

Spatial Diet Data Analysis

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Spatial Analysis of Juvenile Sockeye Diets in 2015

The following is a collection of the scripts run to generate and analyse the data for spatial analyses of the juvenile sockeye diet data collected in 2015.

Research Questions: 1. How do diets vary across different ocean conditions experienced during the early outmigration? 2. Are they food-limited during their residence in the ‘trophic gauntlet’?

Stomach Fullness

What percent of their body weight are they consuming (%BW) are they consuming in this region that has been hypothesized to be a trophic gauntlet?

Importing and Wrangling the Data

```
library(tidyverse)
```

```
## -- Attaching packages -----
## v ggplot2 3.0.0      v purrr  0.2.5
## v tibble  1.4.2      v dplyr  0.7.7
## v tidyr   0.8.1      v stringr 1.3.1
## v readr   1.1.1      v forcats 0.3.0

## -- Conflicts -----
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()     masks stats::lag()
```

```
library(here)
```

```
## here() starts at C:/Users/Sam/Documents/Academic/UBC/Grad/My Research/R/sockeye_diets
spatial <- read_csv(here("raw", "Spatial_2019.csv"))
```

```
## Warning: Duplicated column names deduplicated: 'species' =>
## 'species_1' [29]
```

```
## Parsed with column specification:
## cols(
##   .default = col_character(),
##   sam.id = col_integer(),
##   sam.proc.date = col_date(format = ""),
##   lab.proc.date = col_date(format = ""),
##   year = col_integer(),
##   month = col_integer(),
##   day = col_integer(),
##   species.no = col_integer(),
##   stomtray = col_integer(),
##   forklenght = col_integer(),
##   fishweight = col_double(),
```



```

axis.text.x = element_text(size = 14),
axis.text.y = element_text(size = 14),
axis.title.x = element_blank(),
axis.title.y = element_text(size = 14),
panel.background = element_rect(fill = "white", colour = "grey50"),
strip.background = element_blank(),
strip.text = element_text(size = 16)
) +
scale_y_continuous("Gut Fullness Index", breaks = c(0,1,2,3,4,5,6)) +
labs(y = "Gut Fullness Index")

```

