BFISH Length Comp Investigations

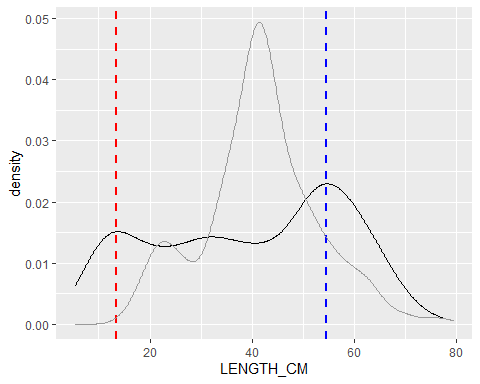
Meg Oshima

5/21/2021

## Camera Lengths

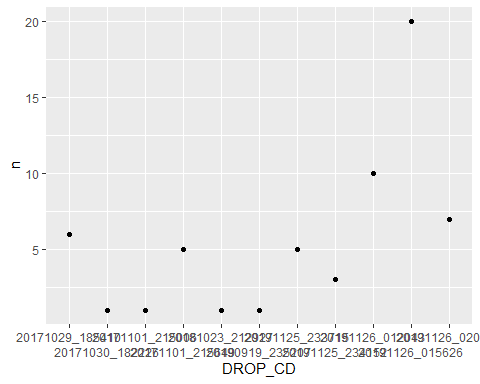
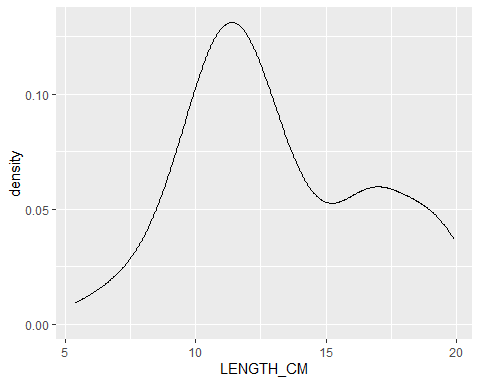
## PSU DROP\_CD SPECIES\_CD SCIENTIFIC\_NAME   
## Min. : 321 Length:535 Length:535 Length:535   
## 1st Qu.: 8046 Class :character Class :character Class :character   
## Median :24083 Mode :character Mode :character Mode :character   
## Mean :22232   
## 3rd Qu.:35943   
## Max. :44532   
## COMMON\_NAME BFISH OFFICIAL\_DEPTH\_M LENGTH\_CM   
## Length:535 Length:535 Min. : 79.81 Min. : 5.40   
## Class :character Class :character 1st Qu.:110.00 1st Qu.:23.11   
## Mode :character Mode :character Median :130.12 Median :41.25   
## Mean :135.45 Mean :39.50   
## 3rd Qu.:156.31 3rd Qu.:55.17   
## Max. :238.00 Max. :79.43   
## Island   
## Length:535   
## Class :character   
## Mode :character   
##   
##   
##

## Warning: Removed 1 rows containing non-finite values (stat\_density).



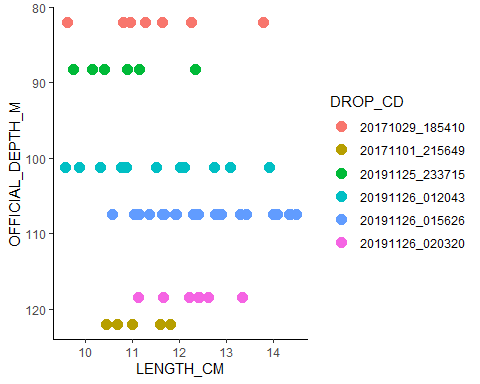
### What is causing the mode in the smaller size classes in the BFISH camera data?

* Which sites are most of these samples coming from?
* Which islands are these samples from?
* What depth are these samples from?



#### Sites that caught 5 or more fish less than 20cm

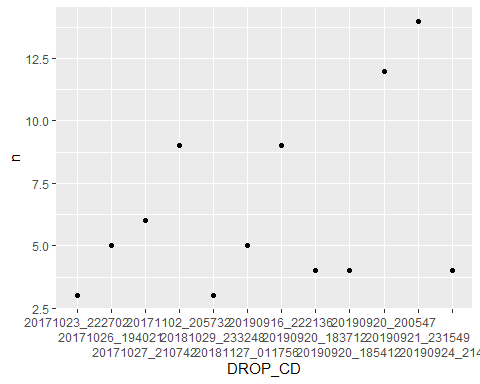
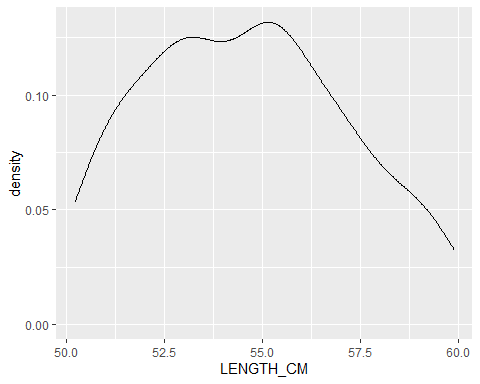
## # A tibble: 6 x 2  
## DROP\_CD n  
## <chr> <int>  
## 1 20191126\_015626 20  
## 2 20191126\_012043 12  
## 3 20171029\_185410 7  
## 4 20191126\_020320 7  
## 5 20191125\_233715 6  
## 6 20171101\_215649 5



6 camera drops had 5 or more fish between 10 - 15 cm. The samples came from Oahu and all were caught between 100 - 110 m deep (which is the first quantile of depths sampled). All from the same day in 2019.

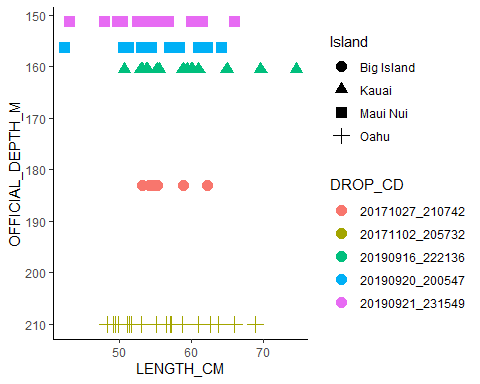
### What is causing the mode in the larger size classes in the BFISH camera data?

* Which sites are most of these samples coming from?
* Which islands are these samples from?
* What depth are these samples from?



#### Sites that caught more than 5 fish between 50 and 60 cm

## # A tibble: 5 x 2  
## DROP\_CD n  
## <chr> <int>  
## 1 20190921\_231549 14  
## 2 20190920\_200547 12  
## 3 20171102\_205732 9  
## 4 20190916\_222136 9  
## 5 20171027\_210742 6



5 camera drops had more than 5 fish between 50 and 60 cm. The samples came from the Big Island (n = 1), Kauai (n = 1), Maui Nui (n = 2), and Oahu (n =1) were caught at depths of 150 to 210 m. The two highest catches occurred in 2019, and all occurred in 2019 or 2017.

## Fishing Lengths

## PSU SAMPLE\_ID SPECIES\_CD SCIENTIFIC\_NAME   
## Min. : 271 Length:293 Length:293 Length:293   
## 1st Qu.:11839 Class :character Class :character Class :character   
## Median :16916 Mode :character Mode :character Mode :character   
## Mean :19741   
## 3rd Qu.:32422   
## Max. :43397   
##   
## COMMON\_NAME LENGTH\_CM WEIGHT\_LB BFISH   
## Length:293 Min. :16.00 Min. :0.000 Length:293   
## Class :character 1st Qu.:35.50 1st Qu.:1.408 Class :character   
## Mode :character Median :41.50 Median :2.546 Mode :character   
## Mean :41.54 Mean :3.300   
## 3rd Qu.:48.00 3rd Qu.:4.877   
## Max. :77.00 Max. :9.900   
## NA's :1 NA's :253   
## SAMPLE\_MEAN\_DEPTH\_M Island   
## Min. : 79.0 Length:293   
## 1st Qu.:116.0 Class :character   
## Median :137.0 Mode :character   
## Mean :139.3   
## 3rd Qu.:158.0   
## Max. :260.0   
##

#### Sites that caught more than 1 fish between 20 and 25 cm

## # A tibble: 4 x 2  
## SAMPLE\_ID n  
## <chr> <int>  
## 1 201708310930LANA 5  
## 2 201708310749LANA 4  
## 3 201910060752JOMO 4  
## 4 201709101027ROMO 3

