2.11

2022-10-27

```
## [1] "stom_df"
```

```
## # A tibble: 300,538 x 27
##    sample_id haul_id   latit~1 longi~2   day month  year ices_~3 pred_~4 pred_~5
##        <int> <chr>       <dbl>   <dbl> <dbl> <dbl> <dbl> <chr>     <dbl>   <dbl>
##  1         3 CLYDE-19~    55.9   -5.41    NA    NA  1935 40E4     0.0617    2.56
##  2         3 CLYDE-19~    55.9   -5.41    NA    NA  1935 40E4     0.0617    2.56
##  3         3 CLYDE-19~    55.9   -5.41    NA    NA  1935 40E4     0.0617    2.56
##  4         3 CLYDE-19~    55.9   -5.41    NA    NA  1935 40E4     0.0617    2.56
##  5         3 CLYDE-19~    55.9   -5.41    NA    NA  1935 40E4     0.0617    2.56
##  6        10 CLYDE-19~    55.9   -5.41    NA    NA  1935 40E4     0.550     4.9
##  7        10 CLYDE-19~    55.9   -5.41    NA    NA  1935 40E4     0.550     4.9
##  8        10 CLYDE-19~    55.9   -5.41    NA    NA  1935 40E4     0.550     4.9
##  9        10 CLYDE-19~    55.9   -5.41    NA    NA  1935 40E4     0.550     4.9
## 10        10 CLYDE-19~    55.9   -5.41    NA    NA  1935 40E4     0.550     4.9
## # ... with 300,528 more rows, 17 more variables: n_stomachs <dbl>,
## #   bin_number <int>, pred_aphiaID <dbl>, pred_taxa <chr>, pred_species <chr>,
## #   prey_taxa <chr>, prey_aphiaID <dbl>, prey_species <chr>, prey_count <dbl>,
## #   prey_ind_weight_g <dbl>, prey_weight_g <dbl>, prey_funcgrp <chr>,
## #   gprey_perpred <dbl>, nprey_perpred <dbl>, ppmr <dbl>, data <chr>,
## #   guild <fct>, and abbreviated variable names 1: latitude, 2: longitude,
## #   3: ices_rectangle, 4: pred_weight_g, 5: pred_length_cm
## # i Use `print(n = ...)` to see more rows, and `colnames()` to see all variable names
```

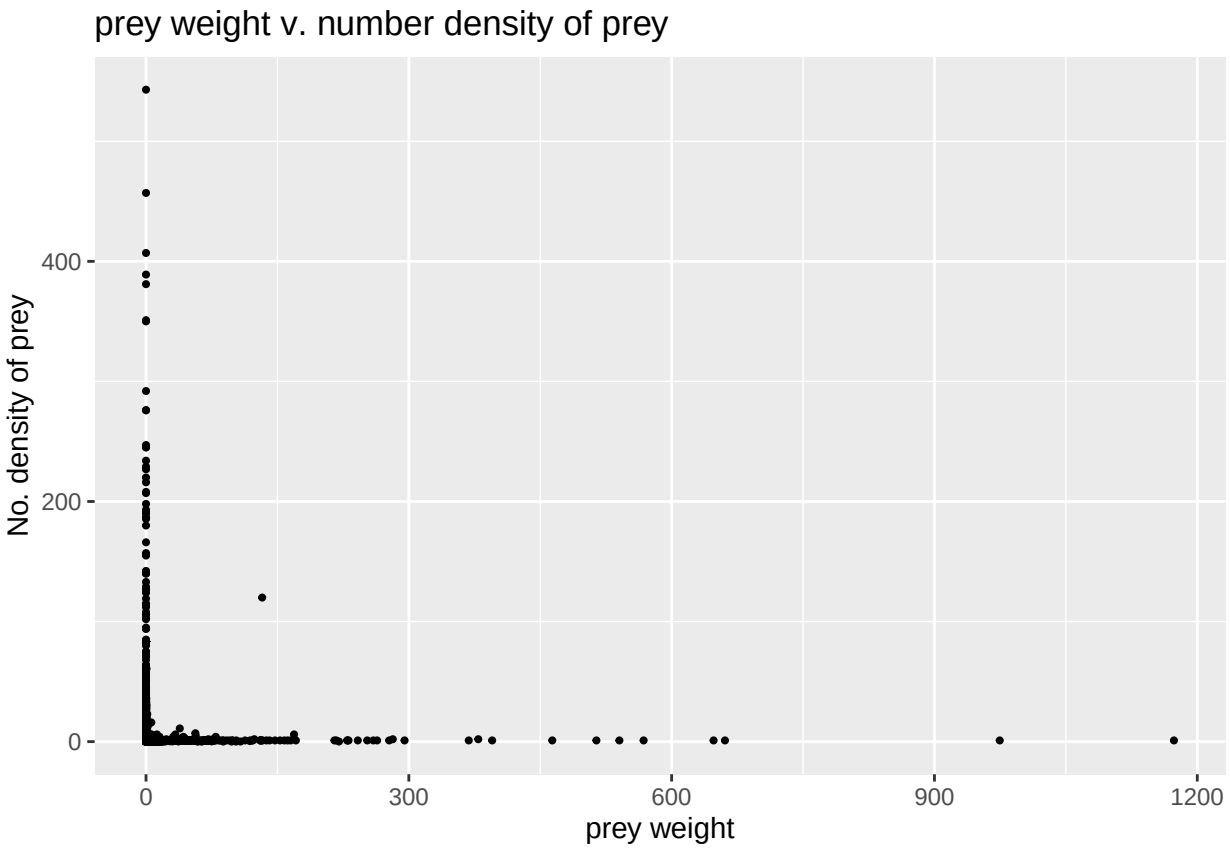
```
## # A tibble: 300,538 x 12
##    haul_id latit~1 longi~2  year pred_~3 pred_~4 pred_~5 prey_~6 prey_~7 indiv~8
##    <chr>     <dbl>   <dbl> <dbl> <chr>     <dbl>   <dbl> <chr>   <chr>     <dbl>
##  1 CLYDE-~    55.9   -5.41  1935 Clupea~  0.0617    2.56 <NA>    zoopla~ 6.5 e-5
##  2 CLYDE-~    55.9   -5.41  1935 Clupea~  0.0617    2.56 <NA>    zoopla~ 6.5 e-5
##  3 CLYDE-~    55.9   -5.41  1935 Clupea~  0.0617    2.56 <NA>    zoopla~ 5.4 e-5
##  4 CLYDE-~    55.9   -5.41  1935 Clupea~  0.0617    2.56 <NA>    zoopla~ 5.4 e-5
##  5 CLYDE-~    55.9   -5.41  1935 Clupea~  0.0617    2.56 <NA>    zoopla~ 1.60e-3
##  6 CLYDE-~    55.9   -5.41  1935 Clupea~  0.550     4.9  <NA>    zoopla~ 6.5 e-5
##  7 CLYDE-~    55.9   -5.41  1935 Clupea~  0.550     4.9  <NA>    zoopla~ 5.4 e-5
##  8 CLYDE-~    55.9   -5.41  1935 Clupea~  0.550     4.9  <NA>    zoopla~ 5.4 e-5
##  9 CLYDE-~    55.9   -5.41  1935 Clupea~  0.550     4.9  Centro~ zoopla~ 1.8 e-4
## 10 CLYDE-~    55.9   -5.41  1935 Clupea~  0.550     4.9  Centro~ zoopla~ 1.8 e-4
## # ... with 300,528 more rows, 2 more variables: no._prey_per_stmch <dbl>,
## #   ppmr <dbl>, and abbreviated variable names 1: latitude, 2: longitude,
## #   3: pred_species, 4: pred_weight_g, 5: pred_length_cm, 6: prey_species,
## #   7: prey_type, 8: indiv_prey_weight
## # i Use `print(n = ...)` to see more rows, and `colnames()` to see all variable names
```

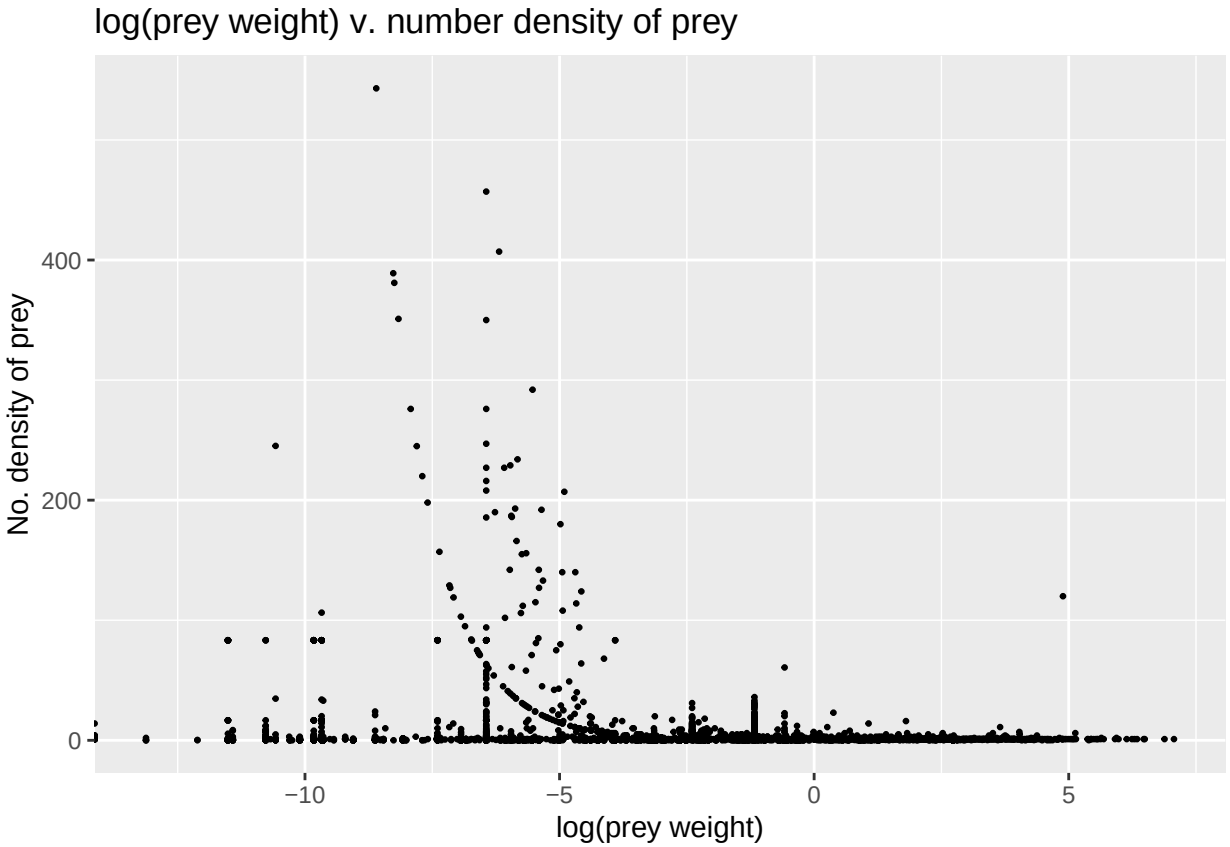
```
## [1] FALSE
```

```
## [1] FALSE
```

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

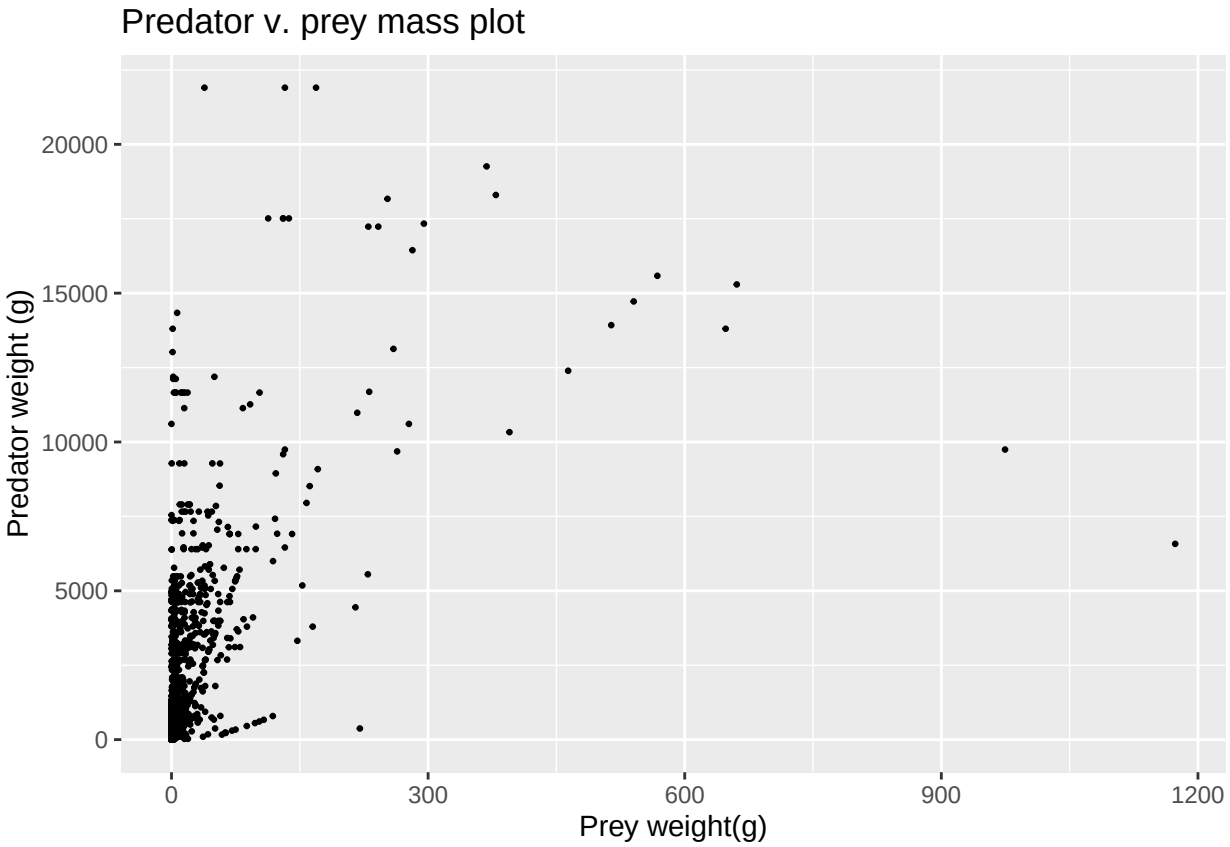
prey weight v. number density of prey



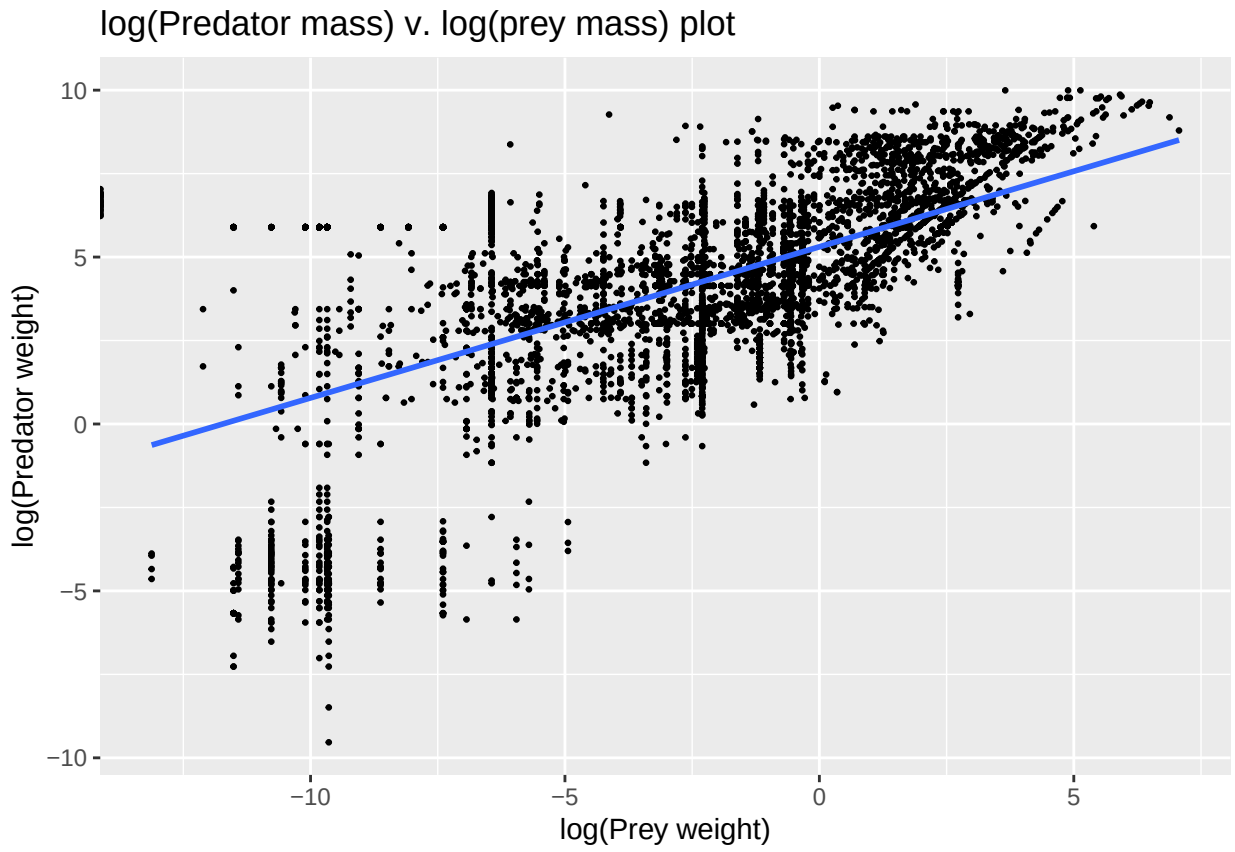

log(prey weight) v. number density of prey
No. density of prey
400
200
0
−10
−5
0
5
log(prey weight)


log(prey weight) v. number prey per stomach − separate ship names
No. density of prey
400
200
0
−10
−5
0
5
log(prey weight)
haul_id_short
BLEGVAD
BULLEN
CIROL05
CLARK
CLYDE
DOVE
END03
END04
END19
EVHOE
FRESHWATER
HARTLEY
LANCELOT
LAST
LOCH
SCOTLAND
SIZEWELL

prey weight v. pred weight

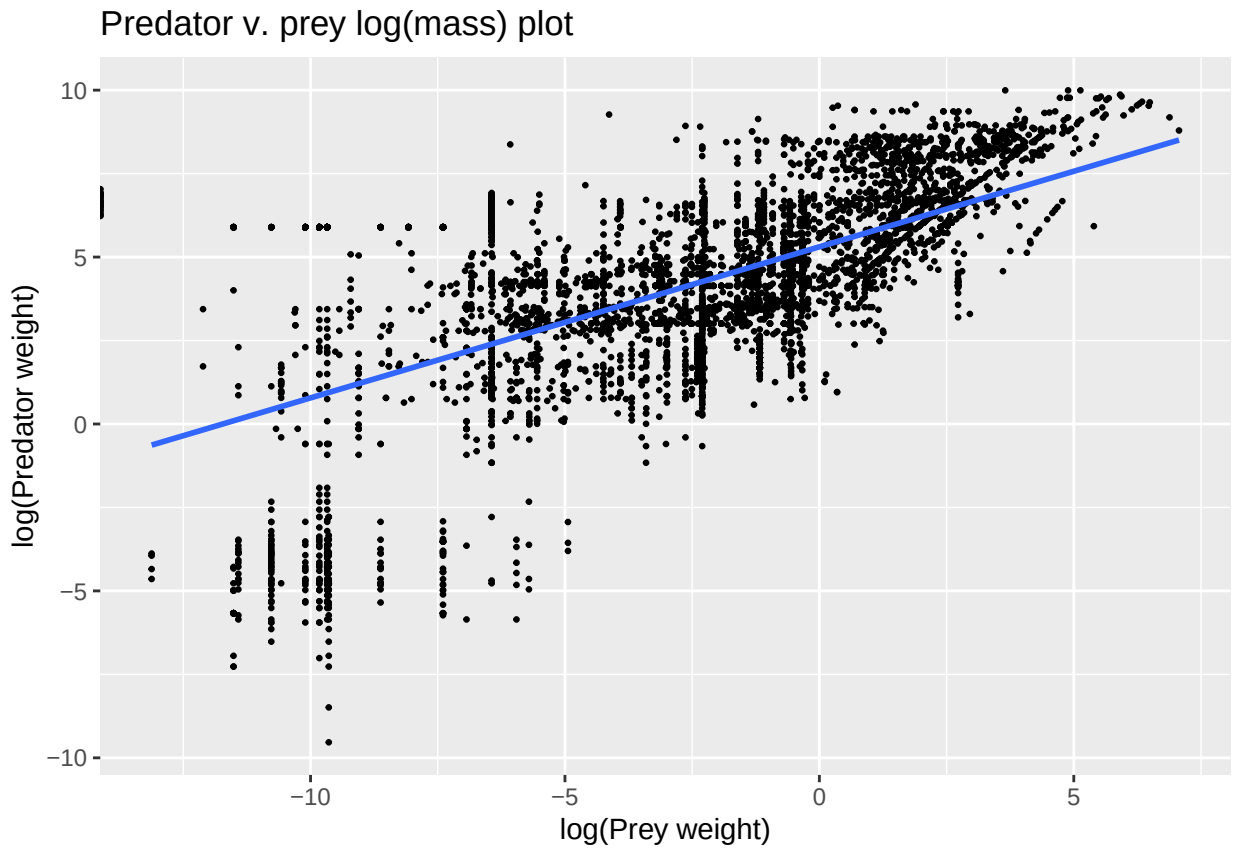



```
## `geom_smooth()` using formula 'y ~ x'
```

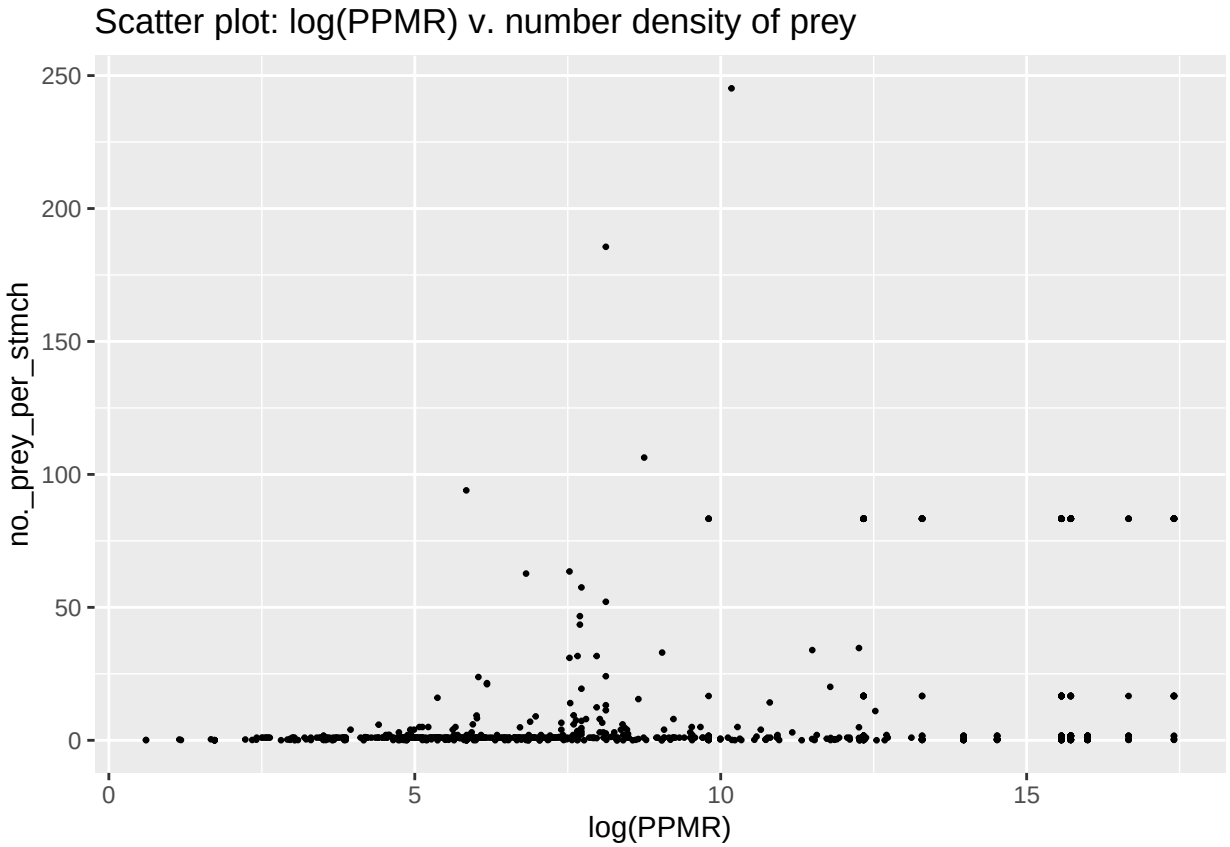


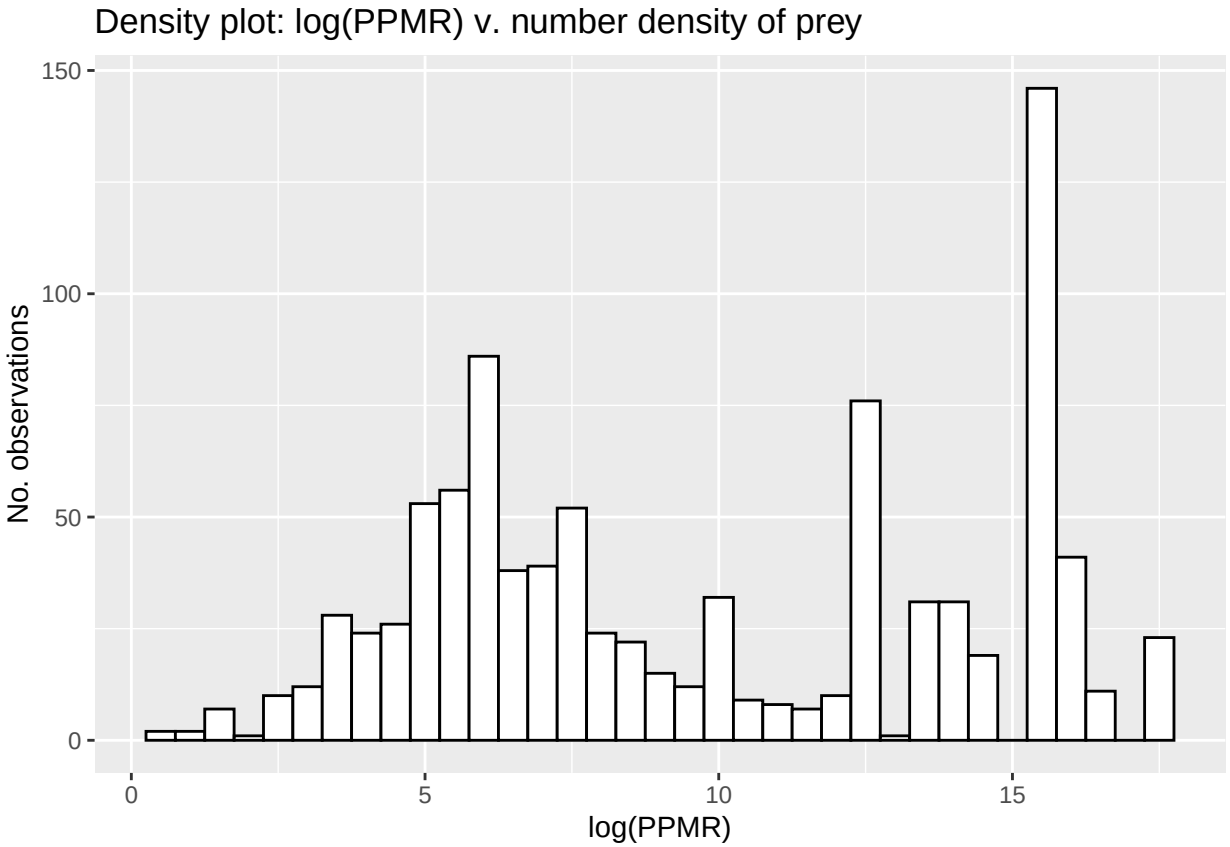

```
##                   (Intercept) df_smaller$indiv_prey_weight
##                     535.96347                    28.74321
```

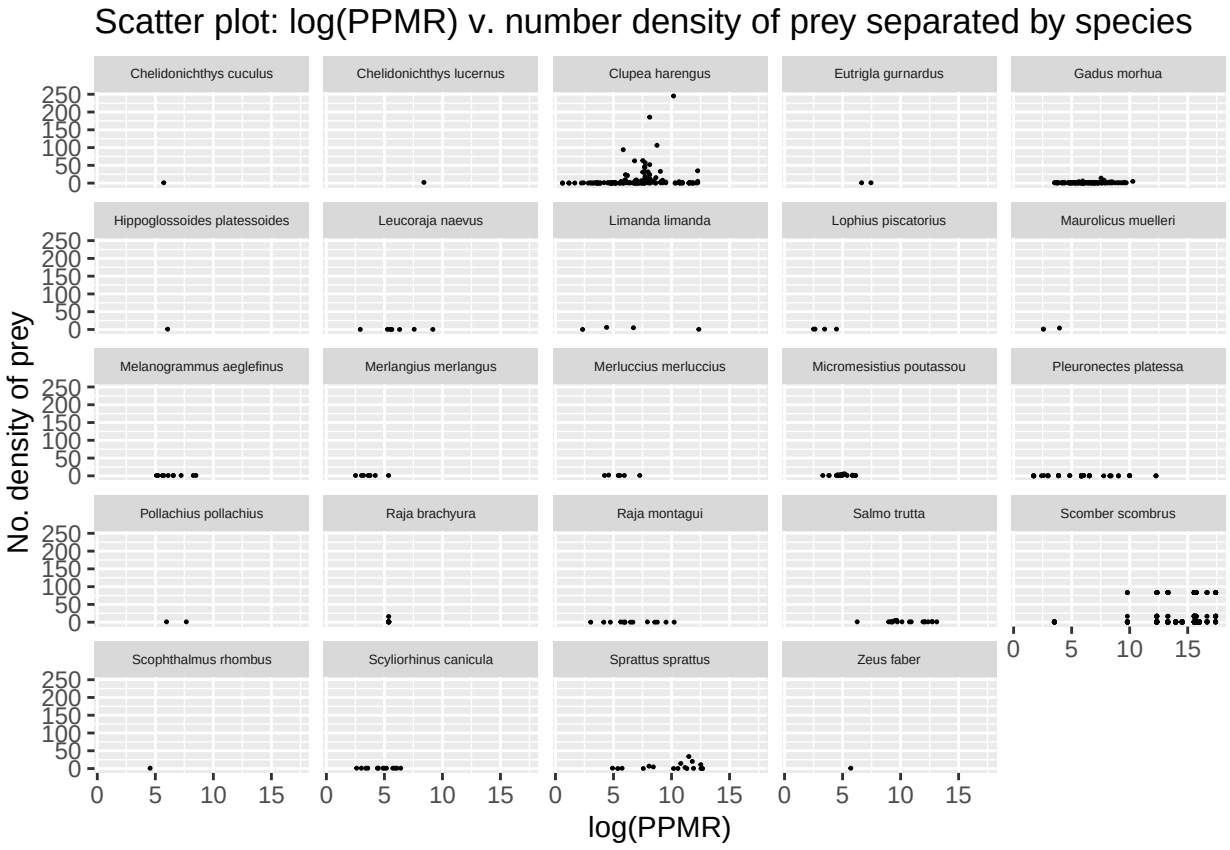
```
## `geom_smooth()` using formula 'y ~ x'
```

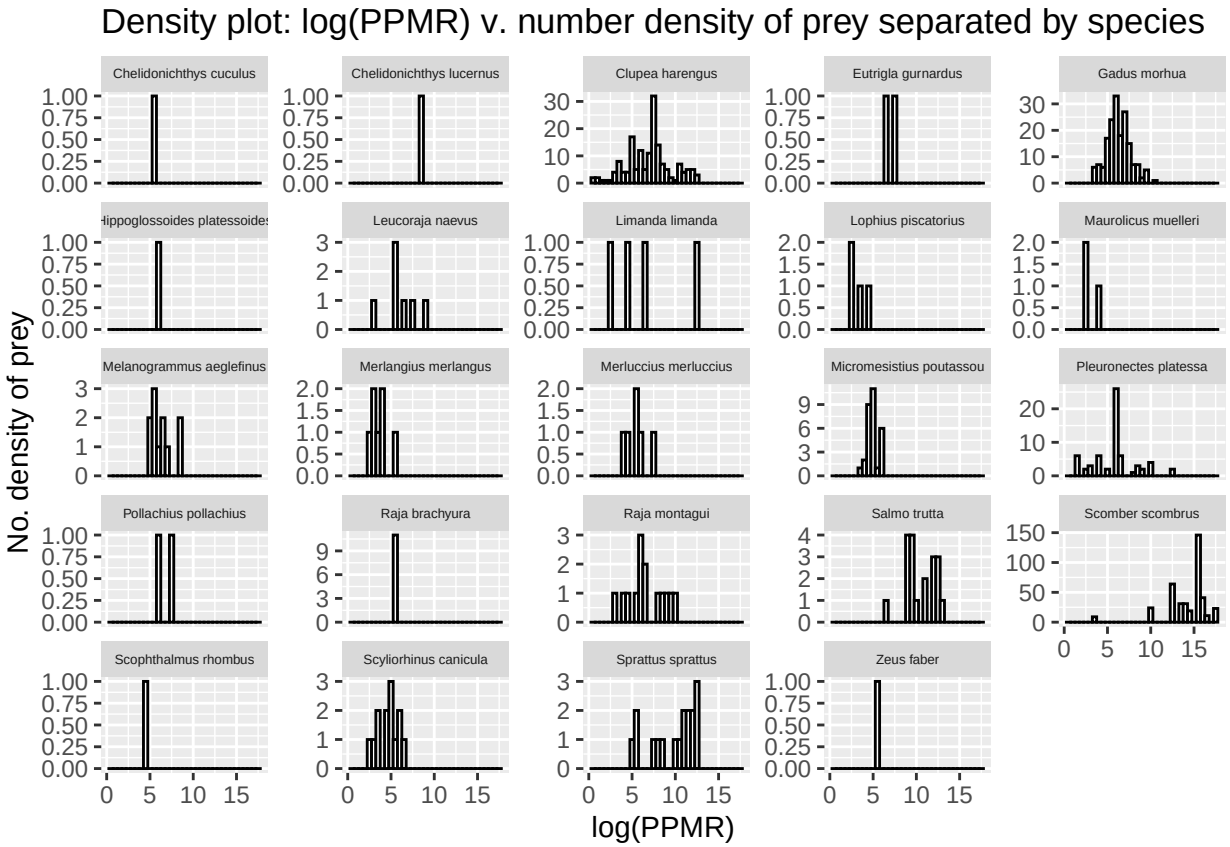


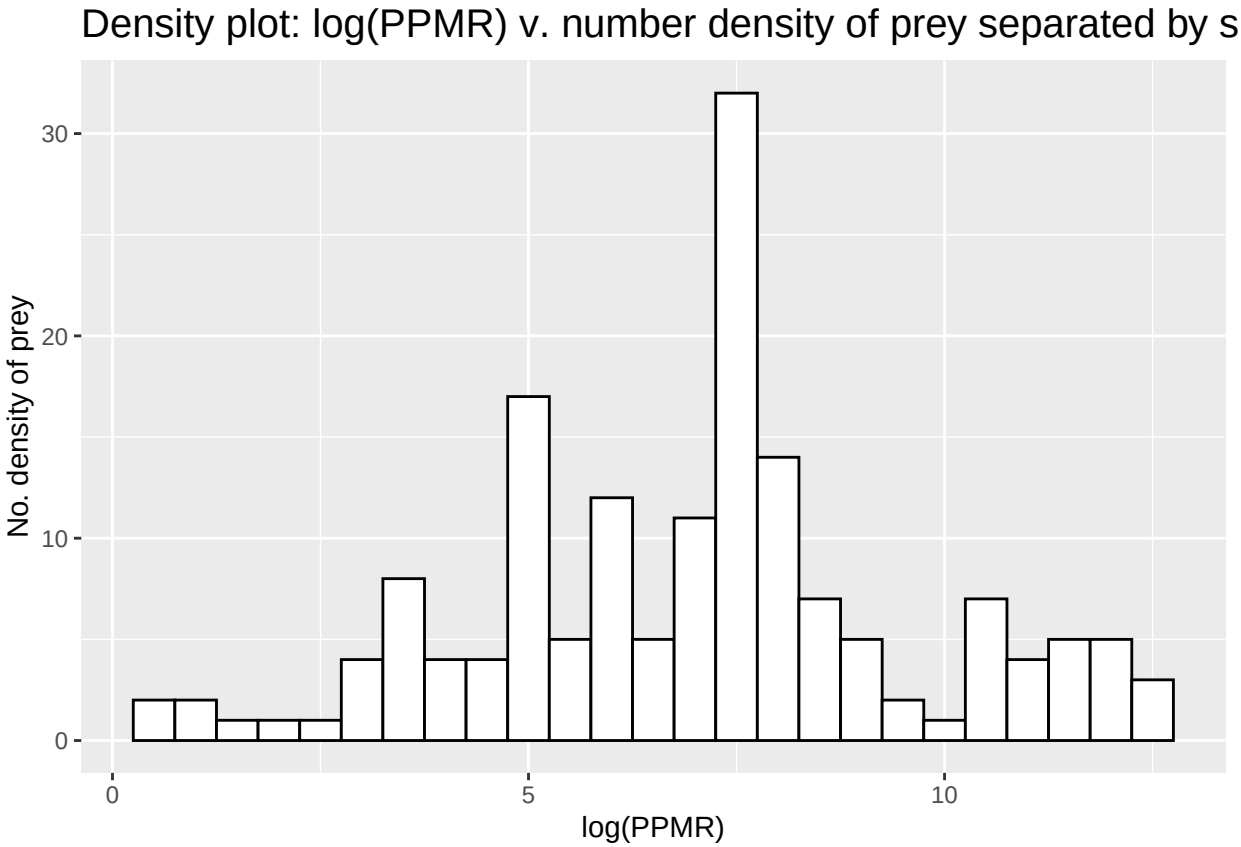
log(PPMR) v. number density of prey


Scatter plot: log(PPMR) v. number density of prey
no._prey_per_stmch
250
200
150
100
50
0
0
5
10
15
log(PPMR)


Density plot: log(PPMR) v. number density of prey
No. observations
150
100
50
0
0
5
10
15
log(PPMR)


Scatter plot: log(PPMR) v. number density of prey separated by species
Chelidonichthys cuculus
Chelidonichthys lucernus
Clupea harengus
Eutrigla gurnardus
Gadus morhua
Hippoglossoides platessoides
Leucoraja naevus
Limanda limanda
Lophius piscatorius
Maurolicus muelleri
Melanogrammus aeglefinus
Merlangius merlangus
Merluccius merluccius
Micromesistius poutassou
Pleuronectes platessa
Pollachius pollachius
Raja brachyura
Raja montagui
Salmo trutta
Scomber scombrus
Scophthalmus rhombus
Scyliorhinus canicula
Sprattus sprattus
Zeus faber
No. density of prey
log(PPMR)
0
50
100
150
200
250
0
5
10
15


Density plot: log(PPMR) v. number density of prey separated by species
Chelidonichthys cuculus
Chelidonichthys lucernus
Clupea harengus
Eutrigla gurnardus
Gadus morhua
Hippoglossoides platessoides
Leucoraja naevus
Limanda limanda
Lophius piscatorius
Maurolicus muelleri
Melanogrammus aeglefinus
Merlangius merlangus
Merluccius merluccius
Micromesistius poutassou
Pleuronectes platessa
Pollachius pollachius
Raja brachyura
Raja montagui
Salmo trutta
Scomber scombrus
Scophthalmus rhombus
Scyliorhinus canicula
Sprattus sprattus
Zeus faber
No. density of prey
log(PPMR)


Density plot: log(PPMR) v. number density of prey separated by s
No. density of prey
30
20
10
0
0
5
10
log(PPMR)