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

Daniel Ricard

Last modified: 2022-01-21 14:35:59

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])),
       type='n',
       xlab="Dan estimate", ylab="Hugues estimate")
  text(dan.to.compare[,i+1],
       hugues.to.compare[,i+1],
       dan.to.compare[,1]
       )
  abline(a=0,b=1)
}
```

Species 10–Atlantic cod
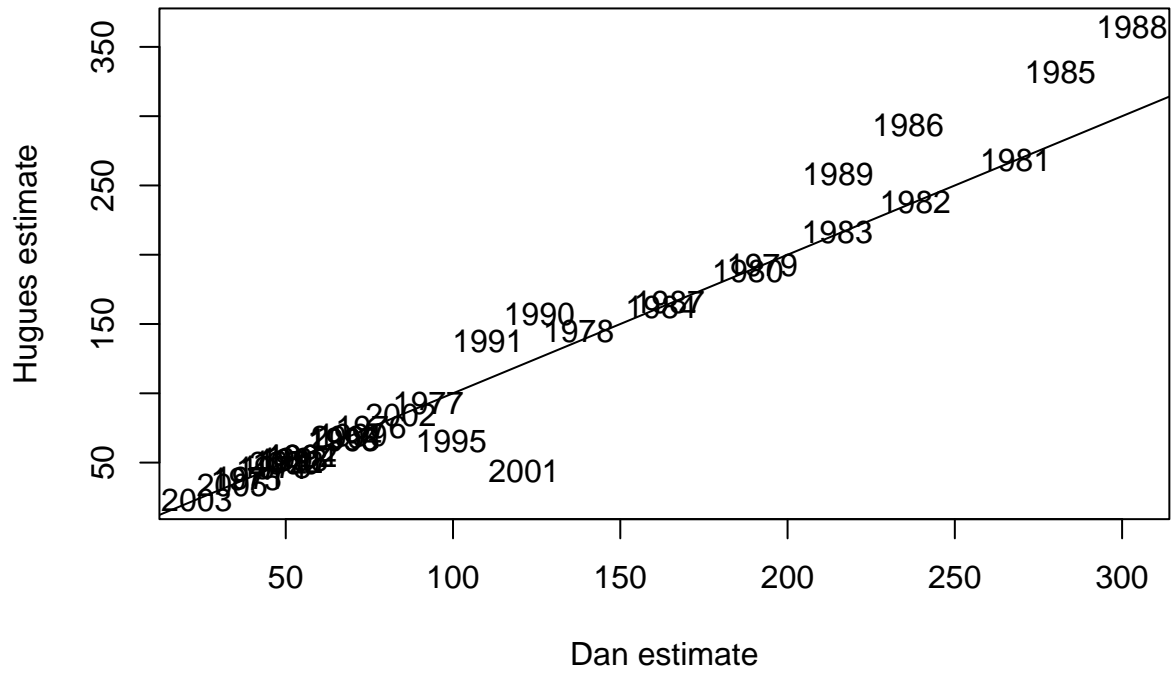
Species 11−Haddock
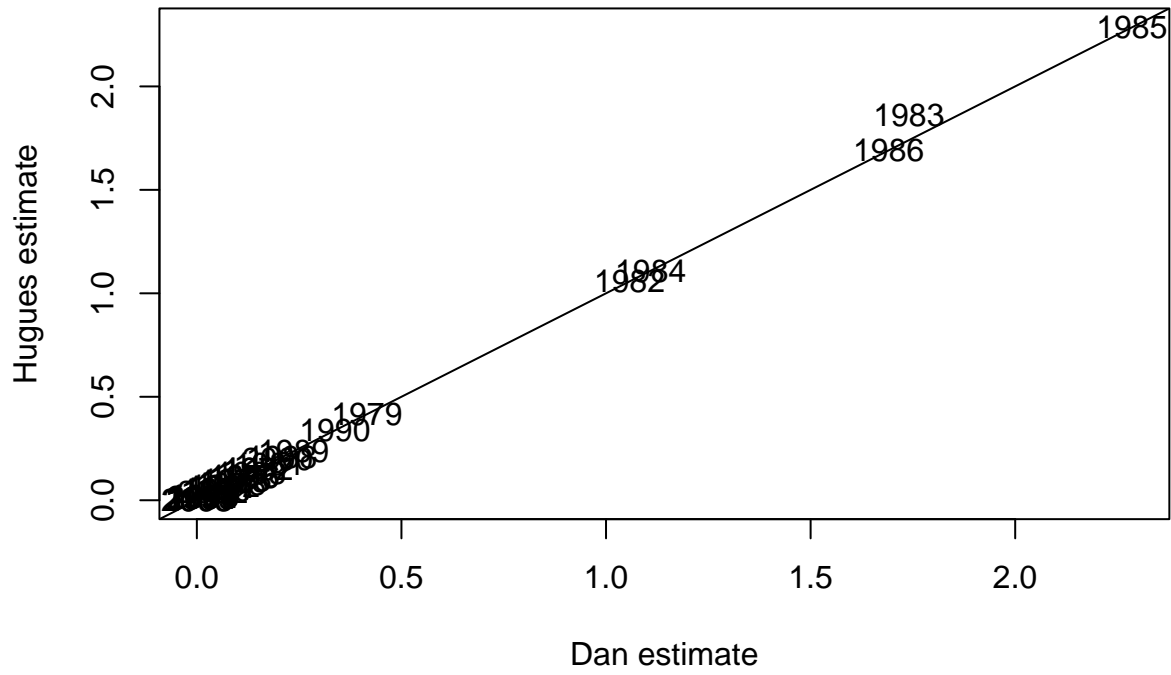
Species 12–White hake
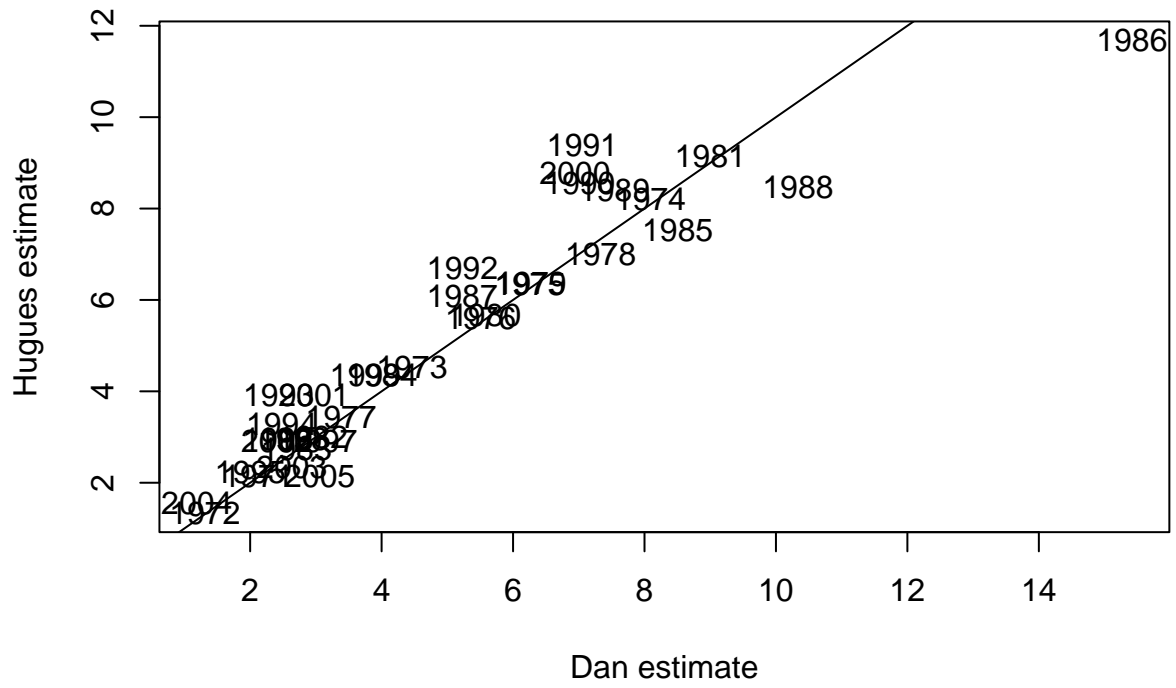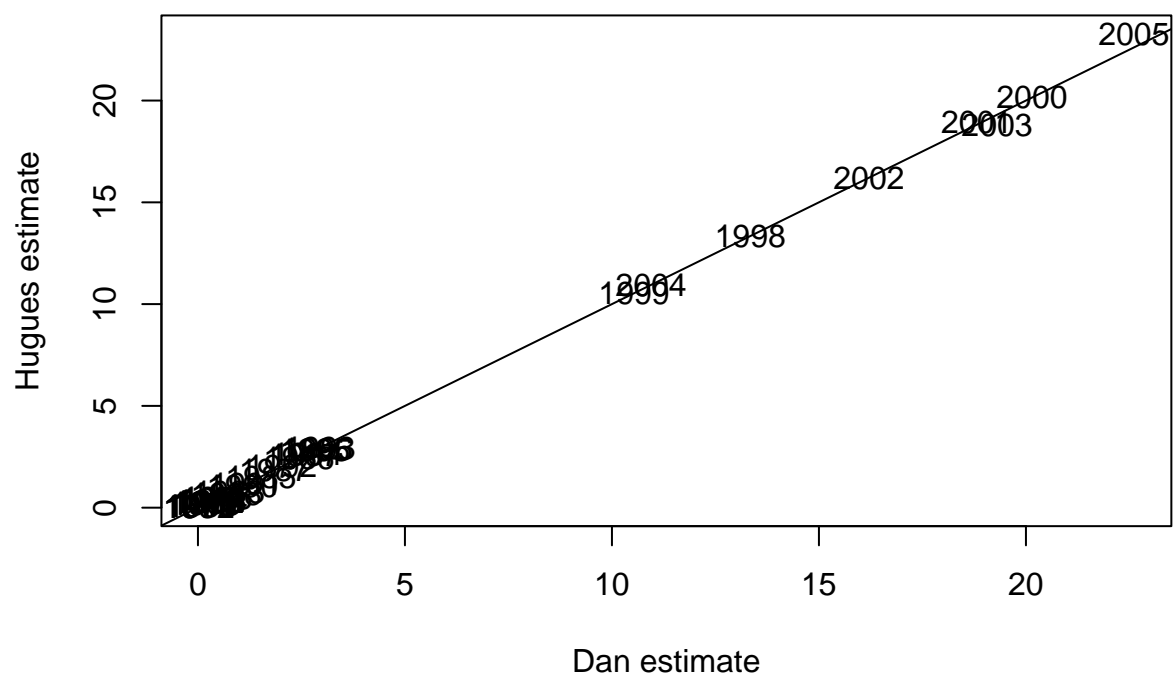
Species 14–Silver hake
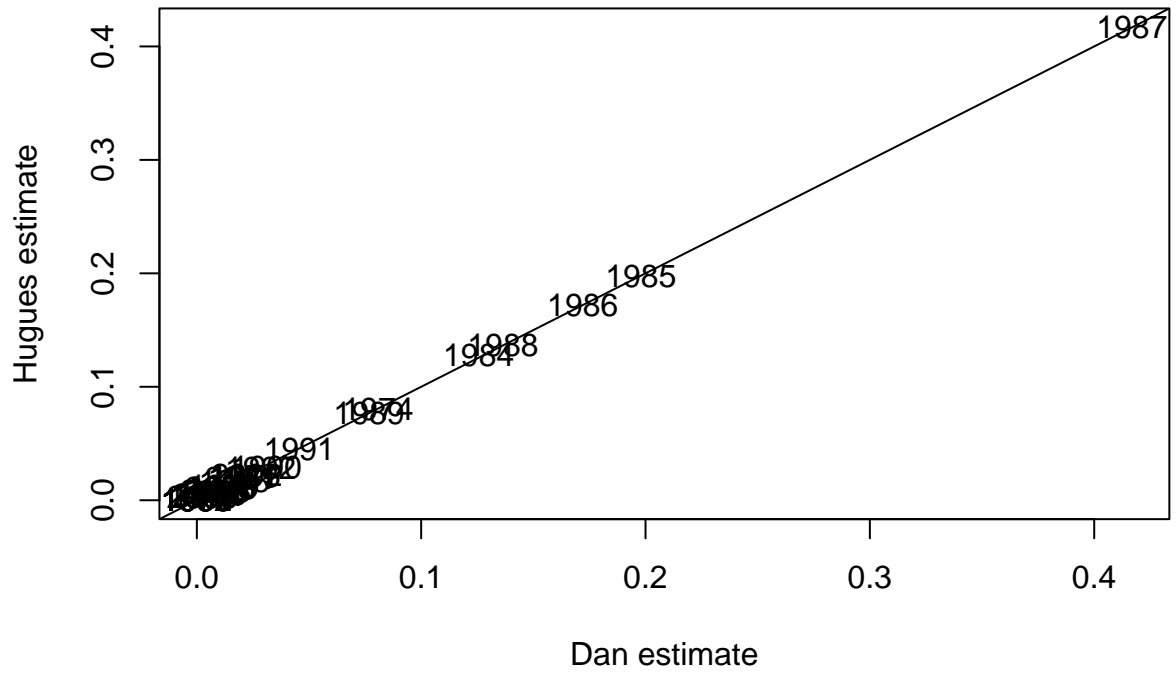
Species 16−Pollock

Dan estimate
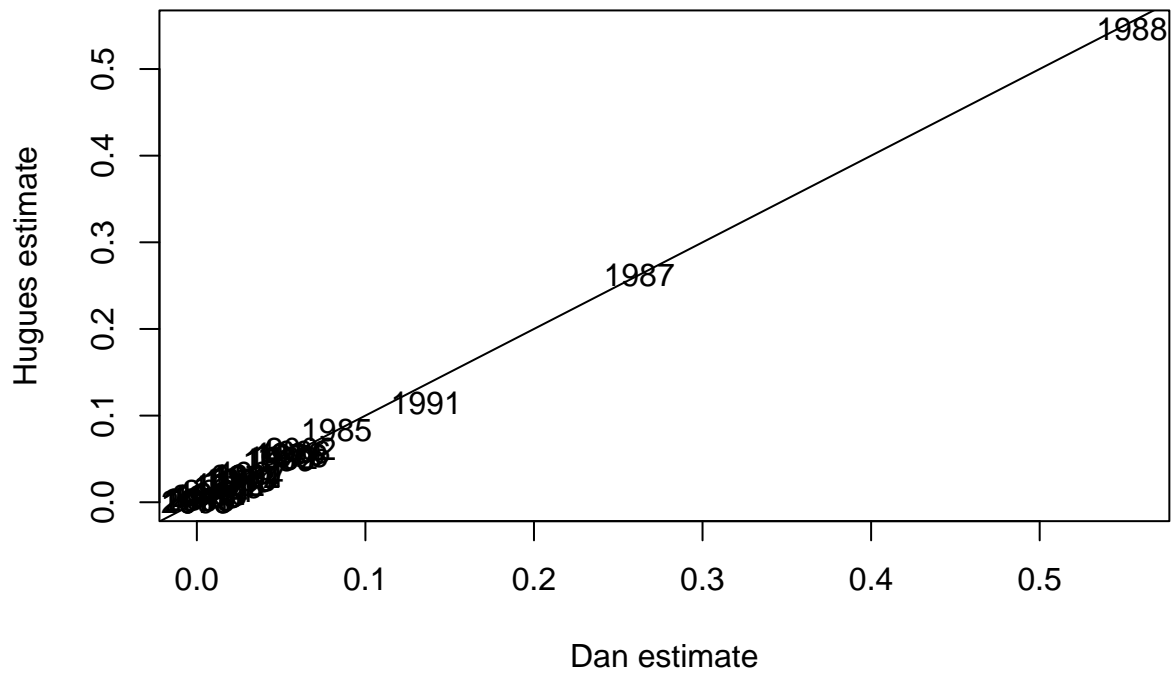
Species 23−Redfish unidentified

Dan estimate

Hugues estimate
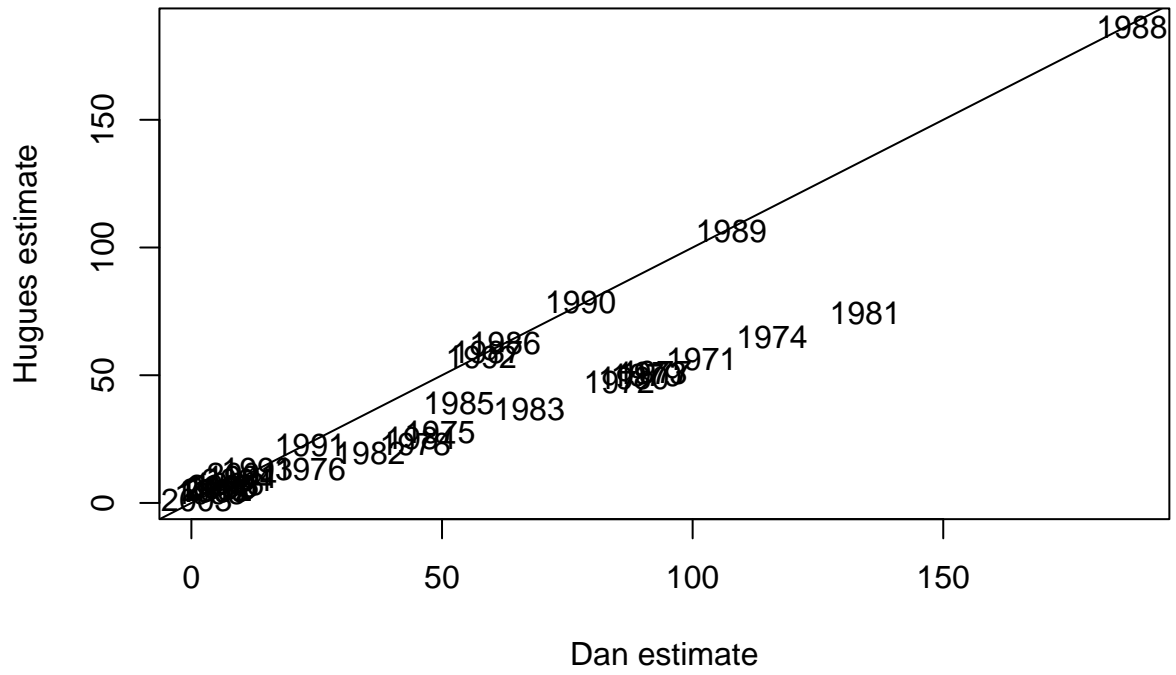
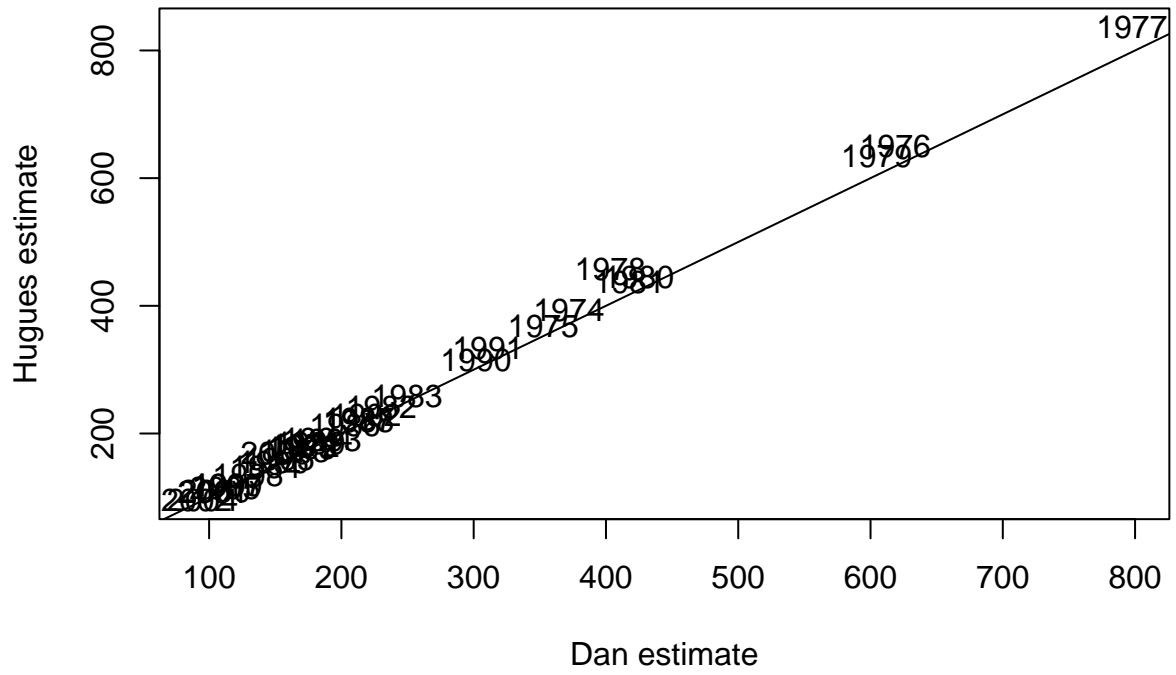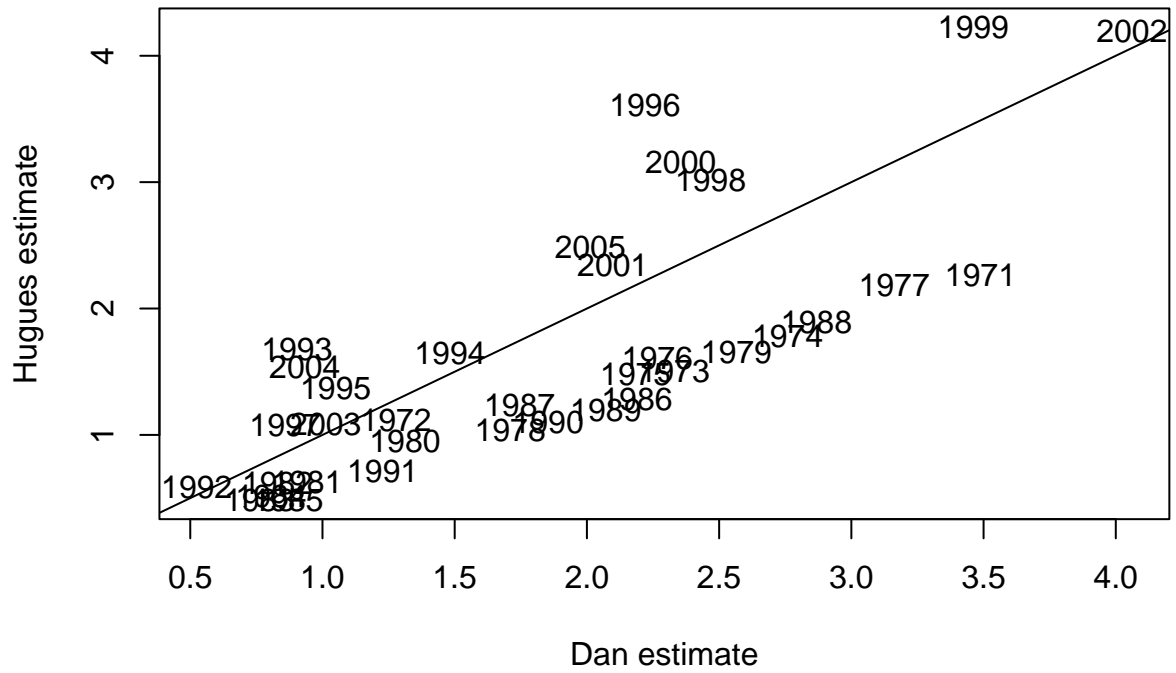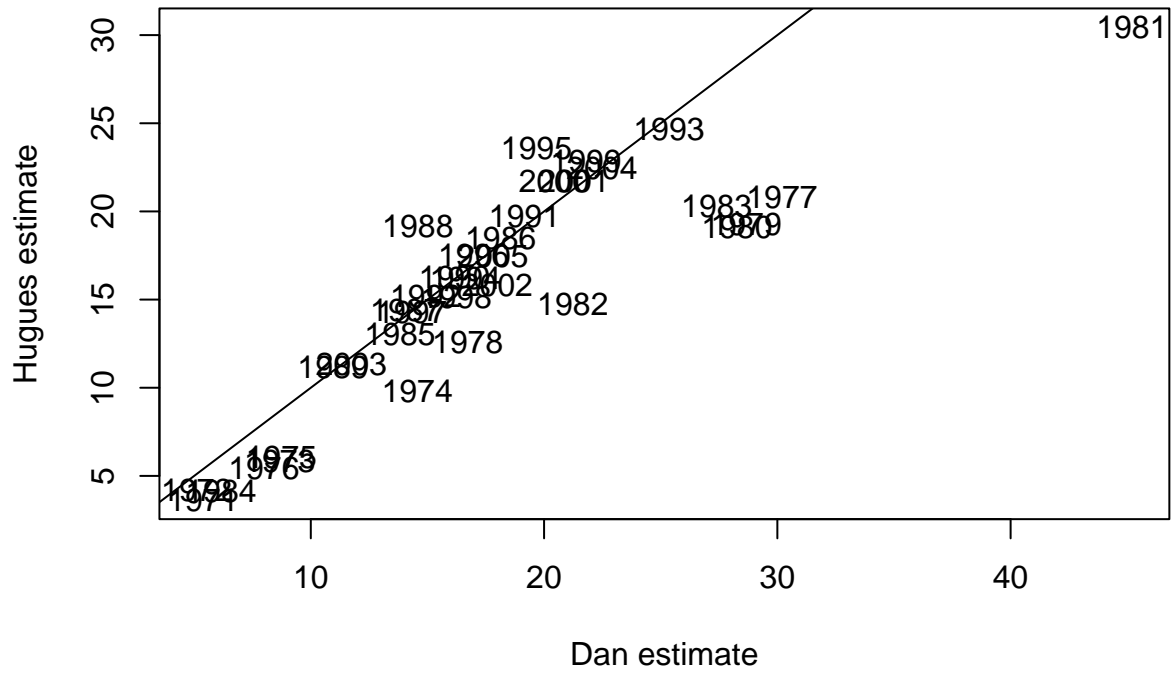# Species 30–Atlantic halibut
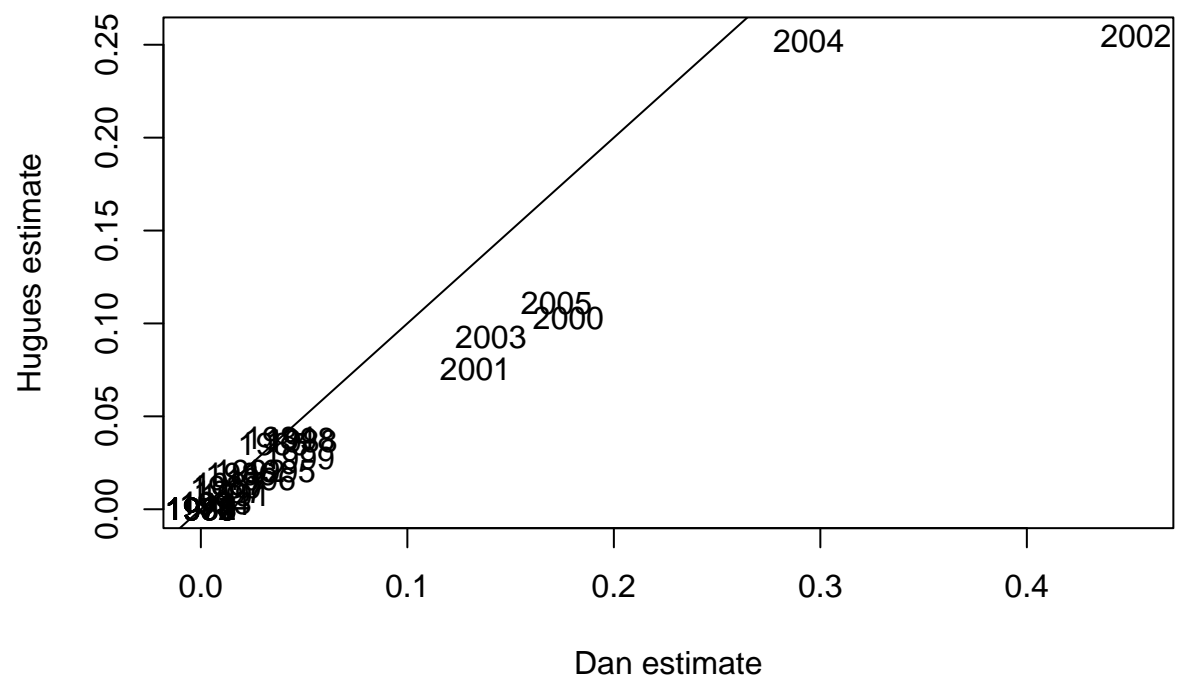
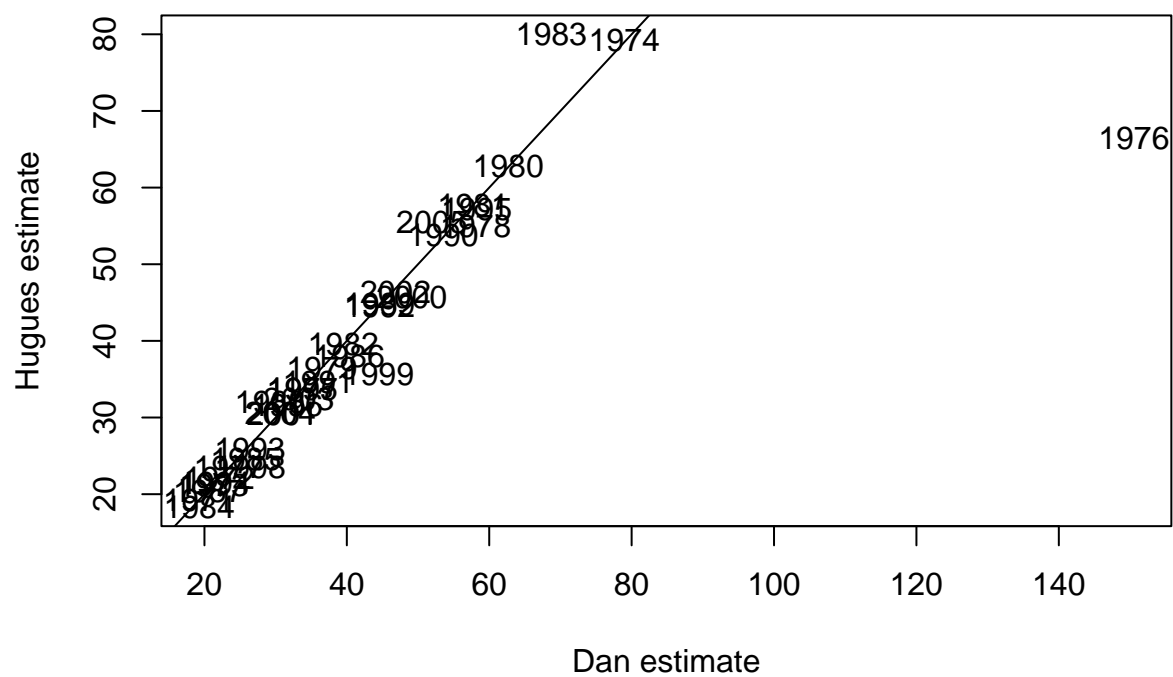# Species 31–Greenland halibut

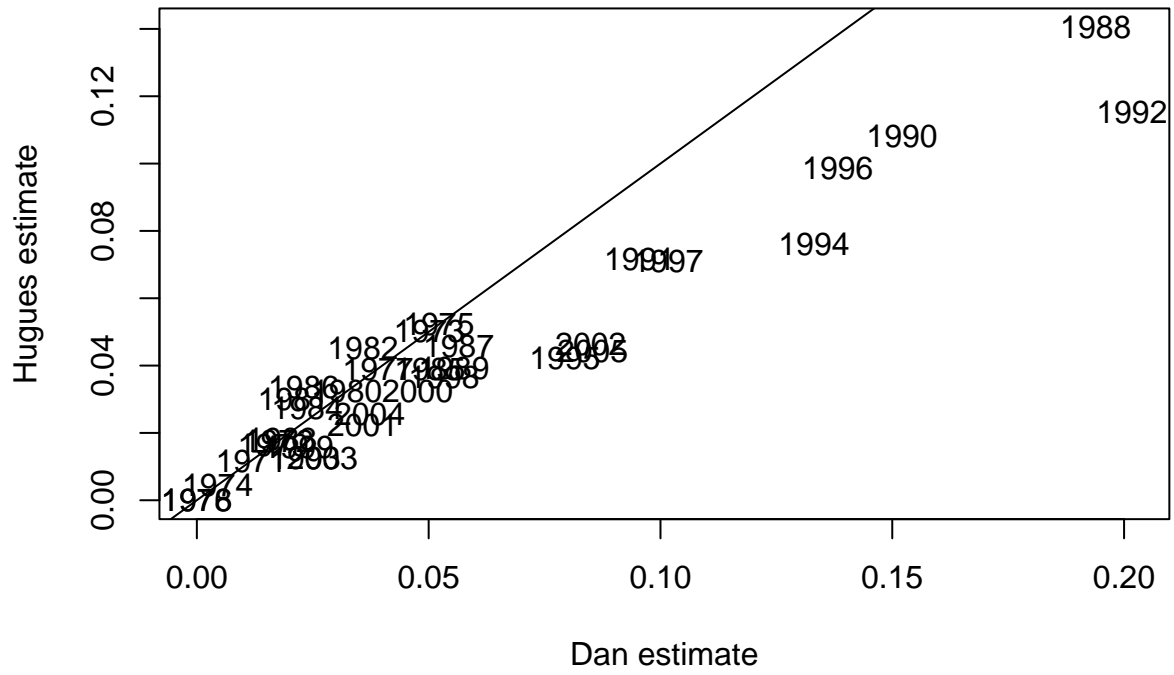# Species 40−American plaice

Species 41−Witch flounder

Species 42–Yellowtail flounder
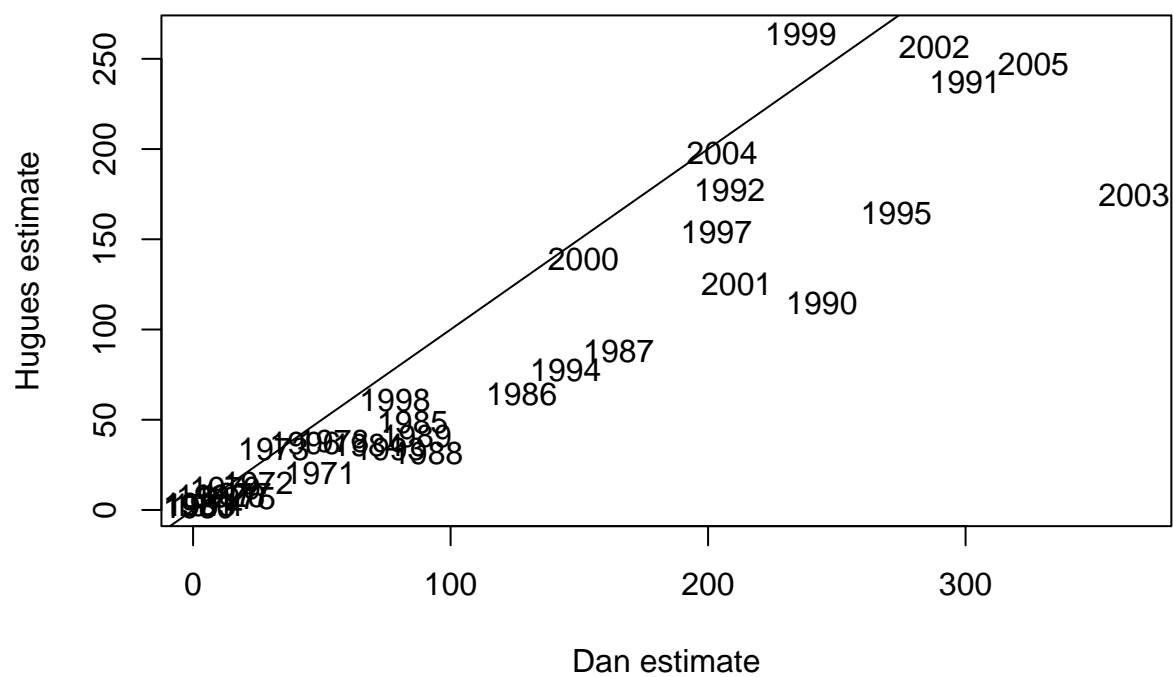

Dan estimate

Hugues estimate

Species 43–Winter flounder
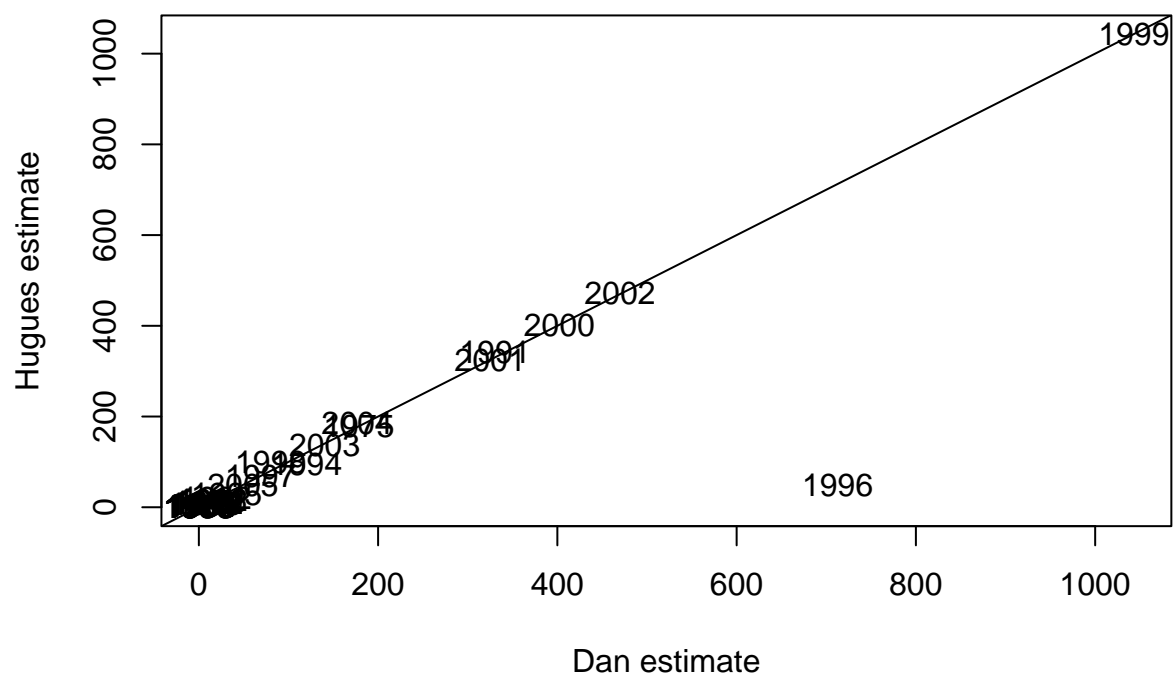
Species 50−Atlantic wolffish

Species 60–Atlantic herring

Species 62–Alewife
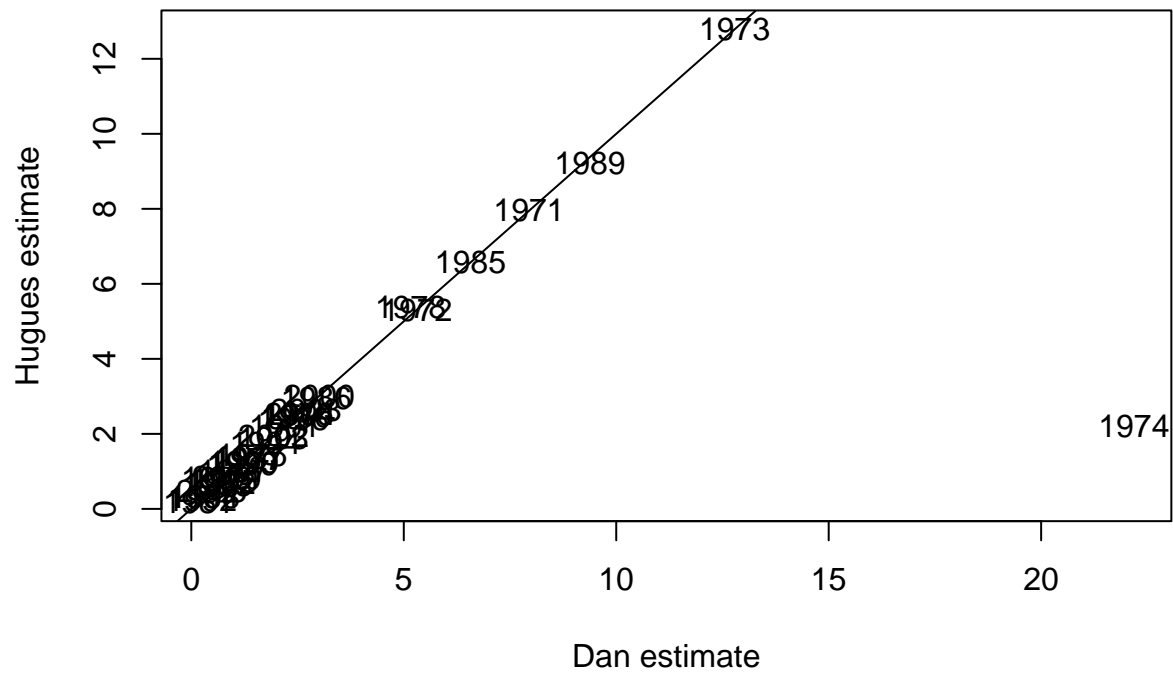
Species 63–Rainbow smelt
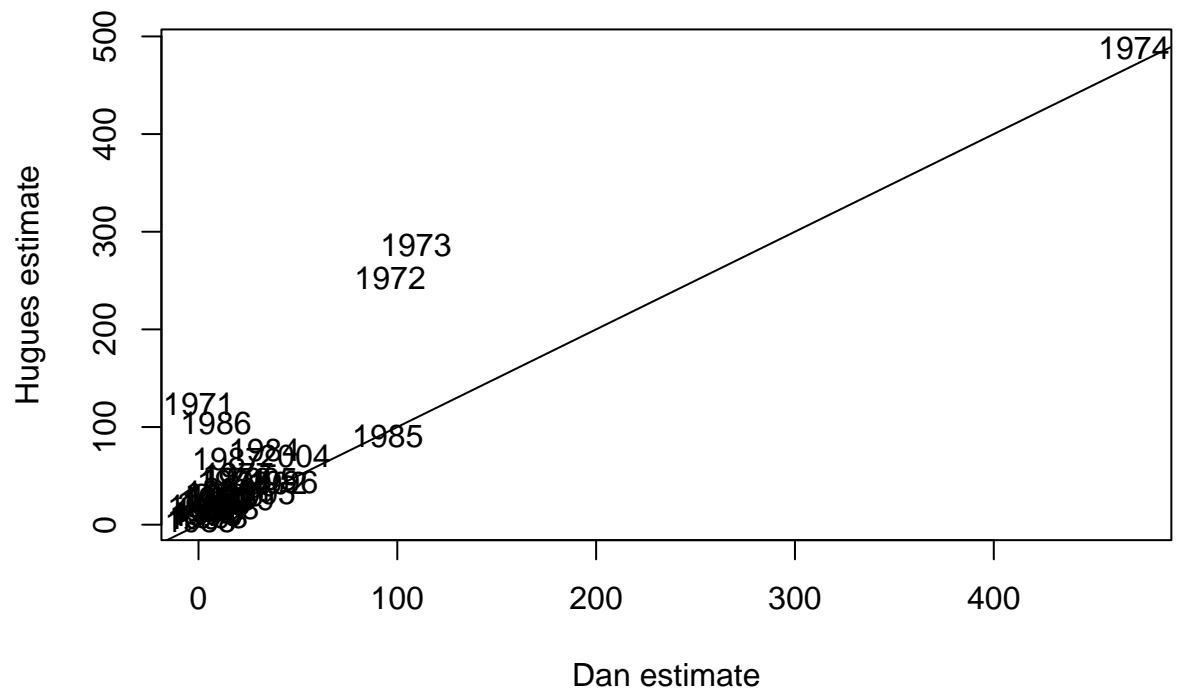
Species 64–Capelin

Species 110–Arctic cod
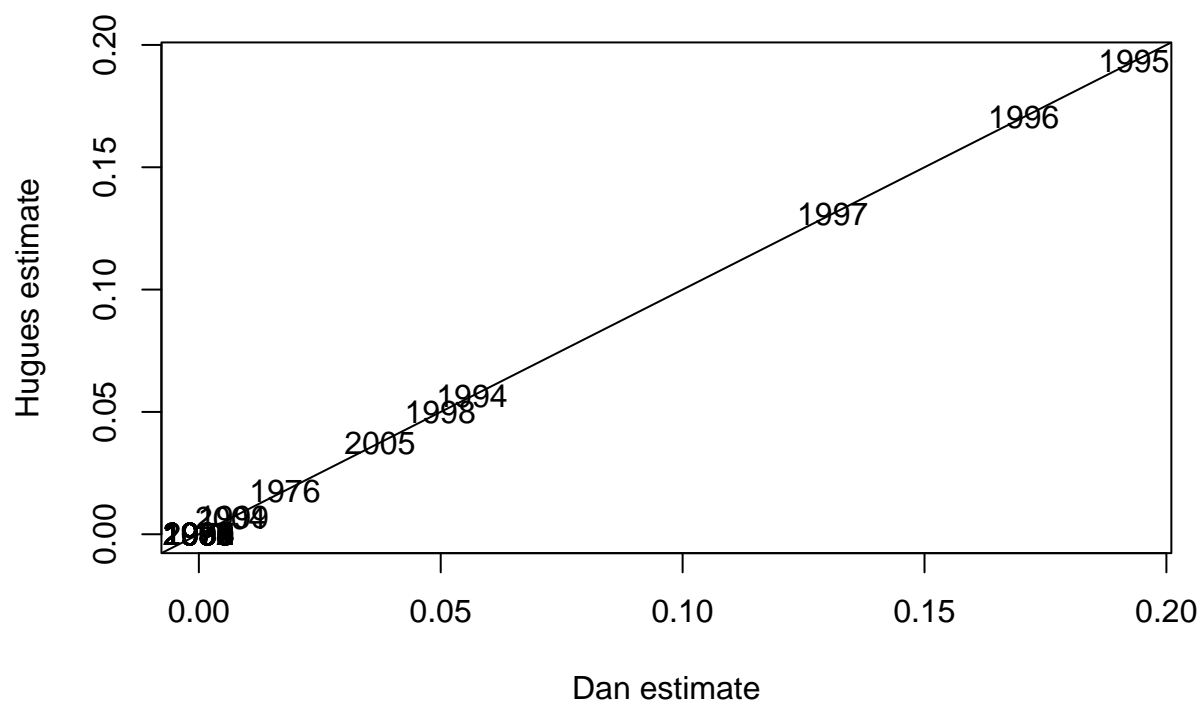
Species 112–Longfin hake

Y-axis: Hugues estimate

X-axis: Dan estimate
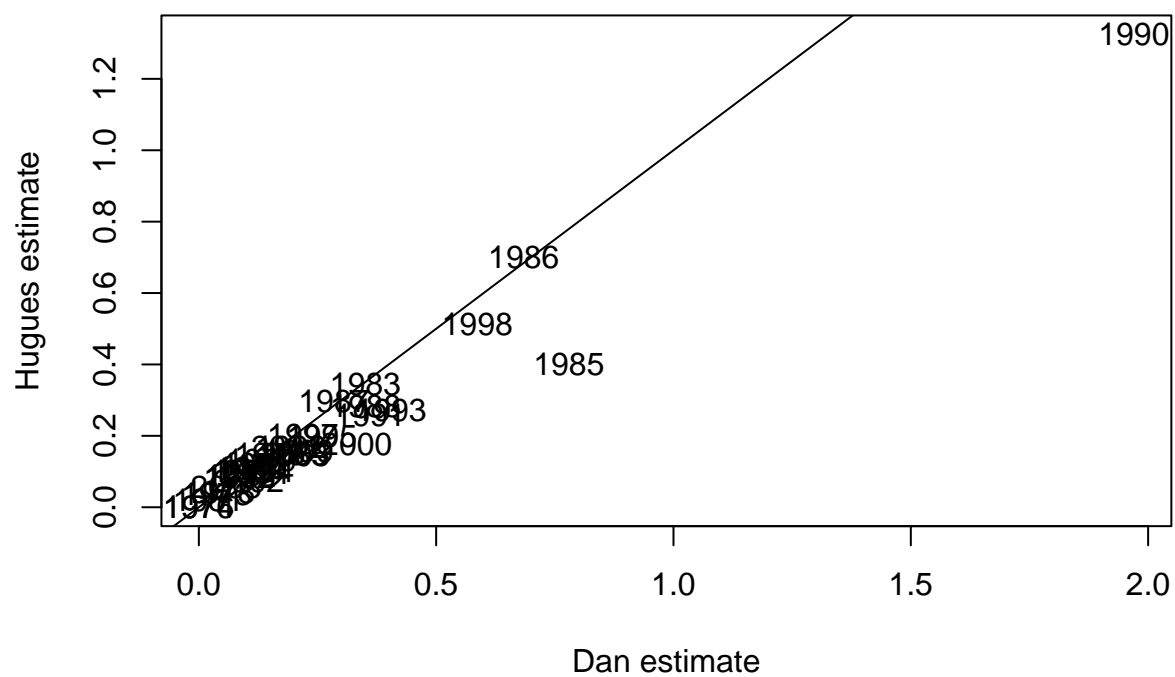
Species 114–Fourbeard rockling
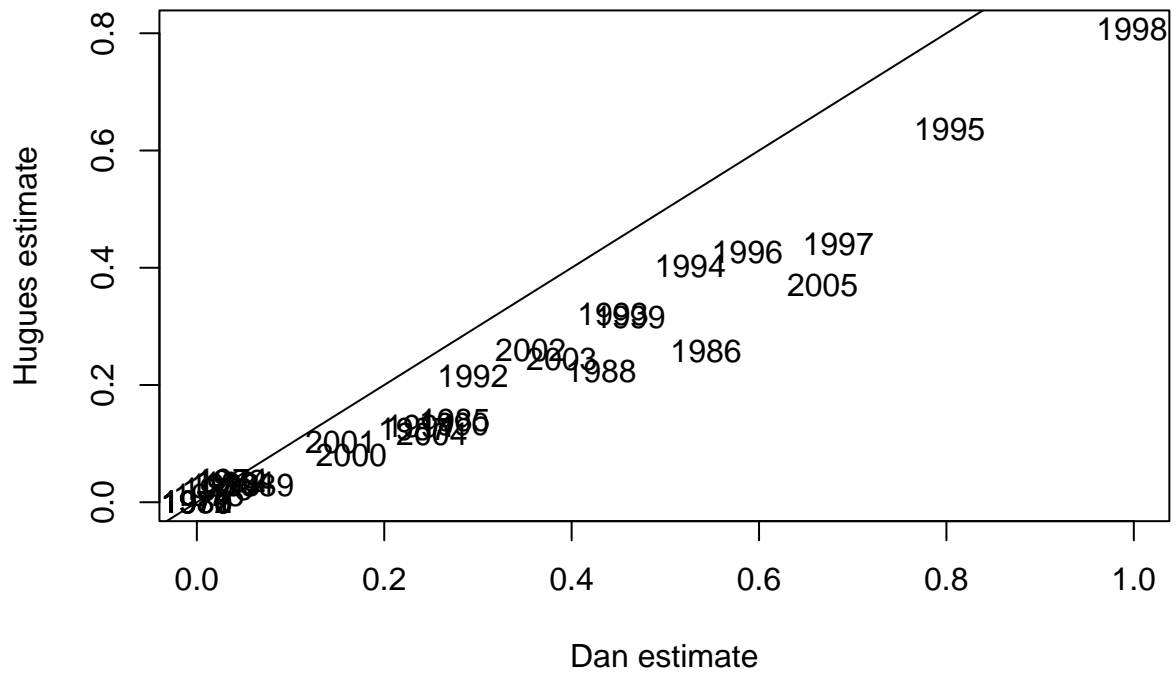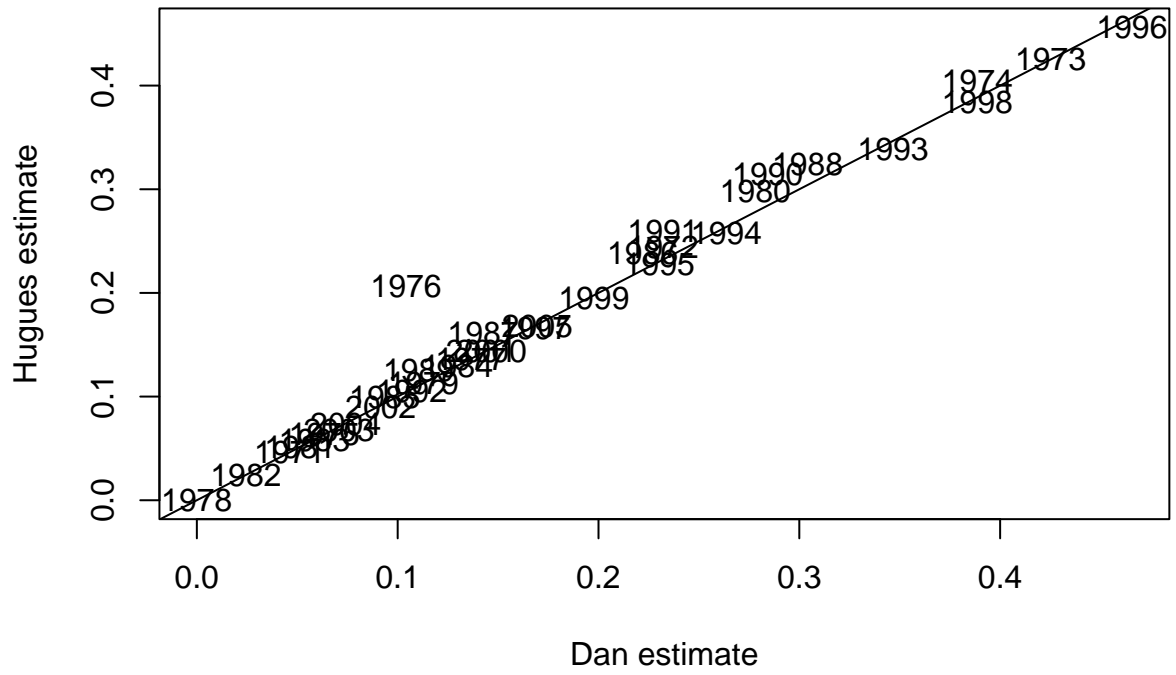
Species 118–Greenland cod
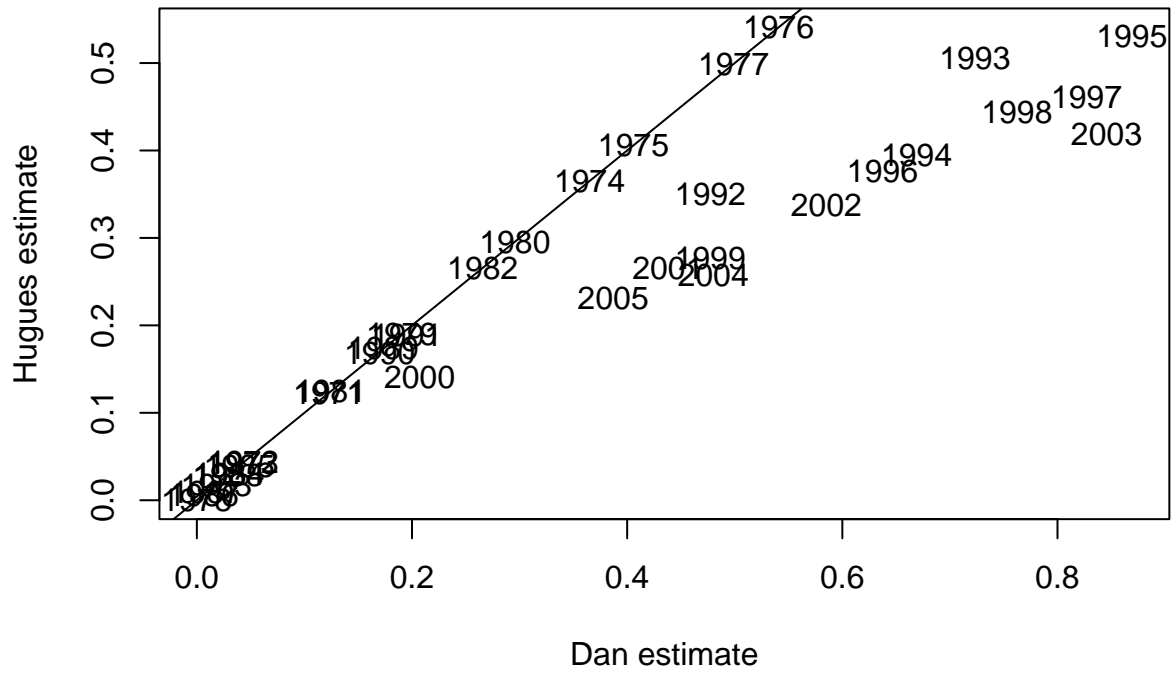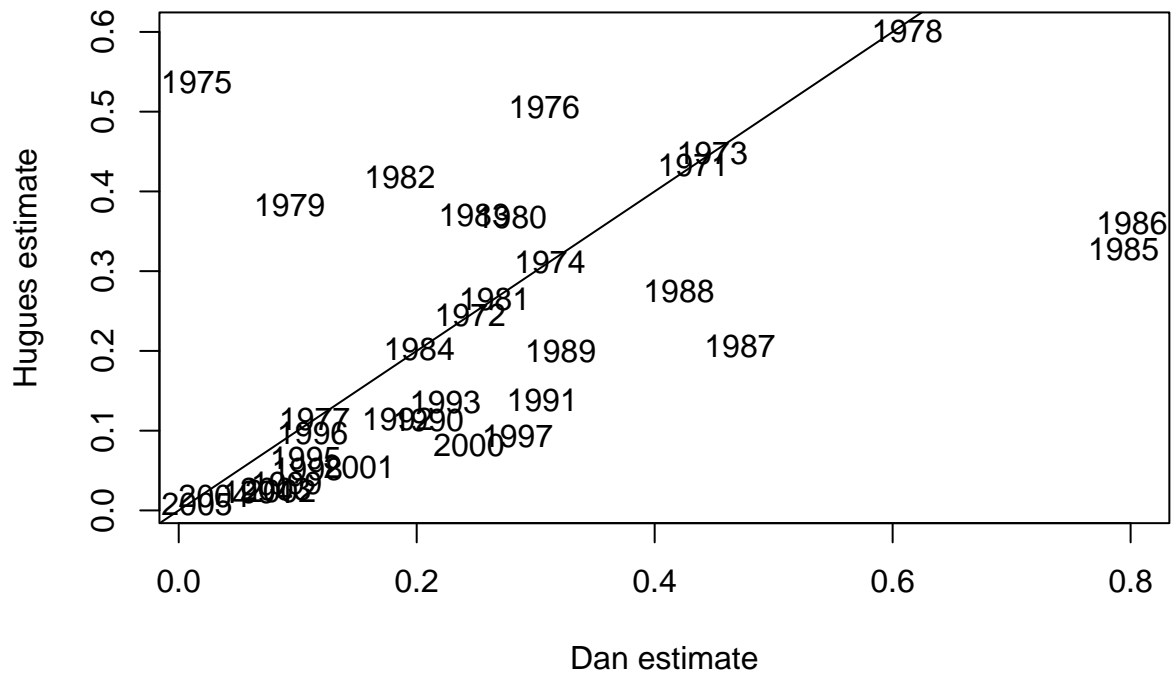
Species 122–Cunner
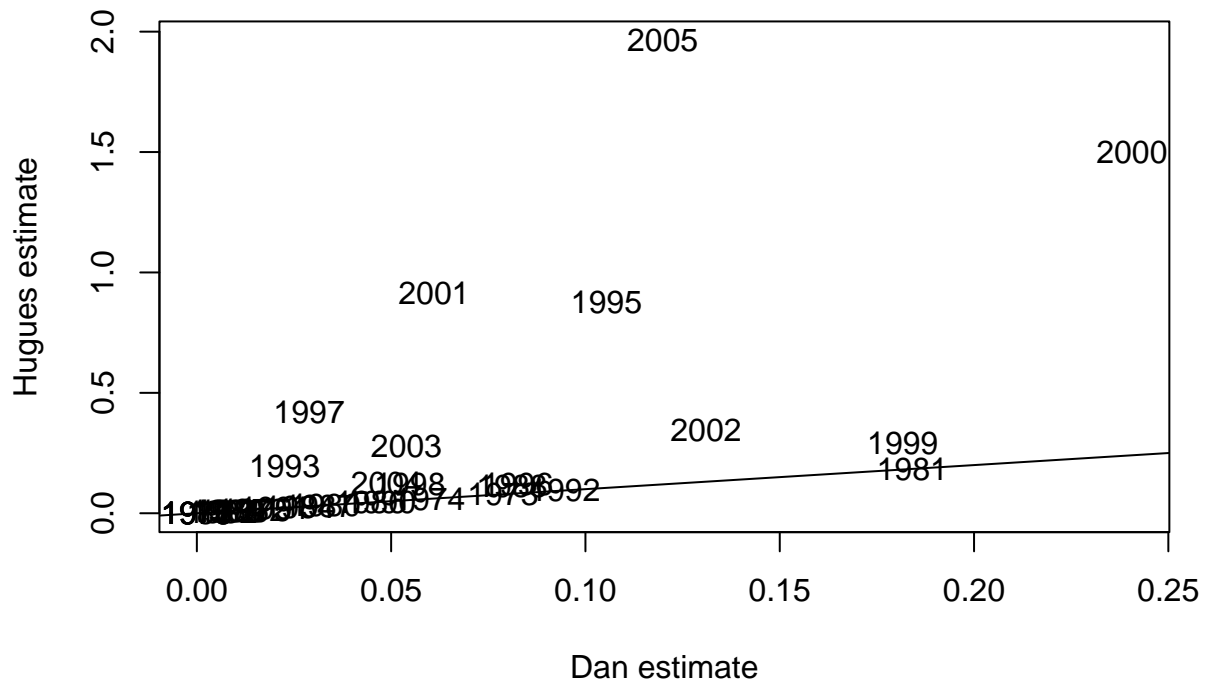
Species 143–Windowpane flounder

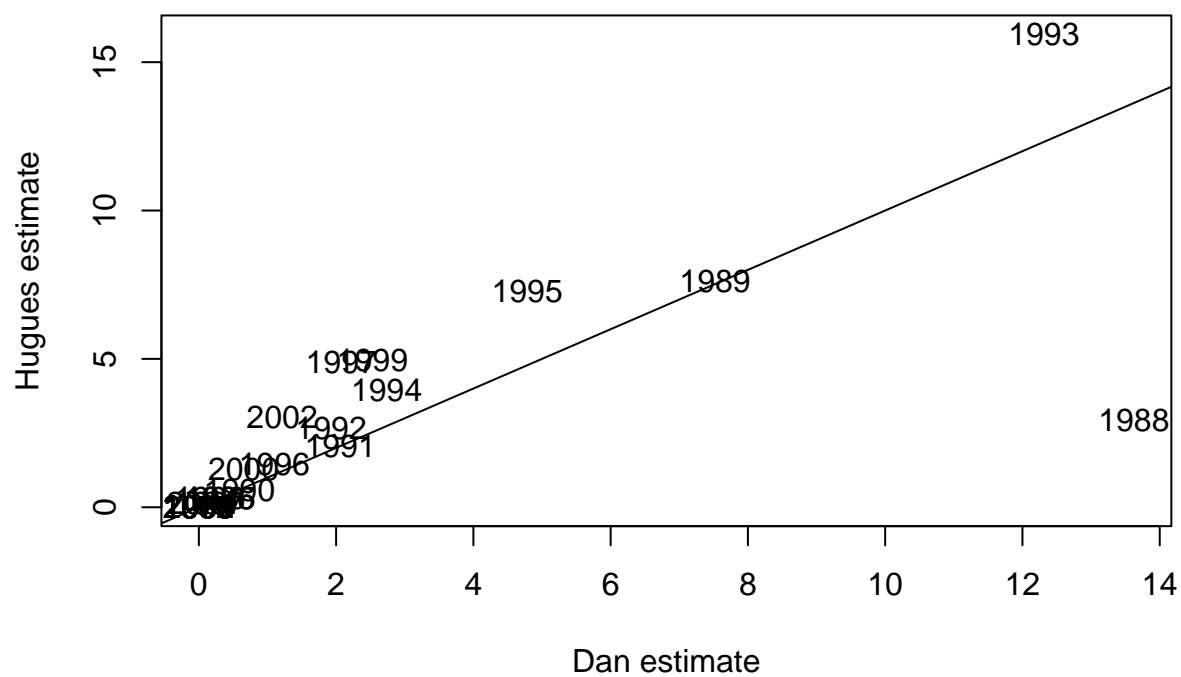Dan estimate

Hugues estimate
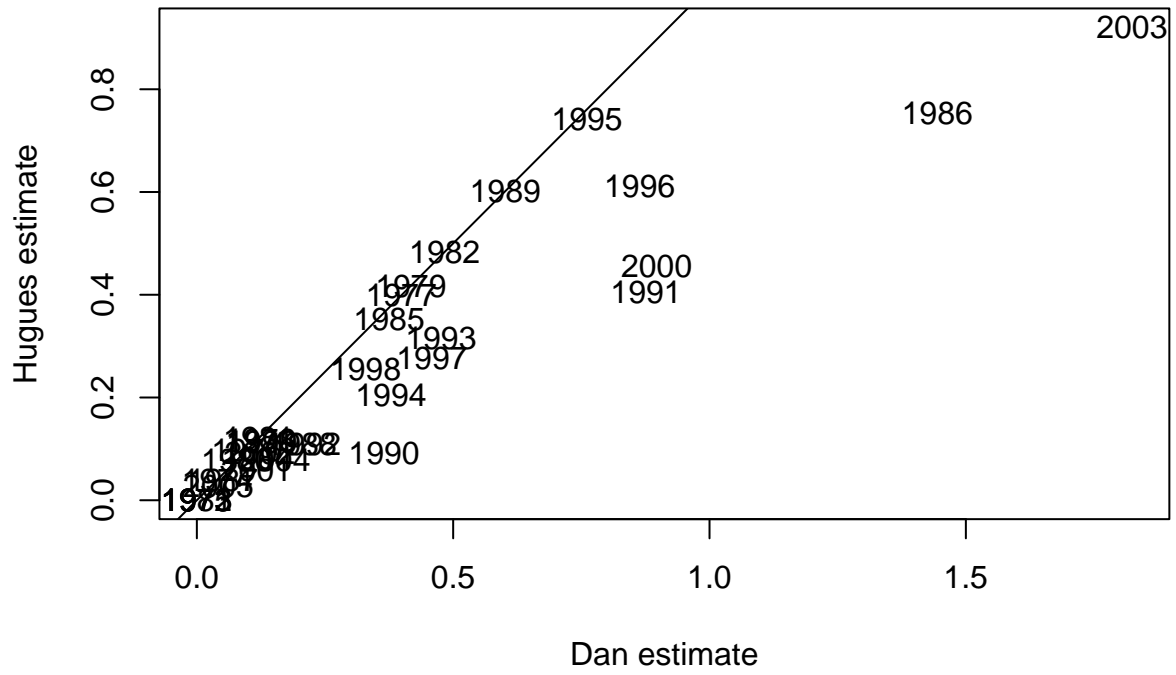
Species 201–Thorny skate
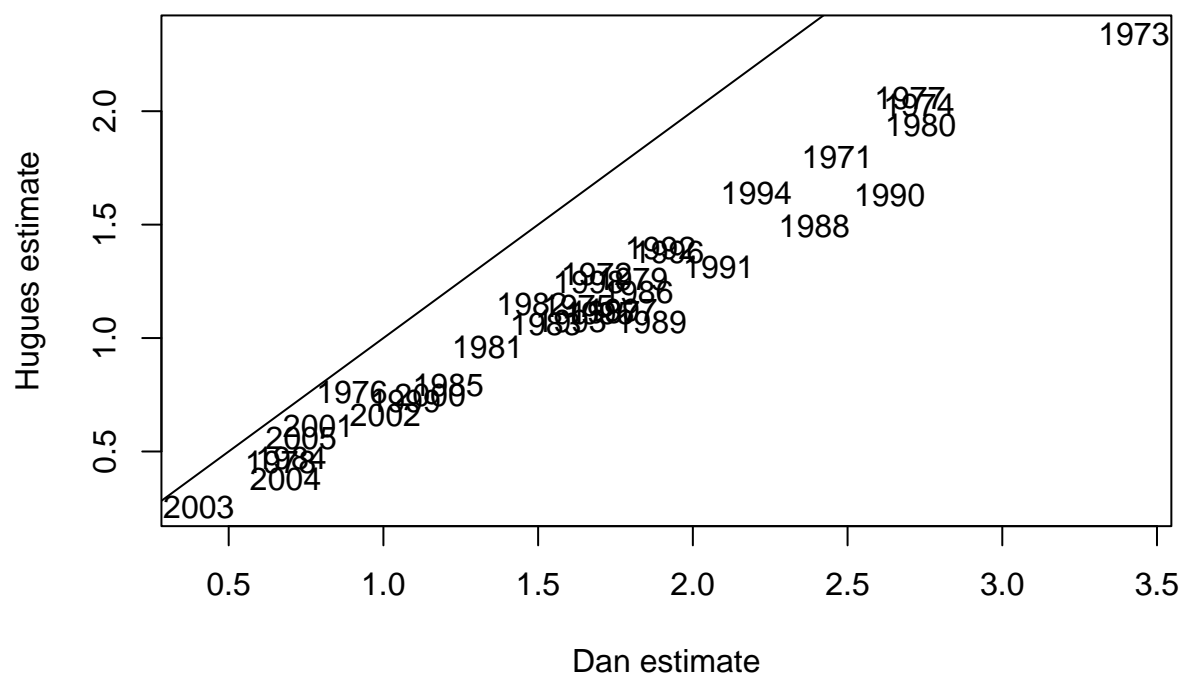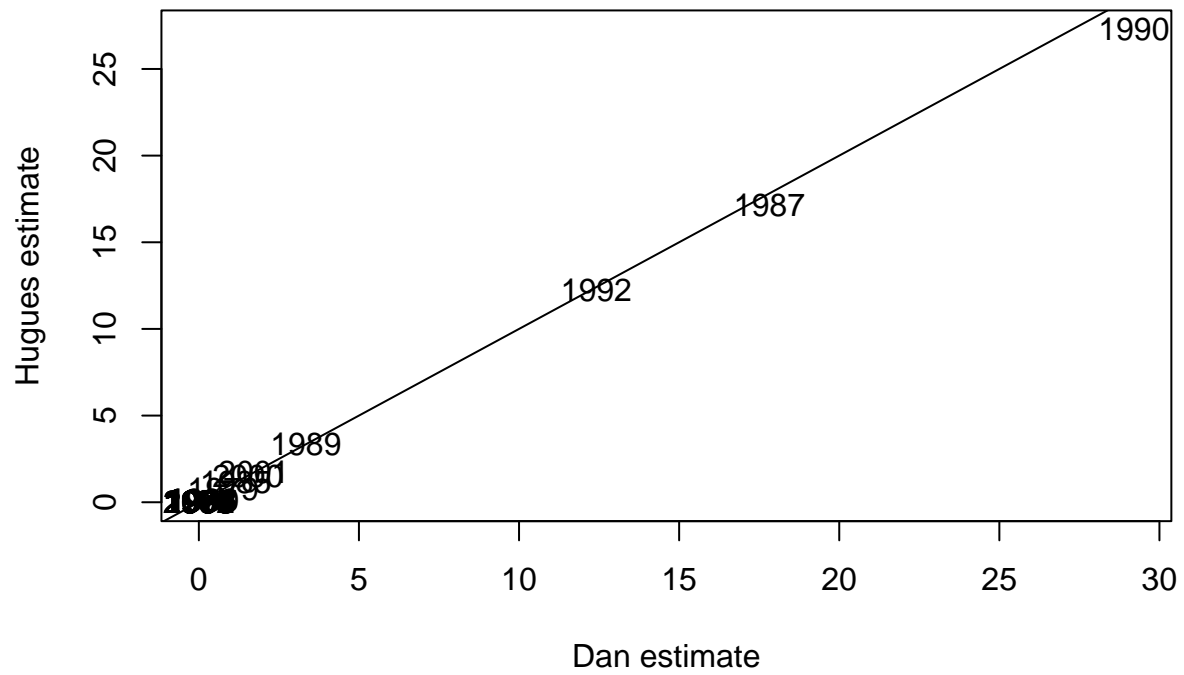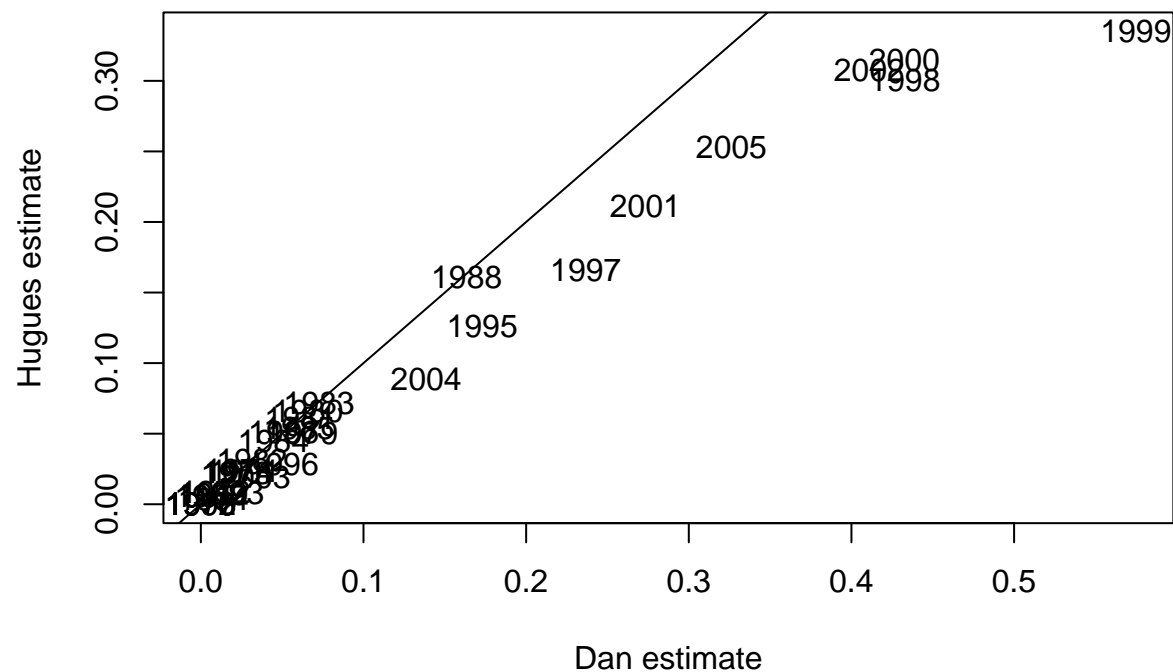
Species 202−Smooth skate

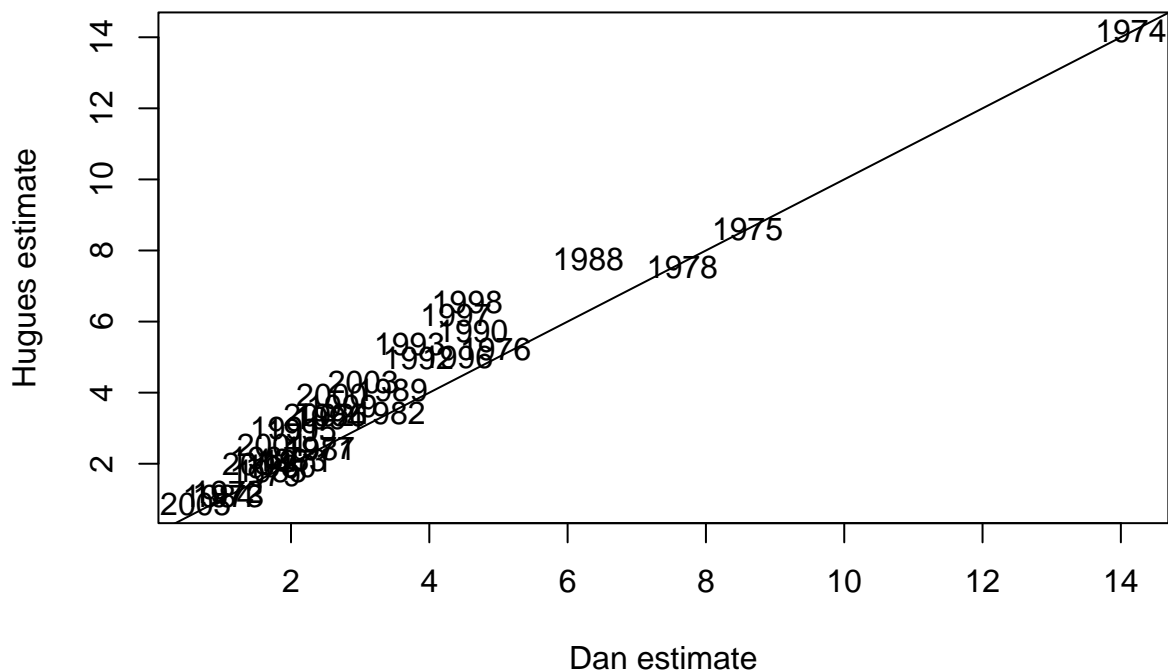# Species 204–Winter skate

Species 220–Spiny dogfish
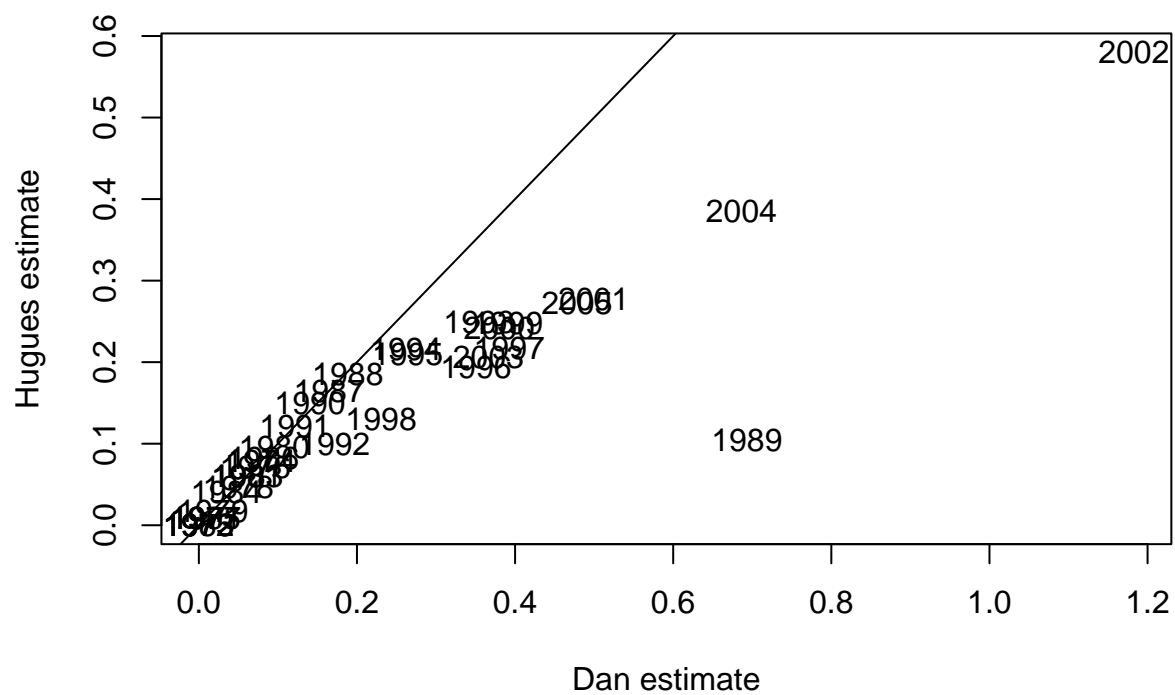
Species 221−Black dogfish

Species 241–Atlantic hagfish
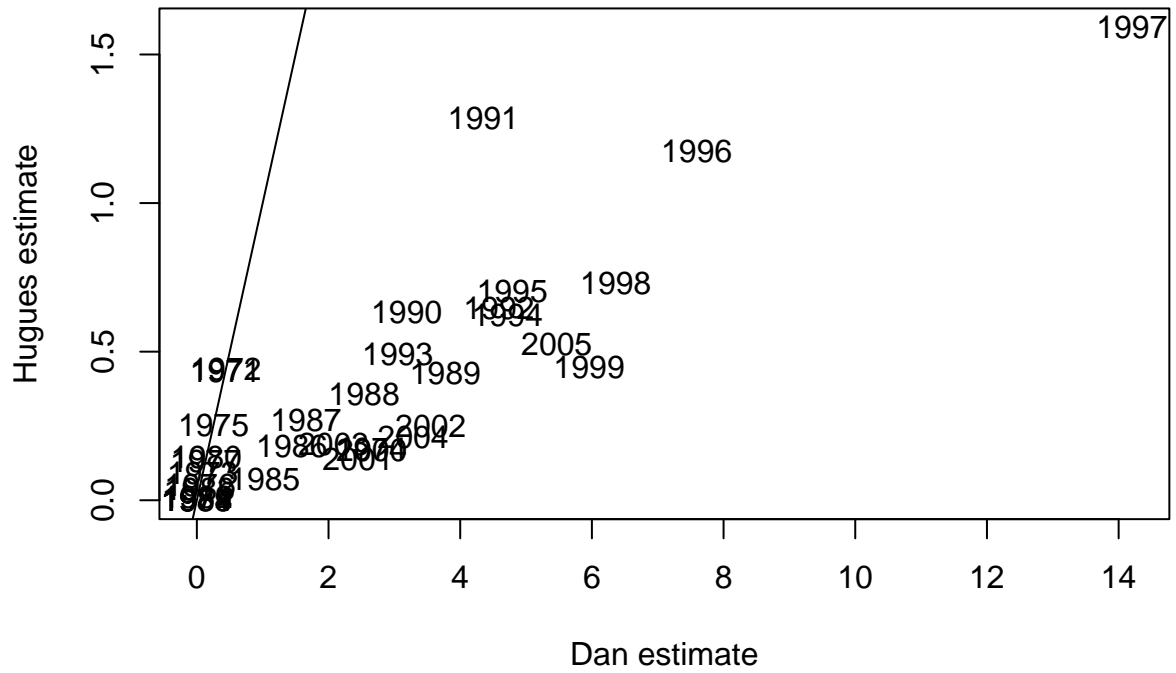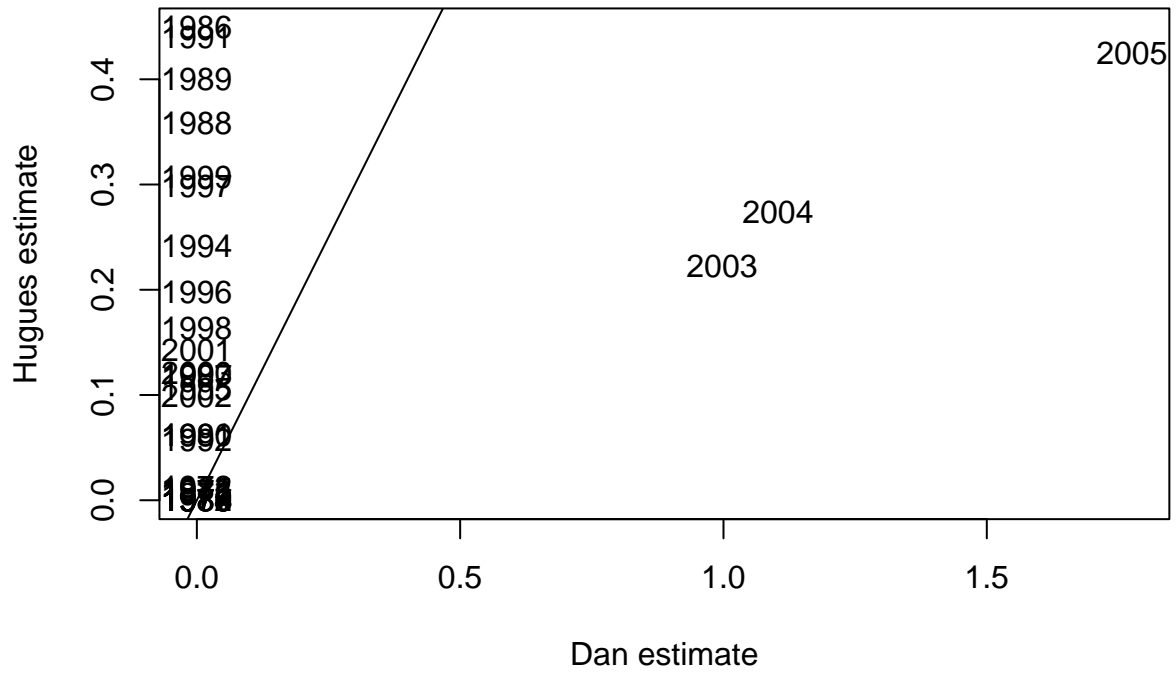
Species 300−Longhorn sculpin
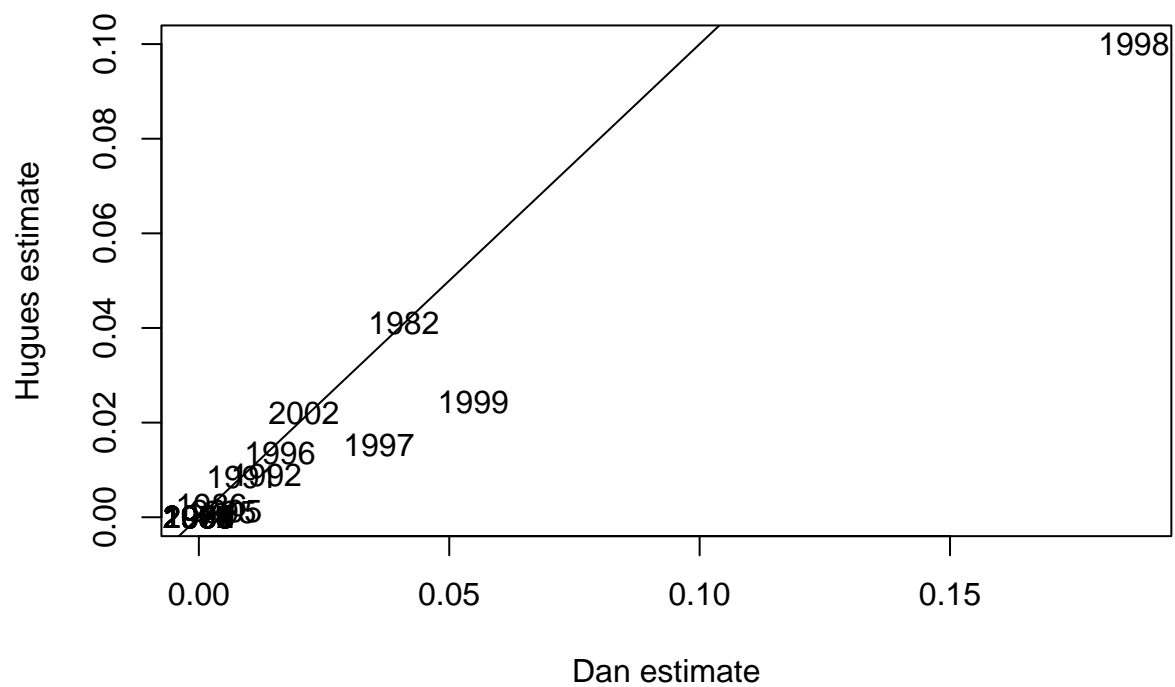
Species 301–Shorthorn sculpin

Hugues estimate

Dan estimate

2002

2004

2001
2006

1989

Species 304–Moustache sculpin

Species 880–Atlantic hookear sculpin

Dan estimate

Hugues estimate

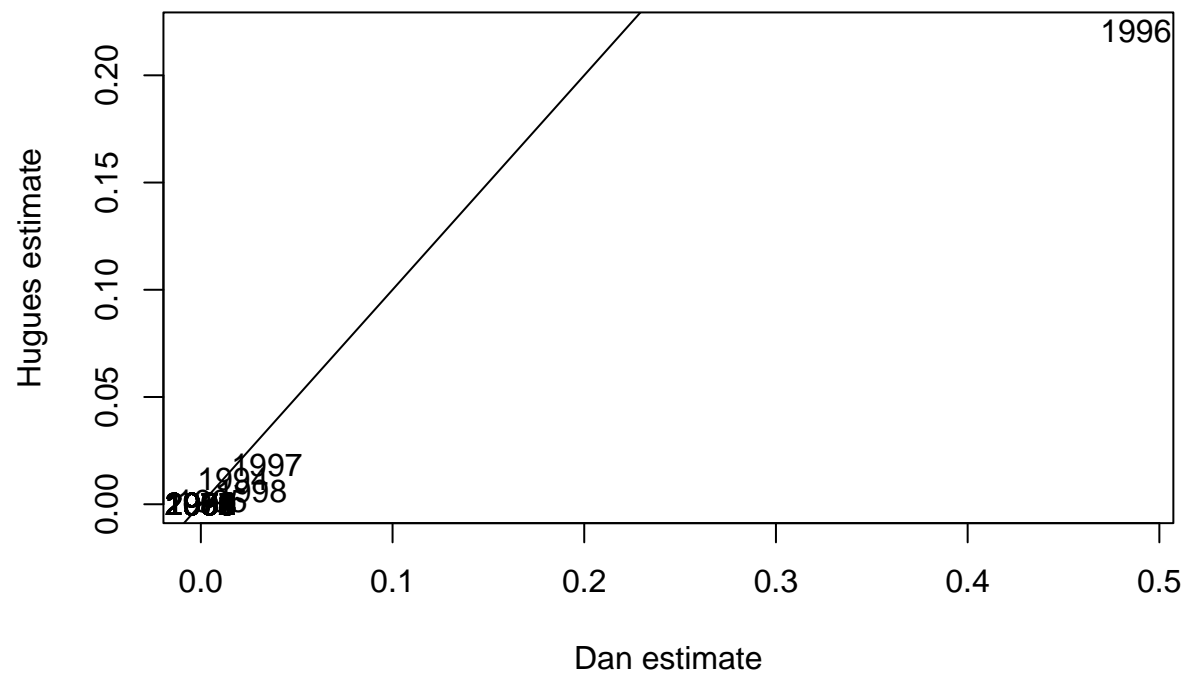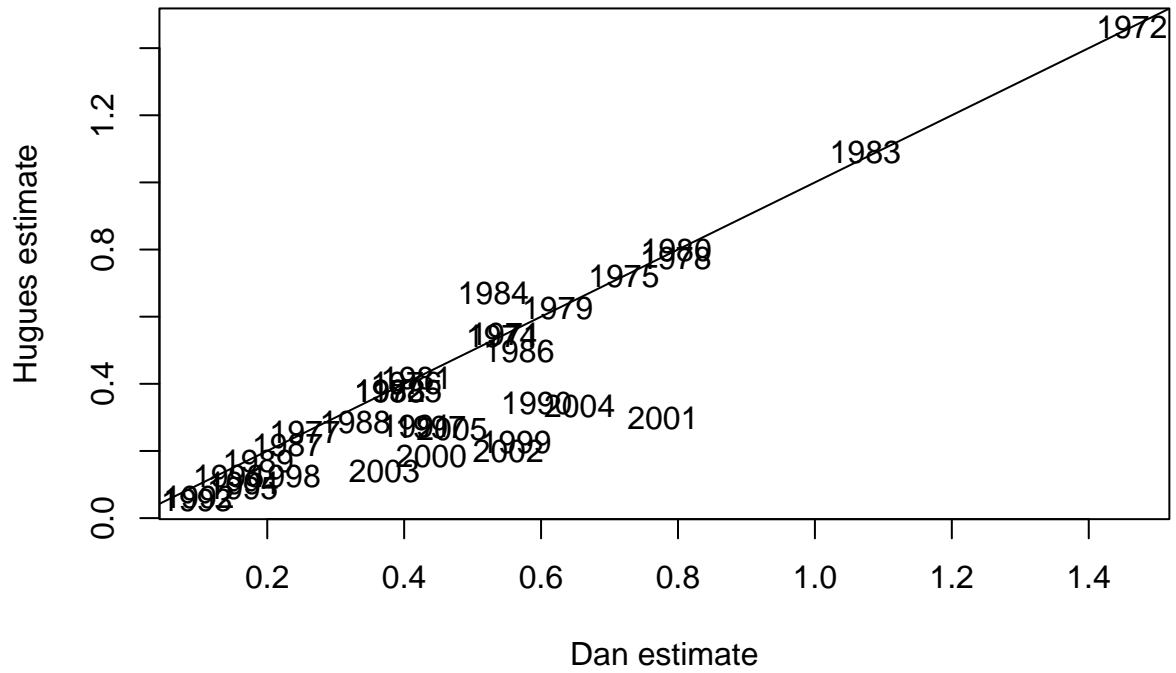# Species 307–Polar sculpin
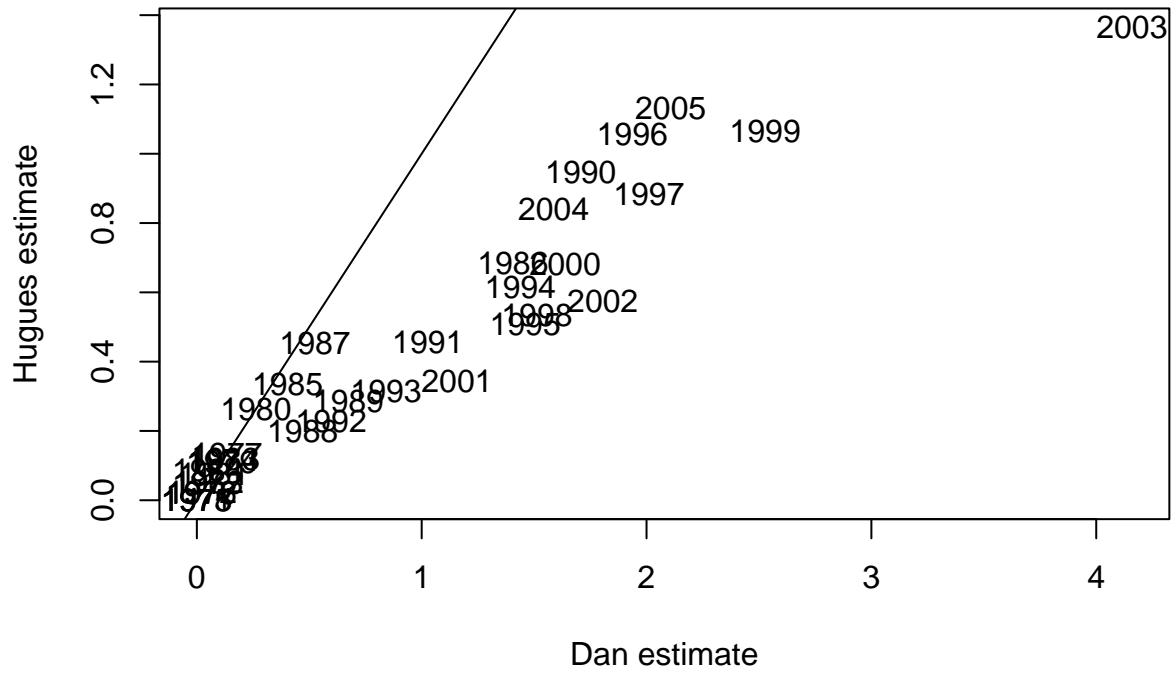
Species 314–Spatulate sculpin
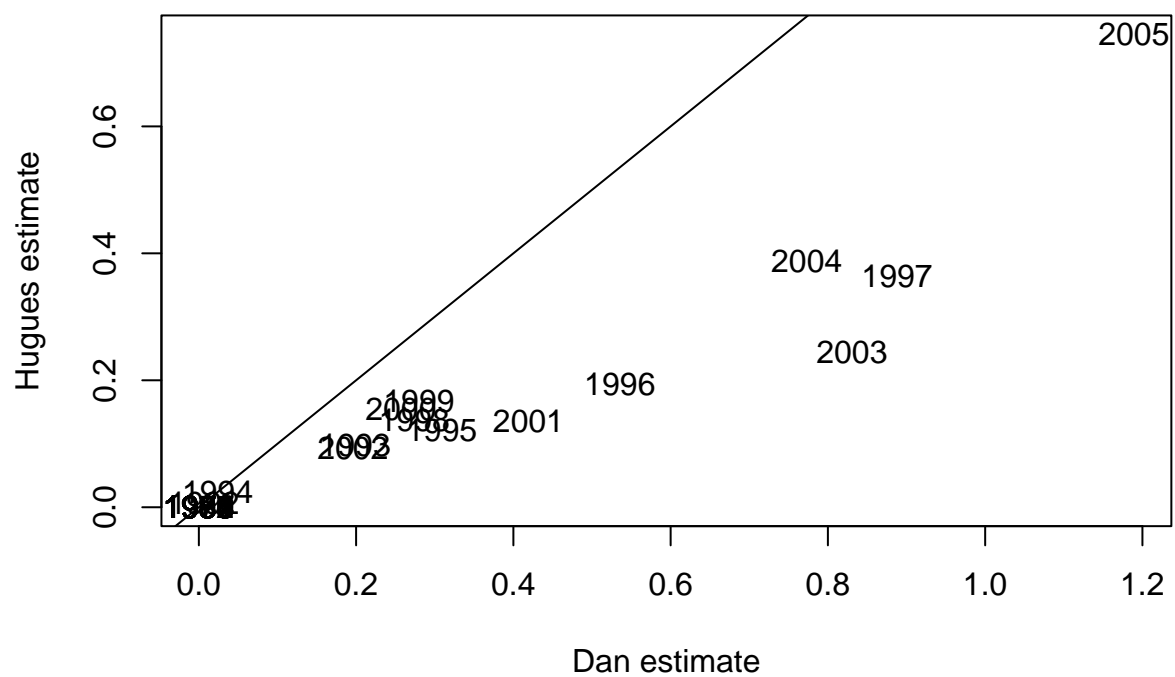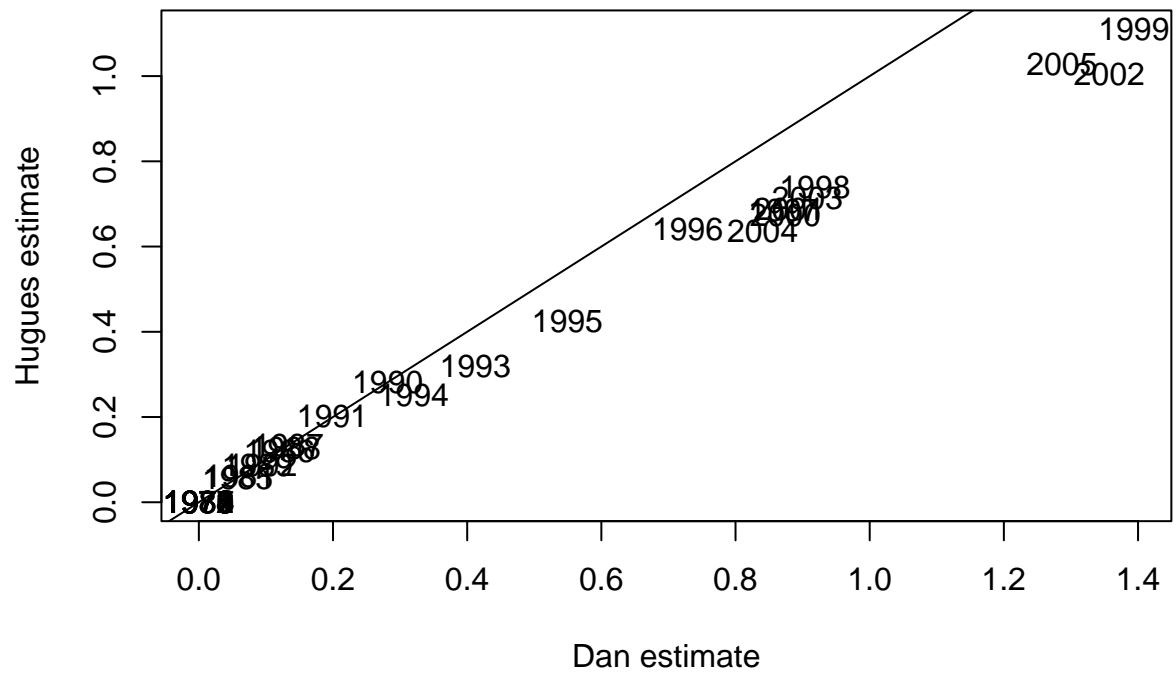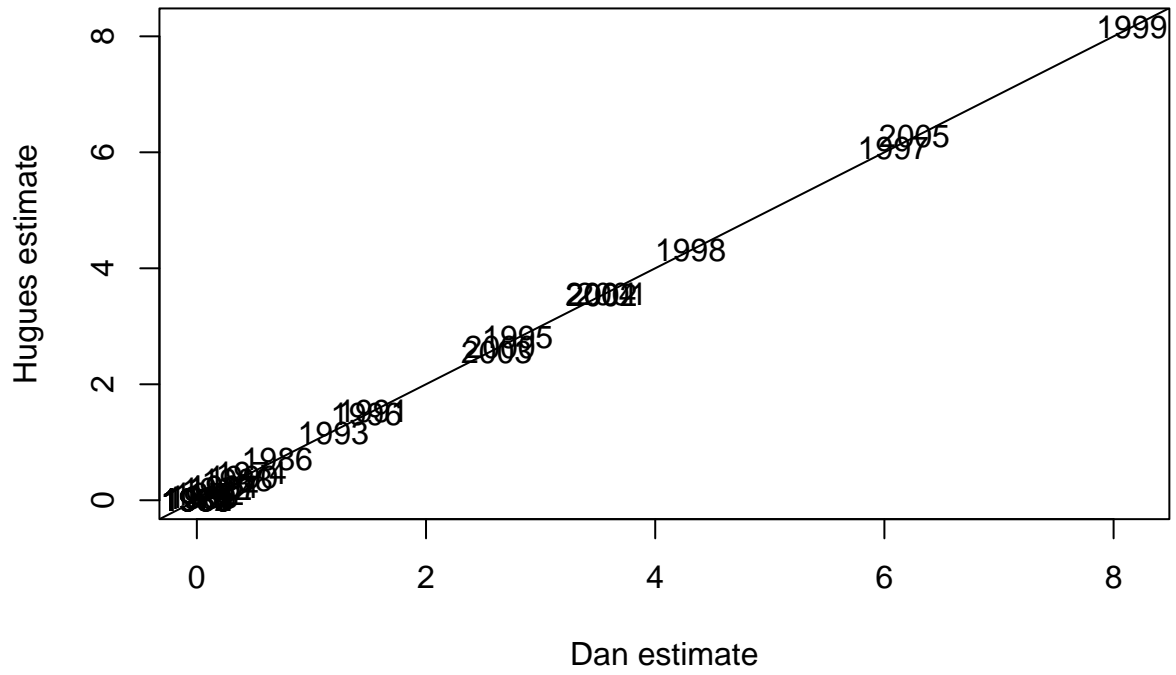
Species 316−Arctic sculpin
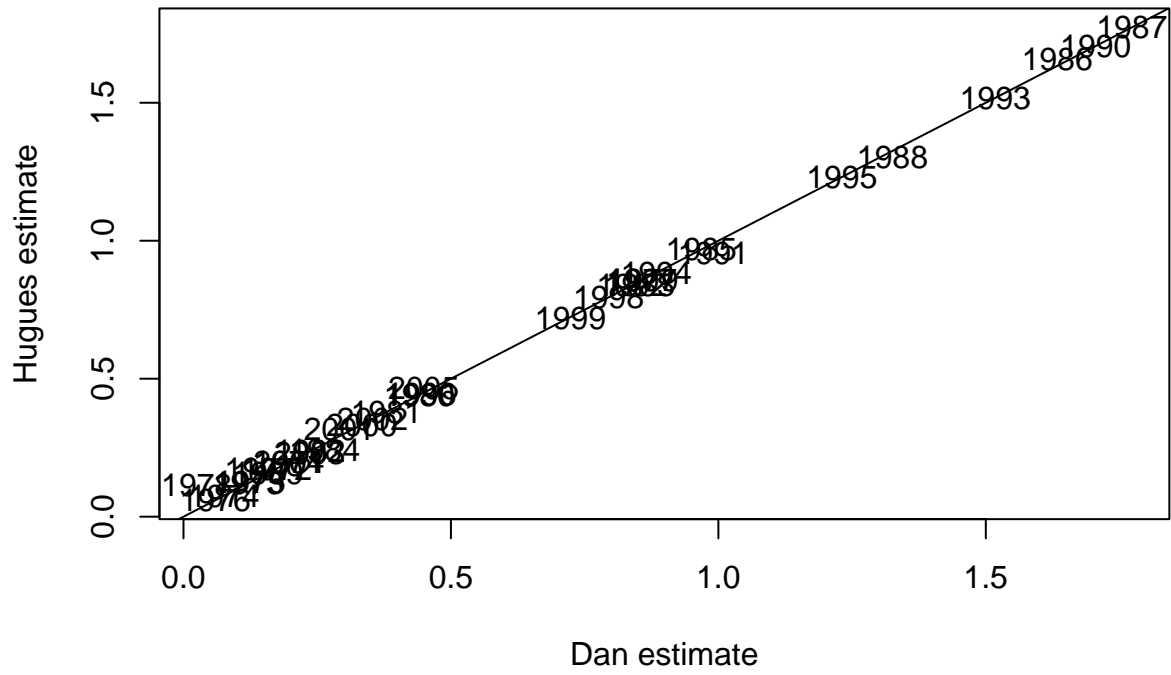
Species 320–Sea raven

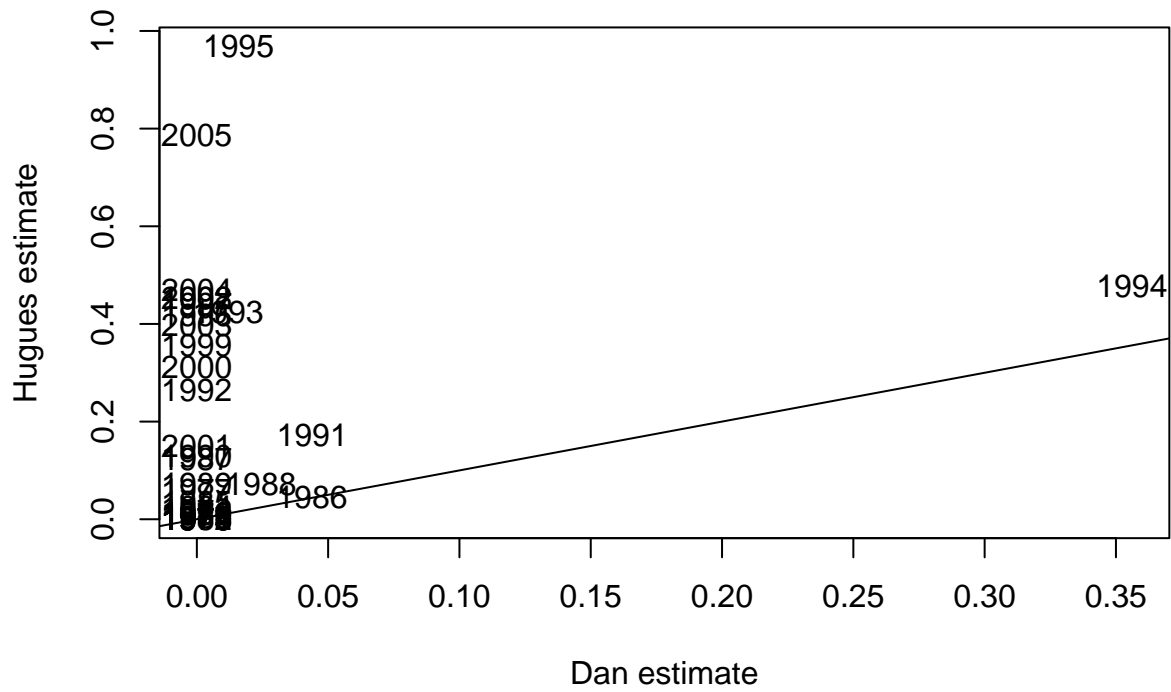# Species 340–Alligatorfish

Species 350–Atlantic poacher

Hugues estimate

Dan estimate

Species 361–Three–spined stickleback

Species 410−Marlin−spike grenadier

Hugues estimate

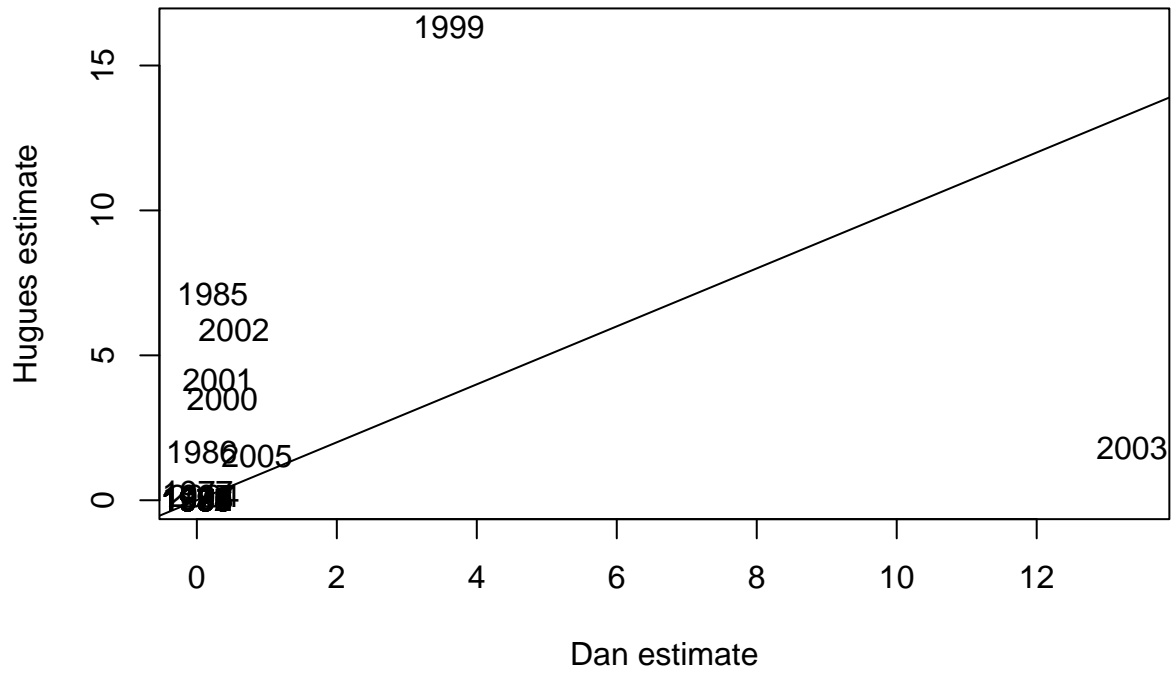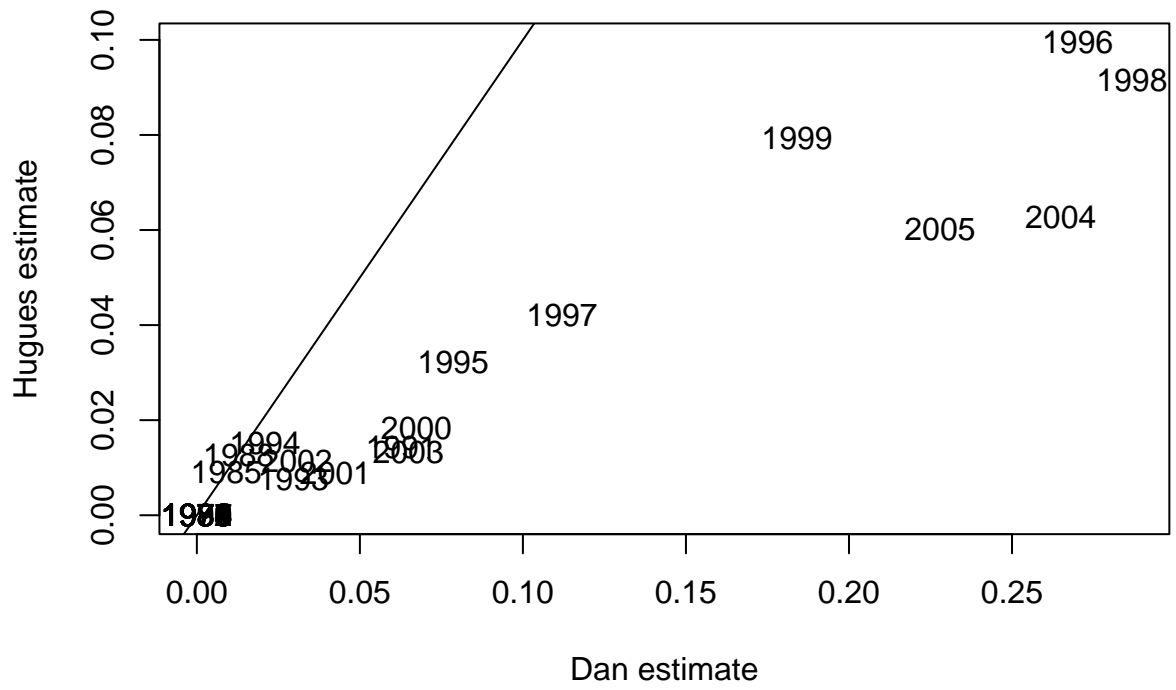Dan estimate

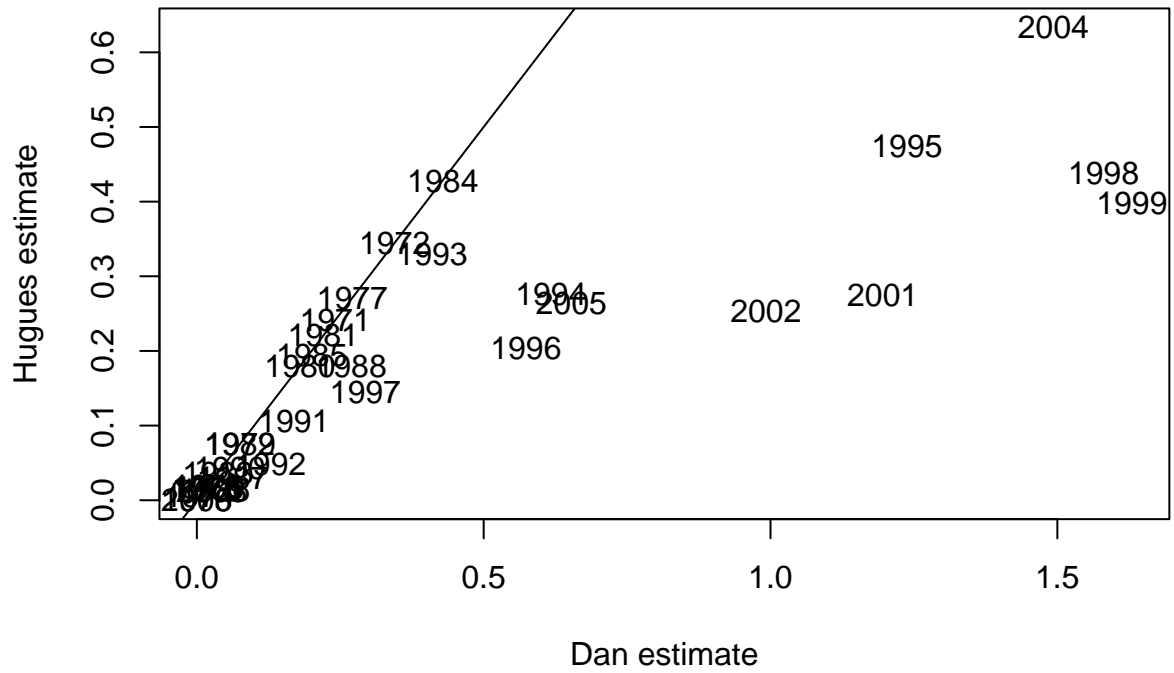# Species 503–Atlantic seasnail

Species 501–Lumpfish
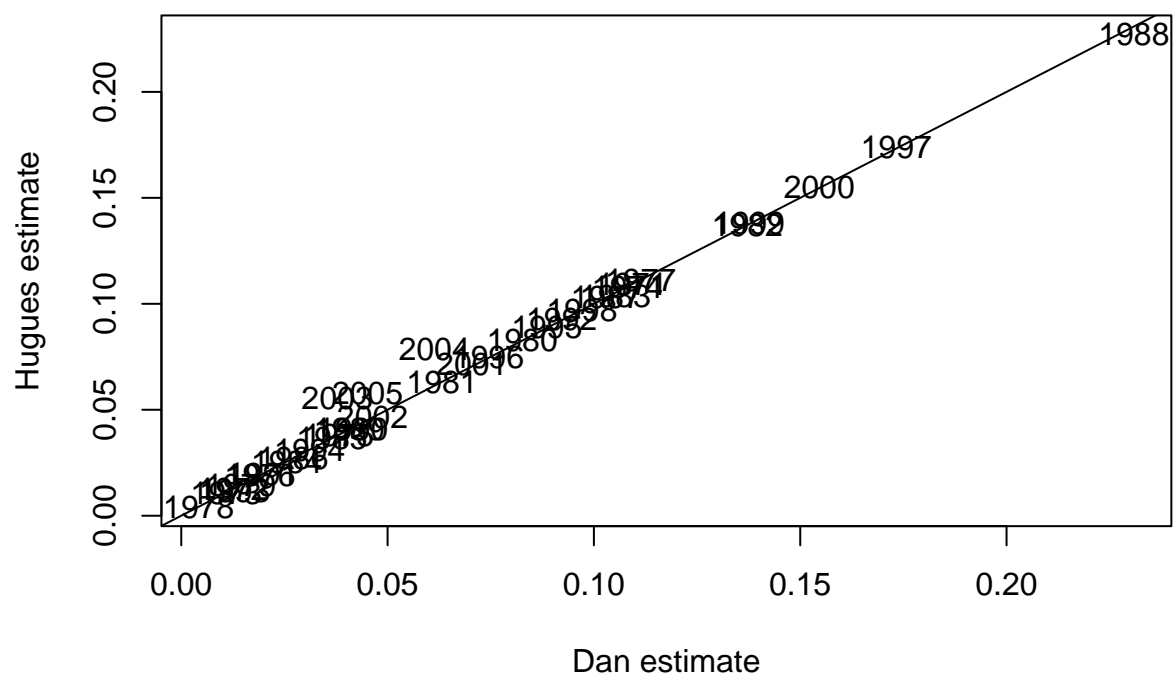
Species 610–Northern sand lance
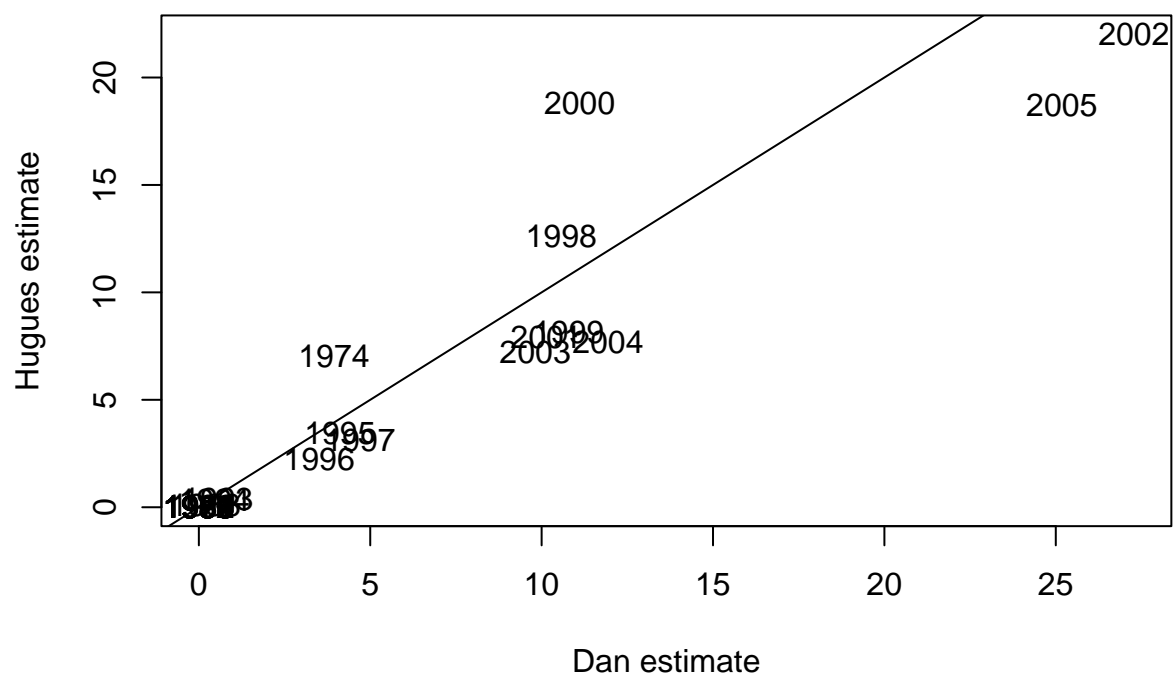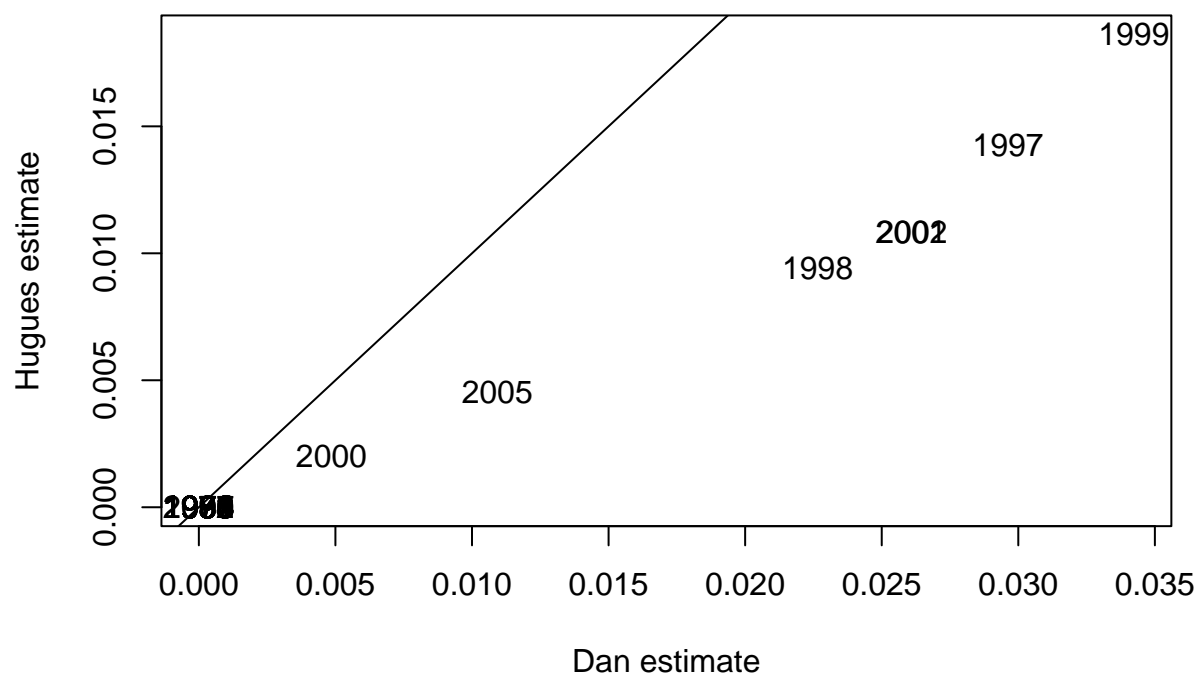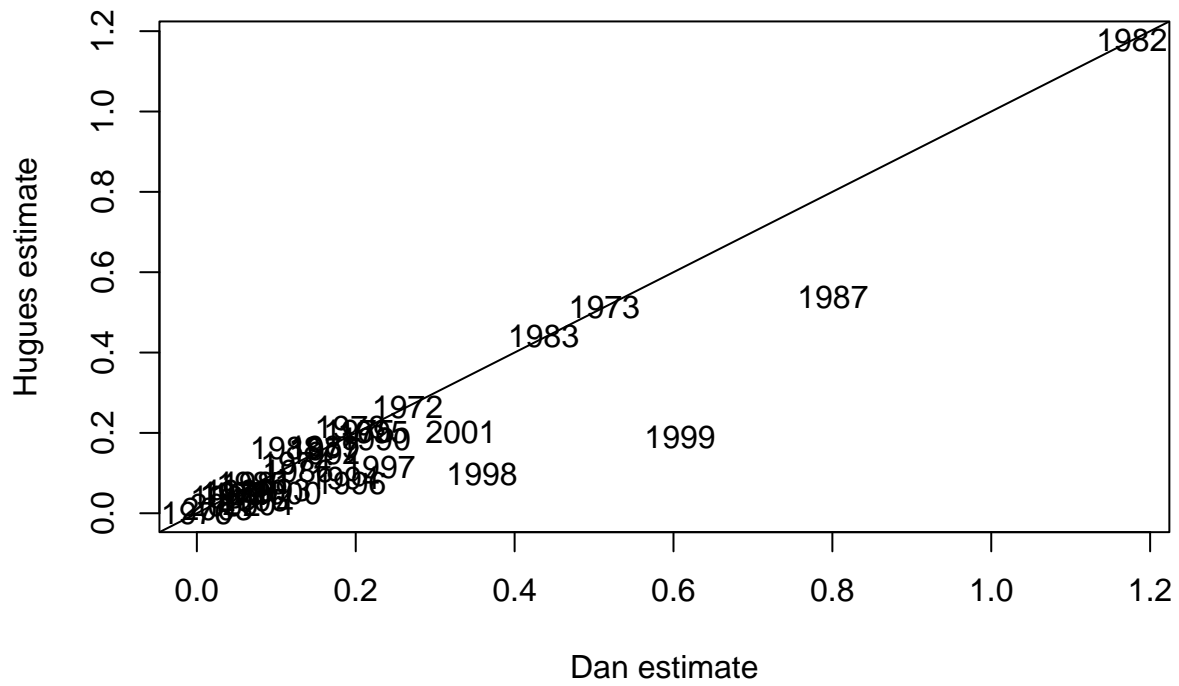
Species 616–Fish doctor

Species 622–Snakeblenny

Hugues estimate

Dan estimate

2004
1995
1998
1999
1984
1972
1993
1977
1971
1981
1985
1980
1988
1997
1994
2005
1996
2002
2001
1991
1979
1992

Species 623–Daubed shanny

Species 624–Arctic shanny

Species 640–Ocean pout

Species 598−Eelpouts unidentified

Scatter plot with "Dan estimate" on the x-axis (ranging from 0 to 10) and "Hugues estimate" on the y-axis (ranging from 0 to 5). Data points are labeled by year: 1990, 1977, 1991, 1976, 1979, 1993, 1995, 1981, 1992, 1994, 1989, 1974, 1971, 1988, 1997, 1996, 1987, 1998, 1999, 1980, 1986, 2005, 1983, 1985, 2002, 1978, 2000, 1984, 2004, 1972, 1975, 1973, 1982.
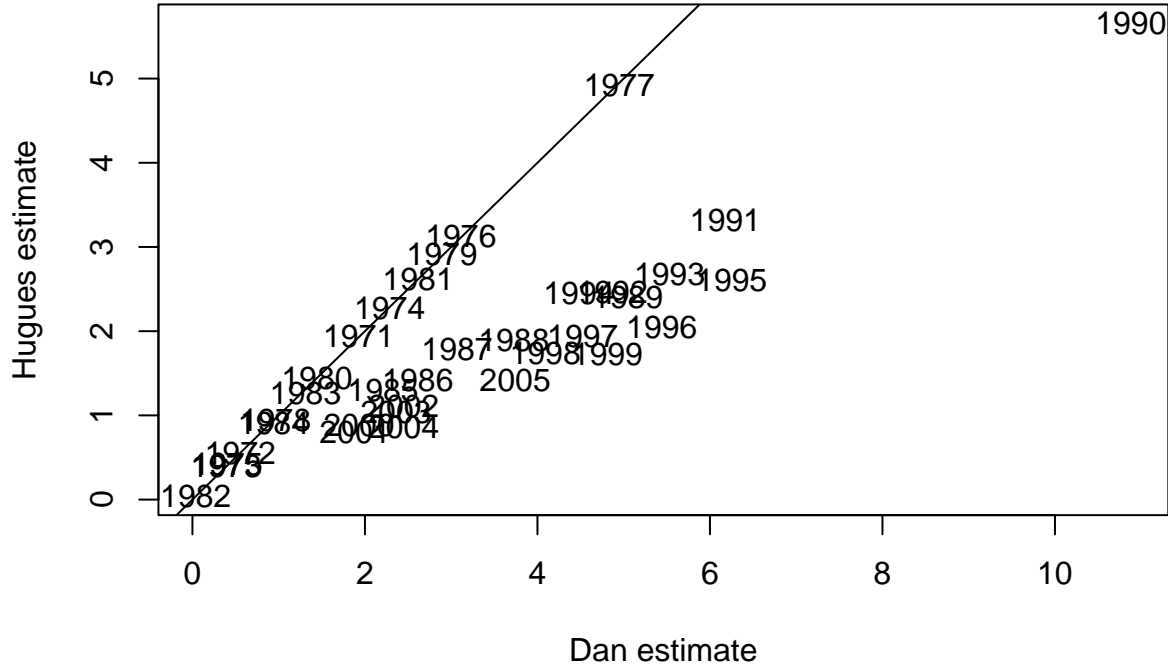
Species 646–Atlantic soft pout
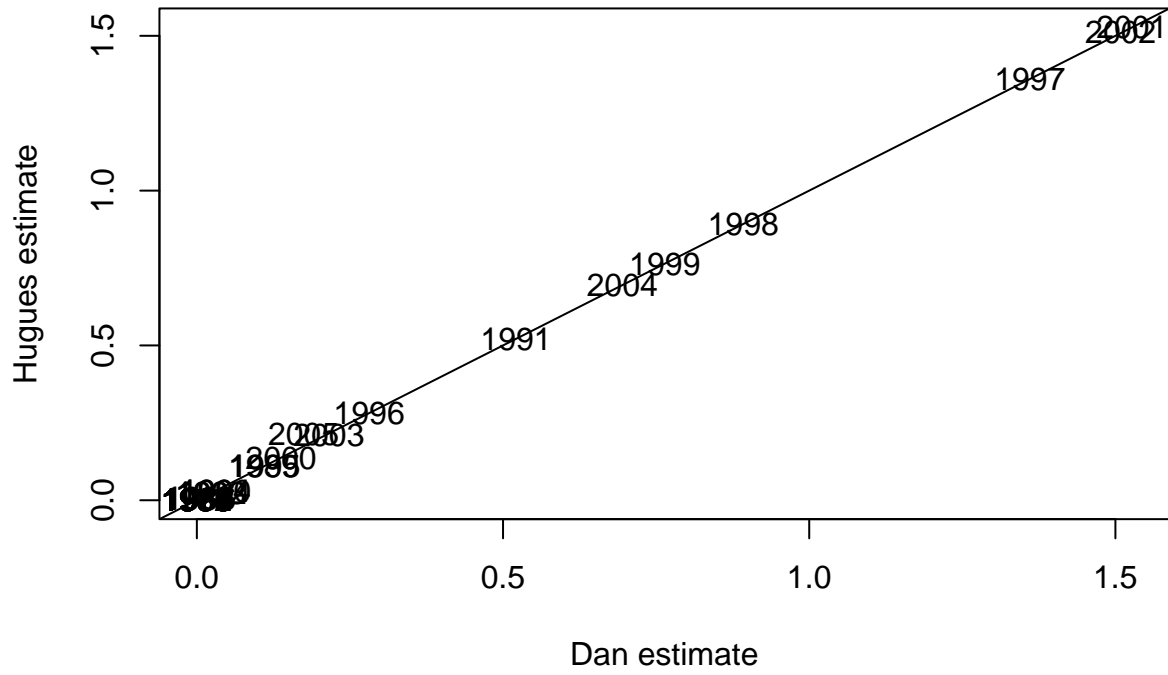
Species 712−White barracudina