Creation of Witch Flounder ageing datasets for OpenData

Daniel Ricard

January 9, 2020

Witch Flounder

Witch Flounder otoliths are collected on the annual September RV survey and during scientific sampling of commercial fisheries.

The goal here is to summarise the ageing materials that we have, and provide a dataset of the otoliths that we have at the Gulf Fisheries Centre.

```
## RV data
y <- read.card(species=41, card.type="bio")
```

```
## Warning in convert.vector(x[, vars[i]], to = format[vars[i], "format"]): Some
## numerical values were set to NA.
```

```
## commercial data
## what years are available for commercial ages?
## com.files <- list.files(path="//DFNBE1CwpFSP002/Hd2/commercial/age", pattern="witage")
y.c <- read.card(year=1982, sampling="commercial", species=41, card.type="age") ## this loads all pre-19
```

```
## [1] "Reading: '//DFNBE1CwpFSP002/Hd2/commercial/age/witage4882.dat'"
```

```
for(yy in 1998:2016){ ## loop over years
t.c <- read.card(year=yy, sampling="commercial", species=41, card.type="age")
y.c <- rbind(y.c,t.c)
}
```

```
## [1] "Reading: '//DFNBE1CwpFSP002/Hd2/commercial/age/witage1998.dat'"
## [1] "Reading: '//DFNBE1CwpFSP002/Hd2/commercial/age/witage1999.dat'"
## [1] "Reading: '//DFNBE1CwpFSP002/Hd2/commercial/age/witage2000.dat'"
## [1] "Reading: '//DFNBE1CwpFSP002/Hd2/commercial/age/witage2001.dat'"
## [1] "Reading: '//DFNBE1CwpFSP002/Hd2/commercial/age/witage2002.dat'"
## [1] "Reading: '//DFNBE1CwpFSP002/Hd2/commercial/age/witage2003.dat'"
## [1] "Reading: '//DFNBE1CwpFSP002/Hd2/commercial/age/witage2004.dat'"
## [1] "Reading: '//DFNBE1CwpFSP002/Hd2/commercial/age/witage2005.dat'"
## [1] "Reading: '//DFNBE1CwpFSP002/Hd2/commercial/age/witage2006.dat'"
## [1] "Reading: '//DFNBE1CwpFSP002/Hd2/commercial/age/witage2007.dat'"
## [1] "Reading: '//DFNBE1CwpFSP002/Hd2/commercial/age/witage2008.dat'"
## [1] "Reading: '//DFNBE1CwpFSP002/Hd2/commercial/age/witage2009.dat'"
## [1] "Reading: '//DFNBE1CwpFSP002/Hd2/commercial/age/witage2010.dat'"
## [1] "Reading: '//DFNBE1CwpFSP002/Hd2/commercial/age/witage2011.dat'"
## [1] "Reading: '//DFNBE1CwpFSP002/Hd2/commercial/age/witage2012.dat'"
## [1] "Reading: '//DFNBE1CwpFSP002/Hd2/commercial/age/witage2013.dat'"
## [1] "Reading: '//DFNBE1CwpFSP002/Hd2/commercial/age/witage2014.dat'"
## [1] "Reading: '//DFNBE1CwpFSP002/Hd2/commercial/age/witage2015.dat'"
## [1] "Reading: '//DFNBE1CwpFSP002/Hd2/commercial/age/witage2016.dat'"
```

```r
l.4t <- which(substring(y.c$nafo.division,1,2) %in% c("4R","4S","4T")) ## keep only otoliths collected i

rv.df <- aggregate(fish.number~year+month, data=y[which(y$age.material==1),], length)
rv.df$source <- "RV"
names(rv.df)[3] <- "number.otoliths_nombre.otolithes"

comm.df <- aggregate(otolith.number~year+month, data=y.c[l.4t,], length)
names(comm.df)[3] <- "number.otoliths_nombre.otolithes"
comm.df$source <- "Commercial"


witch.out.df <- rbind(rv.df, comm.df)
witch.out.df$latin.name_nom.latin <- "Glyptocephalus cynoglossus"
witch.out.df$english.name_nom.anglais <- "Witch Flounder"
witch.out.df$french.name_nom.français <- "Plie Grise"


vars <- c("source", "latin.name_nom.latin", "english.name_nom.anglais", "french.name_nom.français", "yea
o1 <- order(witch.out.df$source, witch.out.df$year, witch.out.df$month)

witch.out.fn <- "NAFO-4RST-Witch-Flounder-ages.csv"
write.csv(witch.out.df[o1,vars], file=witch.out.fn, row.names = FALSE)

## and a so-called data dictionary to explain the different columns in the CSV file
vars.bilingual <- c("source", "latin.name_nom.latin", "english.name_nom.anglais", "french.name_nom.franc

data.dic <- data.frame(
  name_nom = vars.bilingual
  )
data.dic$description_fr <- c("Source de otolithes, peut soit provenir du relevé par navire de recherche

data.dic$description_en <- c("Source of otoliths, can be either from the Research Vessel (RV) survey or

data.dic.fn <- "data-dictionary.csv"
write.csv(data.dic, file=data.dic.fn, row.names = FALSE)
```

The Web Service to be associated with this dataset will just be a polygon of NAFO division 4RST.