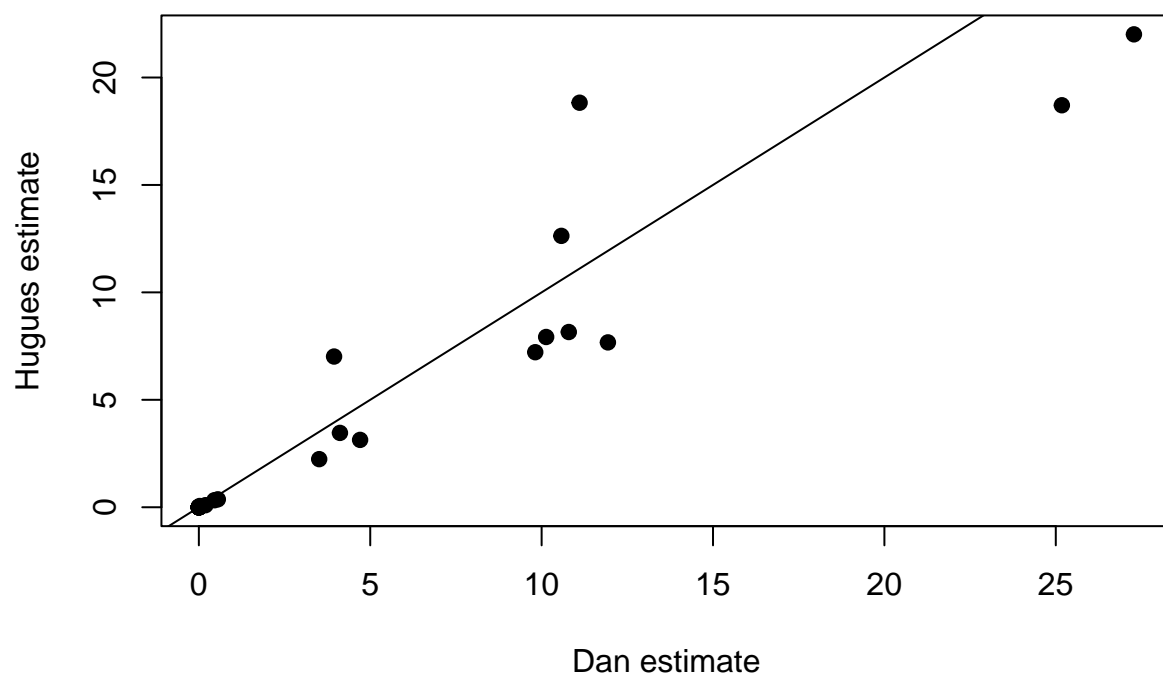
Species 610–Northern sand lance

Species 616–Fish doctor

Species 622–Snakeblenny
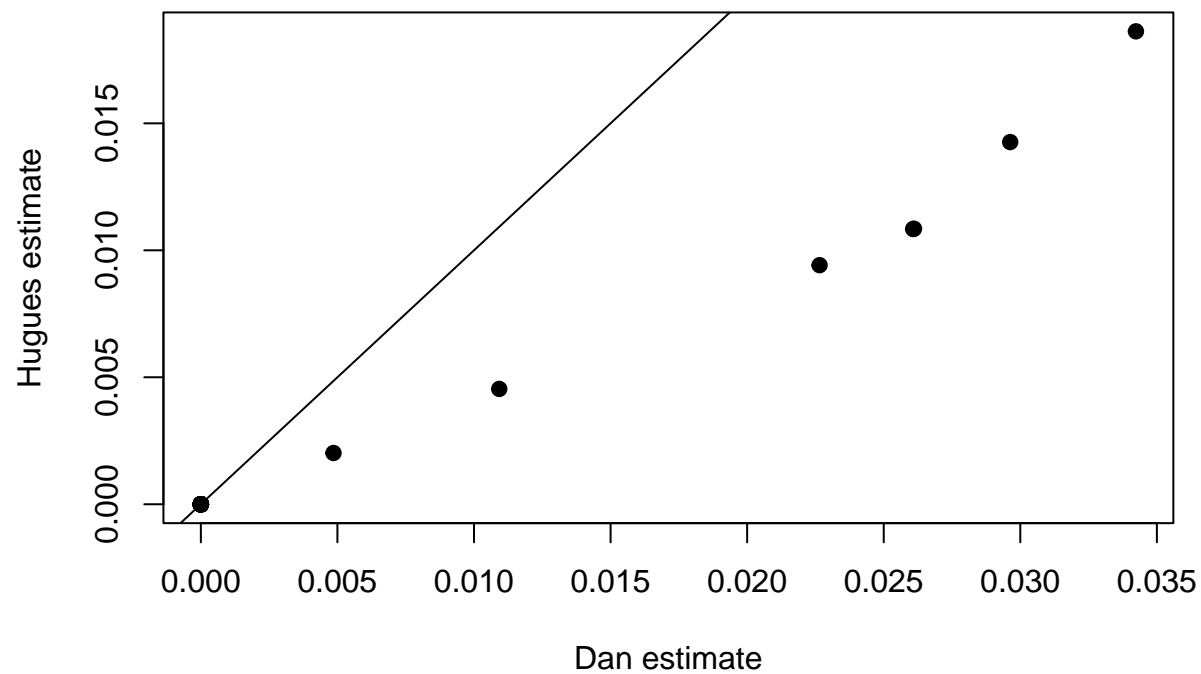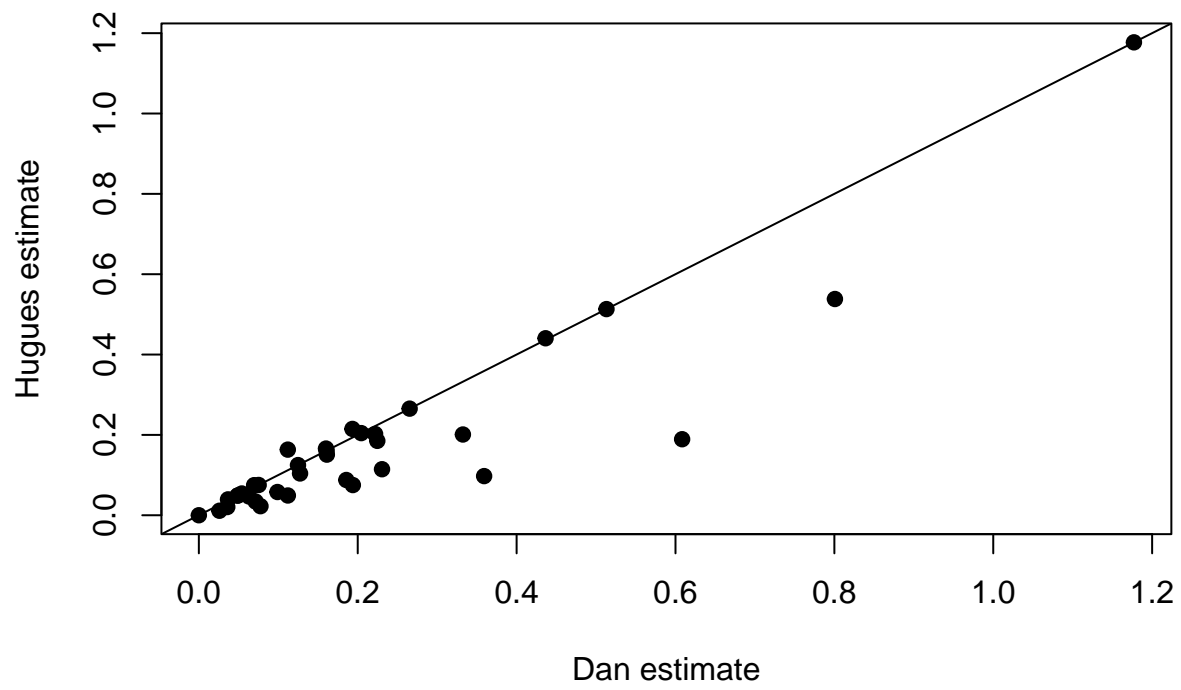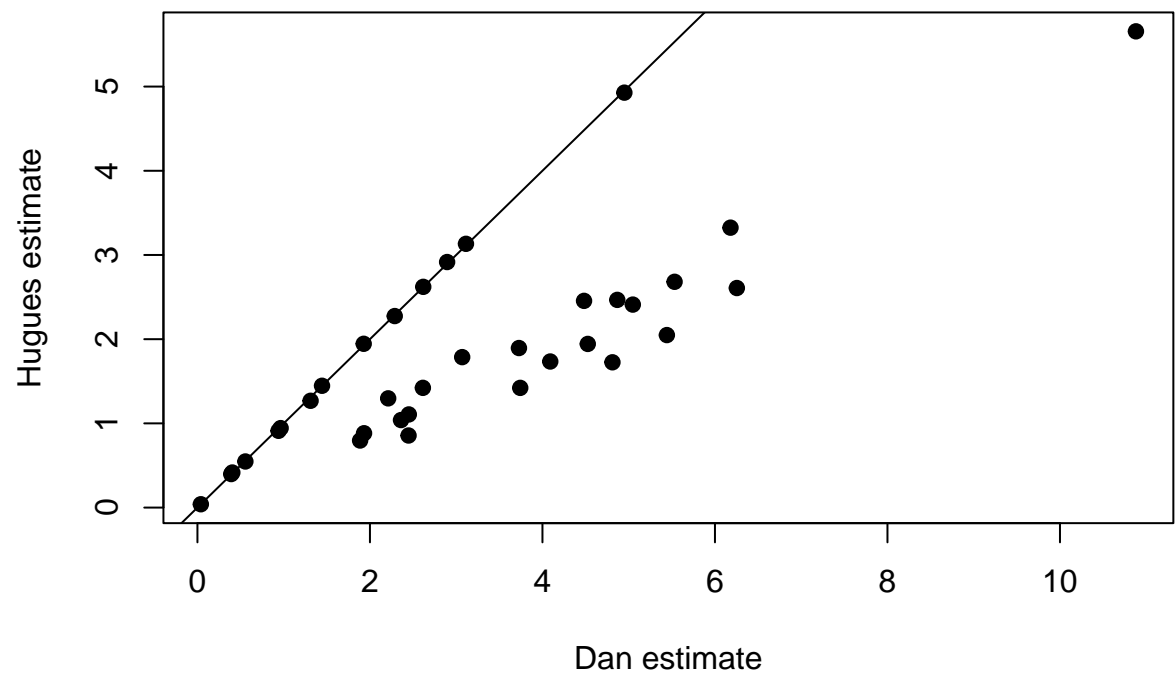
Species 623–Daubed shanny
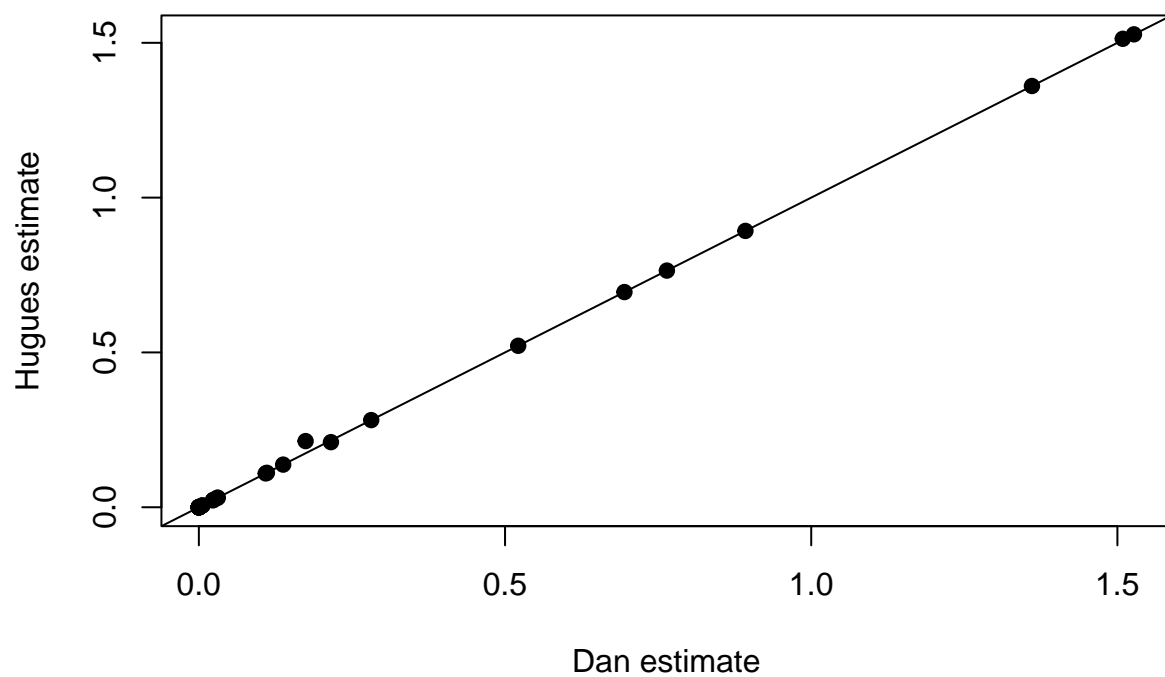
Species 624–Arctic shanny

Species 640–Ocean pout

Species 598–Eelpouts unidentified

Species 646–Atlantic soft pout

Species 712–White barracudina