

Assignment 8

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2. Portal Data Review (25 points)

```
## [1] "2a"
```

```
## # A tibble: 3,027 x 5
##   year month   day species_id weight
##   <dbl> <dbl> <dbl> <chr>      <dbl>
## 1  1977     8    19 D0         52
## 2  1977    10    17 D0         33
## 3  1977    10    17 D0         50
## 4  1977    10    17 D0         48
## 5  1977    10    17 D0         31
## 6  1977    10    18 D0         41
## 7  1977    11    12 D0         44
## 8  1977    11    12 D0         48
## 9  1977    11    14 D0         39
## 10 1977    12    10 D0         40
## # i 3,017 more rows
```

```
## [1] "2b"
```

```
## # A tibble: 5,150 x 3
##   year species_id hindfoot_length
##   <dbl> <chr>          <dbl>
## 1  1995 PP          23
## 2  1995 PP          22
## 3  1995 PP          22
## 4  1995 PP          21
## 5  1995 PP          21
## 6  1995 PP          20
## 7  1995 PP          22
## 8  1995 PP          24
## 9  1995 PP          22
## 10 1995 PP          22
## # i 5,140 more rows
```

```
## [1] "2c"
```

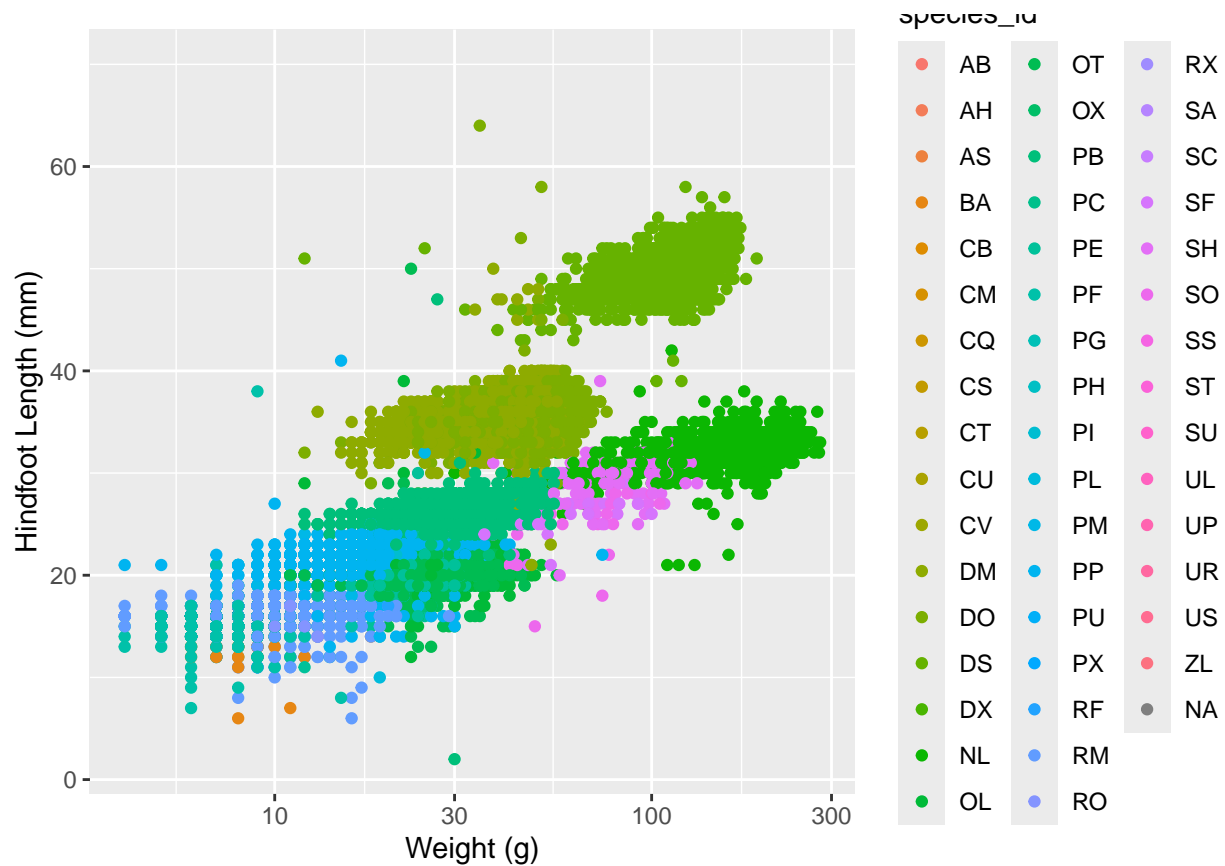
```
## # A tibble: 340 x 3
## # Groups:   species_id [25]
```

```
##   species_id year mean_hf
##   <chr>      <dbl>  <dbl>
## 1 AH        1999    35
## 2 AH        2000    31
## 3 BA        1989    13
## 4 BA        1990    13.8
## 5 BA        1991    12.9
## 6 BA        1992    12
## 7 DM        1977    35.7
## 8 DM        1978    36.1
## 9 DM        1979    35.9
## 10 DM       1980    35.8
## # i 330 more rows
```

```
## [1] "2d"
```

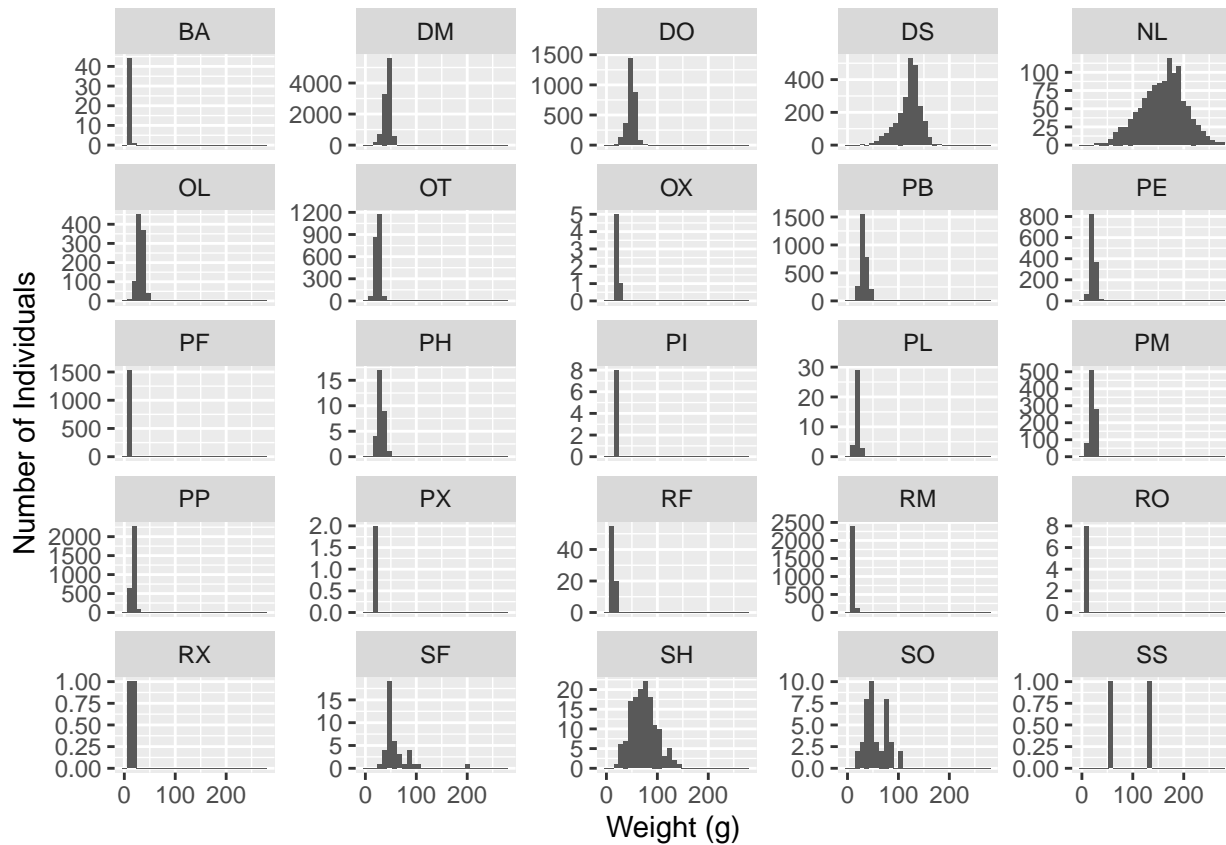
```
## # A tibble: 16,167 x 5
##   year genus species weight plot_type
##   <dbl> <chr>   <chr>   <dbl> <chr>
## 1 1977 Dipodomys merriami NA Control
## 2 1977 Dipodomys merriami NA Rodent Exclosure
## 3 1977 Dipodomys merriami NA Long-term Krat Exclosure
## 4 1977 Dipodomys merriami NA Spectab exclosure
## 5 1977 Dipodomys merriami NA Spectab exclosure
## 6 1977 Dipodomys spectabilis NA Rodent Exclosure
## 7 1977 Dipodomys merriami NA Rodent Exclosure
## 8 1977 Dipodomys merriami NA Long-term Krat Exclosure
## 9 1977 Dipodomys merriami NA Control
## 10 1977 Dipodomys merriami NA Short-term Krat Exclosure
## # i 16,157 more rows
```

```
## [1] "2e"
```



```
## [1] "2f"
```

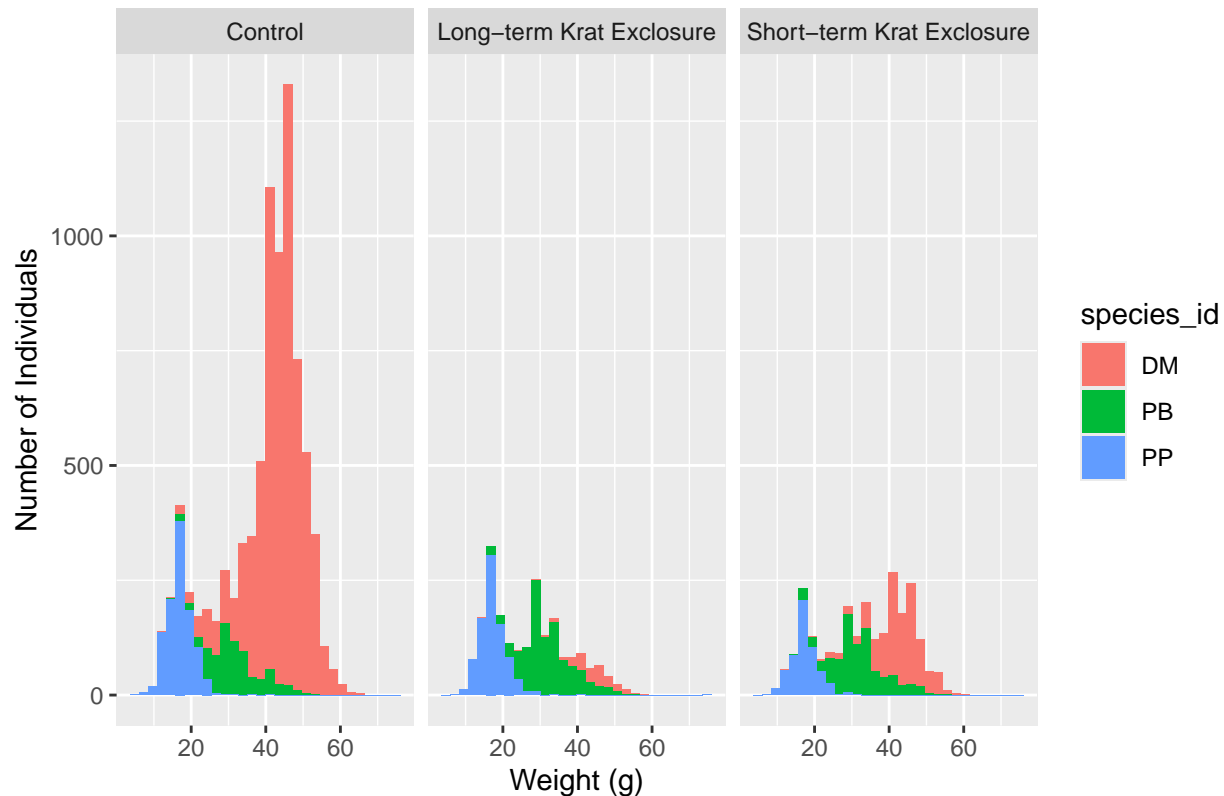
```
## # A tibble: 32,283 x 9
##   record_id month   day  year plot_id species_id sex hindfoot_length weight
##   <dbl> <dbl> <dbl> <dbl> <dbl> <chr> <chr> <dbl> <dbl>
## 1      63     8    19  1977     3 DM      M      35     40
## 2      64     8    19  1977     7 DM      M      37     48
## 3      65     8    19  1977     4 DM      F      34     29
## 4      66     8    19  1977     4 DM      F      35     46
## 5      67     8    19  1977     7 DM      M      35     36
## 6      68     8    19  1977     8 DO      F      32     52
## 7      69     8    19  1977     2 PF      M      15      8
## 8      70     8    19  1977     3 OX      F      21     22
## 9      71     8    19  1977     7 DM      F      36     35
## 10     74     8    19  1977     8 PF      M      12      7
## # i 32,273 more rows
```



```
## [1] "2g, optional"
```

```
## # A tibble: 13,415 x 10
##   record_id month   day  year plot_id species_id sex hindfoot_length weight
##   <dbl> <dbl> <dbl> <dbl> <dbl> <chr>      <chr>      <dbl> <dbl>
## 1         3     7    16  1977      2 DM        F         37    NA
## 2         5     7    16  1977      3 DM        M         35    NA
## 3        13     7    16  1977      3 DM        M         35    NA
## 4        14     7    16  1977      8 DM        <NA>      NA    NA
## 5        15     7    16  1977      6 DM        F         36    NA
## 6        16     7    16  1977      4 DM        F         36    NA
## 7        18     7    16  1977      2 PP        M         22    NA
## 8        21     7    17  1977     14 DM        F         34    NA
## 9        23     7    17  1977     13 DM        M         36    NA
## 10       26     7    17  1977     15 DM        M         31    NA
## # i 13,405 more rows
## # i 1 more variable: plot_type <chr>
```

Size distribution comparison across treatments

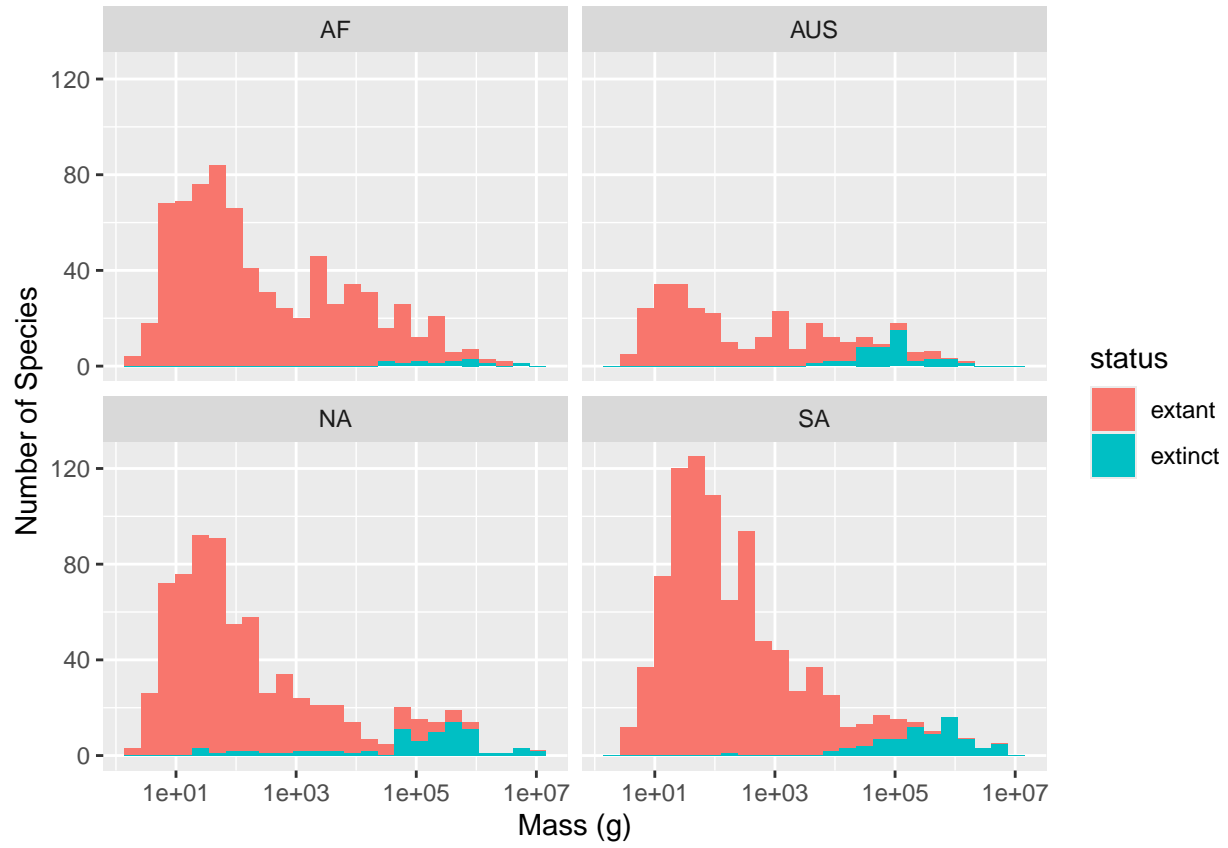


3. Megafaunal Extinction (35 points)

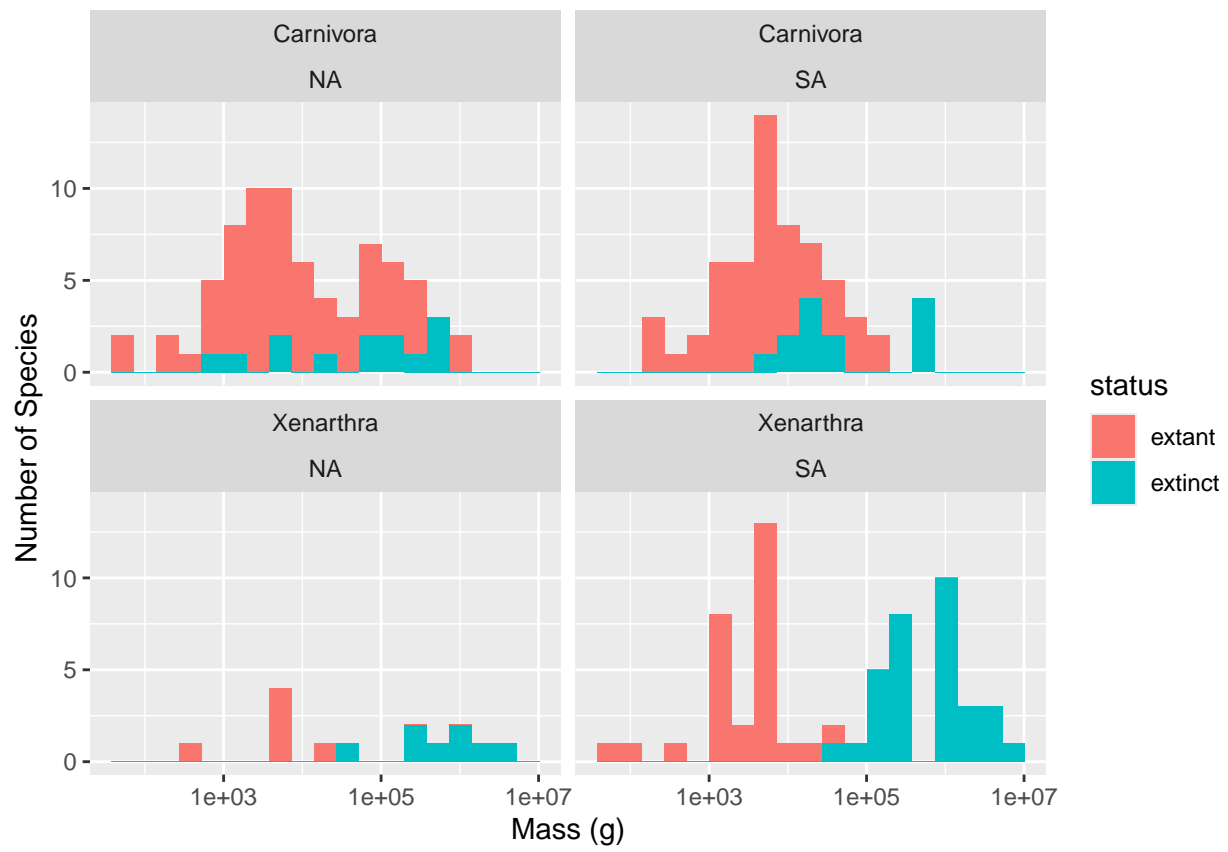
```
## [1] "3a"
```

```
## spc_tbl_ [5,731 x 8] (S3: spec_tbl_df/tbl_df/tbl/data.frame)
## $ continent: chr [1:5731] "AF" "AF" "AF" "AF" ...
## $ status   : chr [1:5731] "extant" "extant" "extant" "extant" ...
## $ order    : chr [1:5731] "Artiodactyla" "Artiodactyla" "Artiodactyla" "Artiodactyla" ...
## $ family   : chr [1:5731] "Bovidae" "Bovidae" "Bovidae" "Bovidae" ...
## $ genus    : chr [1:5731] "Addax" "Aepyceros" "Alcelaphus" "Ammodorcas" ...
## $ species   : chr [1:5731] "nasomaculatus" "melampus" "buselaphus" "clarkei" ...
## $ mass     : num [1:5731] 70000 52500 171002 28050 48000 ...
## $ reference: chr [1:5731] "60" "63, 70" "63, 70" "60" ...
## - attr(*, "spec")=
## .. cols(
## ..   continent = col_character(),
## ..   status = col_character(),
## ..   order = col_character(),
## ..   family = col_character(),
## ..   genus = col_character(),
## ..   species = col_character(),
## ..   mass = col_double(),
## ..   reference = col_character()
## .. )
## - attr(*, "problems")=<externalptr>
```

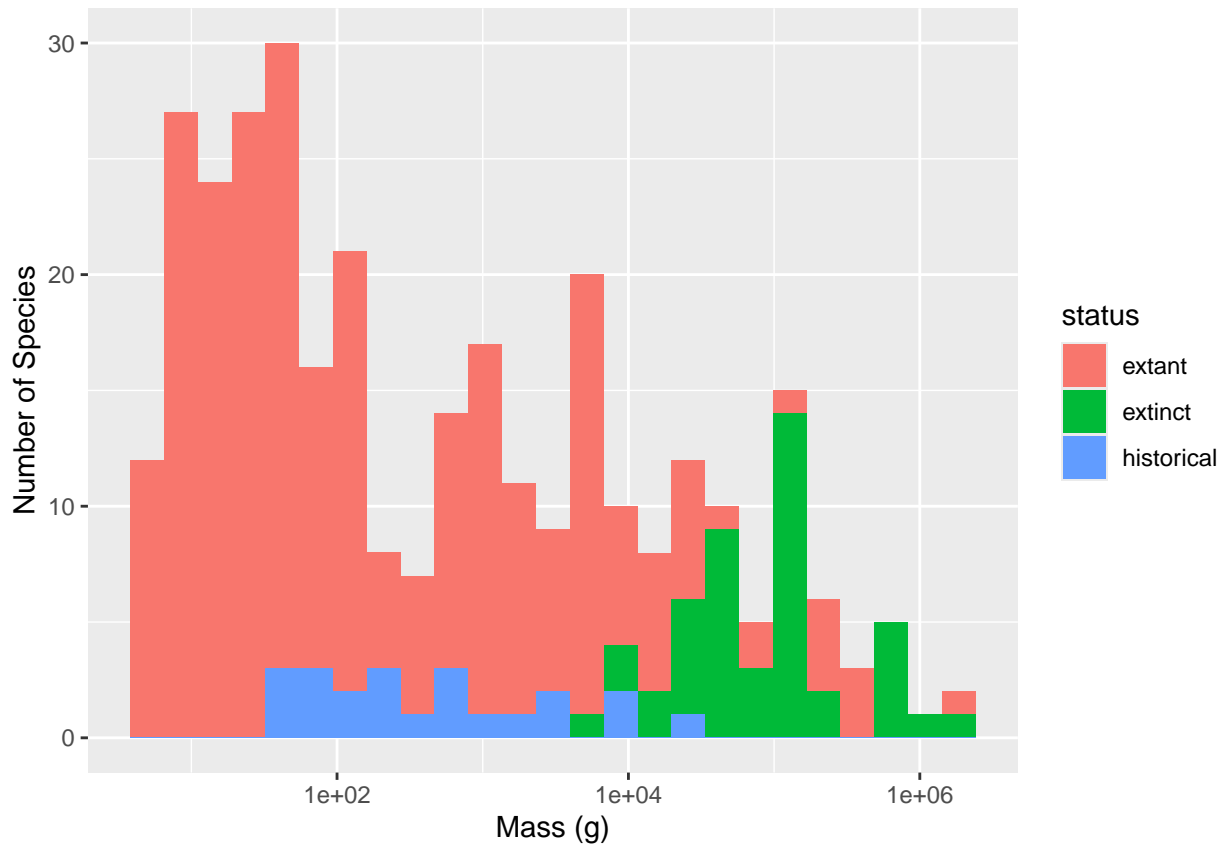
```
## [1] "3b"
```



```
## [1] "3c"
```



[1] "3d"



```
## [1] "3e, optional"
```

```
## # A tibble: 5 x 1
##   continent
##   <chr>
## 1 AF
## 2 AUS
## 3 Insular
## 4 NA
## 5 SA
```

```
## # A tibble: 3,091 x 8
##   continent status order      family genus      species      mass reference
##   <chr>      <chr> <chr>      <chr> <chr>      <chr>      <dbl> <chr>
## 1 AF        extant Artiodactyla Bovidae Addax      nasomacul~ 7.00e4 60
## 2 AF        extant Artiodactyla Bovidae Aepyceros melampus  5.25e4 63, 70
## 3 AF        extant Artiodactyla Bovidae Alcelaphus buselaphus 1.71e5 63, 70
## 4 AF        extant Artiodactyla Bovidae Ammodorcas clarkei   2.80e4 60
## 5 AF        extant Artiodactyla Bovidae Ammotragus lervia    4.80e4 75
## 6 AF        extant Artiodactyla Bovidae Antidorcas marsupial~ 3.90e4 60
## 7 AF        extinct Artiodactyla Bovidae Antidorcas bondi    3.4 e4 1
## 8 AF        extinct Artiodactyla Bovidae Antidorcas australis 4 e4 2
## 9 AF        extant Artiodactyla Bovidae Bos        taurus    9 e5 <NA>
## 10 AF       extant Artiodactyla Bovidae Capra      walie     1 e5 <NA>
## # i 3,081 more rows
```


4. Palmer Penguins (35 points)

Note: you don't need to worry about data types for each column matching up exactly (e.g., the Species and Island columns can be character data and don't need to be converted to factors). As long as `setdiff()` comes back with 0 rows, you're good to go.

```
## # A tibble: 6 x 8
##   species island   bill_length_mm bill_depth_mm flipper_length_mm body_mass_g
##   <fct>   <fct>         <dbl>         <dbl>         <int>         <int>
## 1 Adelie  Torgersen         39.1          18.7           181          3750
## 2 Adelie  Torgersen         39.5          17.4           186          3800
## 3 Adelie  Torgersen         40.3           18           195          3250
## 4 Adelie  Torgersen         NA           NA            NA            NA
## 5 Adelie  Torgersen         36.7          19.3           193          3450
## 6 Adelie  Torgersen         39.3          20.6           190          3650
## # i 2 more variables: sex <fct>, year <int>
```

Result from the `setdiff()` function:

```
## # A tibble: 0 x 8
## # i 8 variables: species <chr>, island <chr>, bill_length_mm <dbl>,
## #   bill_depth_mm <dbl>, flipper_length_mm <dbl>, body_mass_g <dbl>, sex <chr>,
## #   year <dbl>
```