Extract to create a csv file used to feed FGP/OGSL/ETC

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This document is the narrative of how an Excel file called "sGSL-scallop-RV-FGP.csv" was generated.

```
`%nin%` = Negate(`%in%`) ## a useful operator
suppressPackageStartupMessages(library(gulf))
```

SETS

Using the function "read.card" from the DFO Gulf Region's R package "gulf", read in the set cards and exclude hydrographic stations and null sets, so as to keep only representative tows.

```
survey = "sca"
projectBase = here::here()
 yrs <- c(2012, 2013, 2014, 2015, 2016,2018,2019,2020,2021, 2022)

x <- read.card(card.type="set", year=yrs, survey = survey)
```

```
## Data is being retrieved from the PTRAN database
```

```
## select * from V_GSCARD_TYPE_S_SCALLOP  where extract(year from SDATE) in  (2012,2013,2014,2015,2016,
```

```
## we want to keep only representative tows, within the historical context that some tows were identifi
uu <- sort(unique(x$experiment))
```

```
knitr::kable(data.frame(uu,experiment.str(uu)))## what are the experiment codes
```

uu	experiment.str.uu.
1	stratified random survey set
3	unrepresentative catch - net damage

```
#Need to remove data that is of no use for analysis

# true for sets other than NULL sets
logical1 <- x$experiment == 1

#Subset set cards with conditions
x <- x[which(logical1),]
```

Add a few useful columns to the data frame containing the set card information (including depth and swept area as requested).

```
## add useful columns
x$unique.id <- paste(x$year, x$cruise.number, x$vessel.code, x$set.number, sep="-")
x$experiment.str <- experiment.str(x$experiment)
x$vessel.str <- vessel.str(x$vessel.code)
x$gear.str <- gear.str(x$gear)
```

```
## Data is being retrieved from the PTRAN database
```

```
x$longitude <- longitude(x)
x$latitude <- latitude(x)
x$mission <- paste(x$vessel.code, x$cruise.number, sep="")

ox <- order(x$year, x$month, x$day, x$start.hour)
x <- x[ox,] # reorder chronologically
```

Catch cards contain the total catch information for the species of interest. Here they are adjusted for distance towed, estimated diurnal effects and estimated vessel-gear effects.

```
### Catch card for all years requesteed
y <- read.card(card.type="cat", year = yrs , survey=survey)
```

```
## Data is being retrieved from the PTRAN database
```

CATCH

```
# y <- adjust(y, x)
tmp <- adjust(y, x)
```

```
## Data is being retrieved from the PTRAN database
```

```
## Tow catches for 8 gang toothed scallop drag lined with 14 mm mesh adjusted to a standard tow distanc
```

```
y$unique.id <- paste(y$year, y$cruise.number, y$vessel.code, y$set.number, sep="-")
y$english.name <- species.str(y$species, "english")
```

```
## Data is being retrieved from the PTRAN database
```

```
y$latin.name <- species.str(y$species, "latin")
```

```
## Data is being retrieved from the PTRAN database
```

```
y$french.name <- species.str(y$species, "french")
```

```
## Data is being retrieved from the PTRAN database
```

```r
z <- merge(y,x, all.x = TRUE, by = "unique.id", names = c("longitude","latitude", "gear.str"))

##  CSV
## write to file
fn2 <- "sGSL-scallop-RV-FGP.csv"
fp  <- paste0(projectBase,"/stock_assessment_surveys/de6dc782 (scallop_survey)/")
csv.fn2 <- file.path(fp,fn2)

ooz <- order(z$year, z$month, z$day, z$start.hour, z$start.minute, z$species)

#columns to keep
fvars2 <- c("year","month","day","start.hour","start.minute","latitude","longitude","gear.str","species

zz=  z[ooz,fvars2]
#rename header for FGP

names(zz) <- c("year__annee","month__mois","day__jour","start_hour__heure_de_depart","start_minute__minu

write.csv(zz, file=csv.fn2, row.names=FALSE)
```