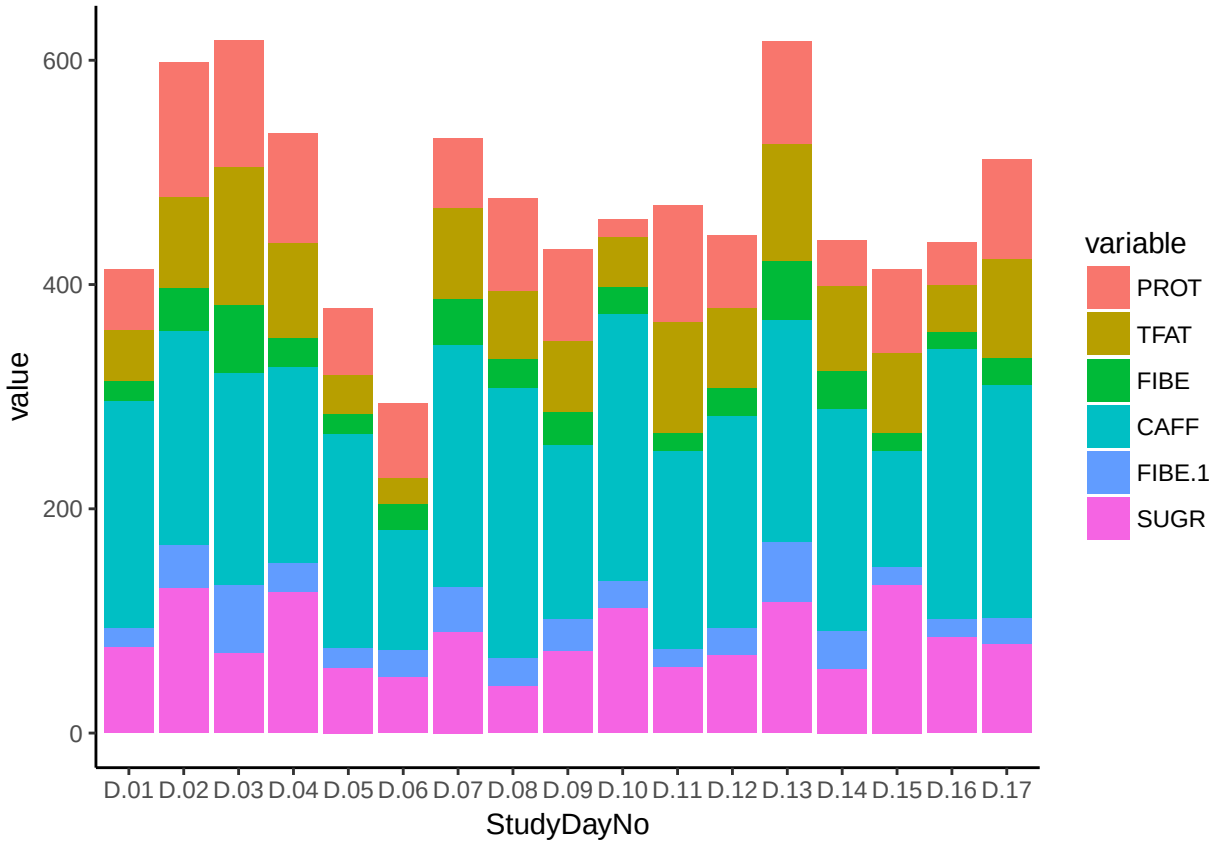
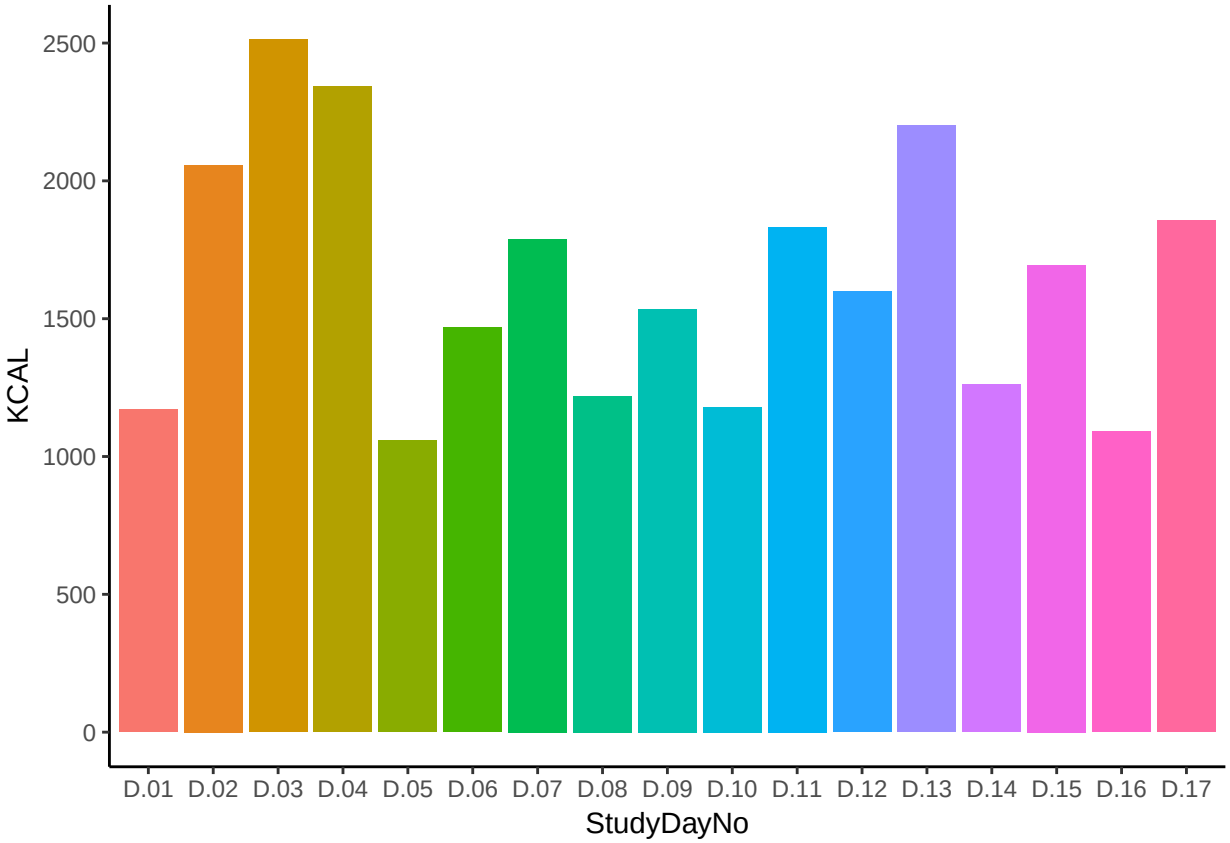
Subject_31

Type	Your Average	Total Average
CALORIES	1639.32	2080.11
PROTEIN	73.77	88.57
TOTAL FAT	70.14	89.97
CARBS	178.23	225.55
FIBER	28.51	21.96

MicroNutrients



Daily Calorie Intake



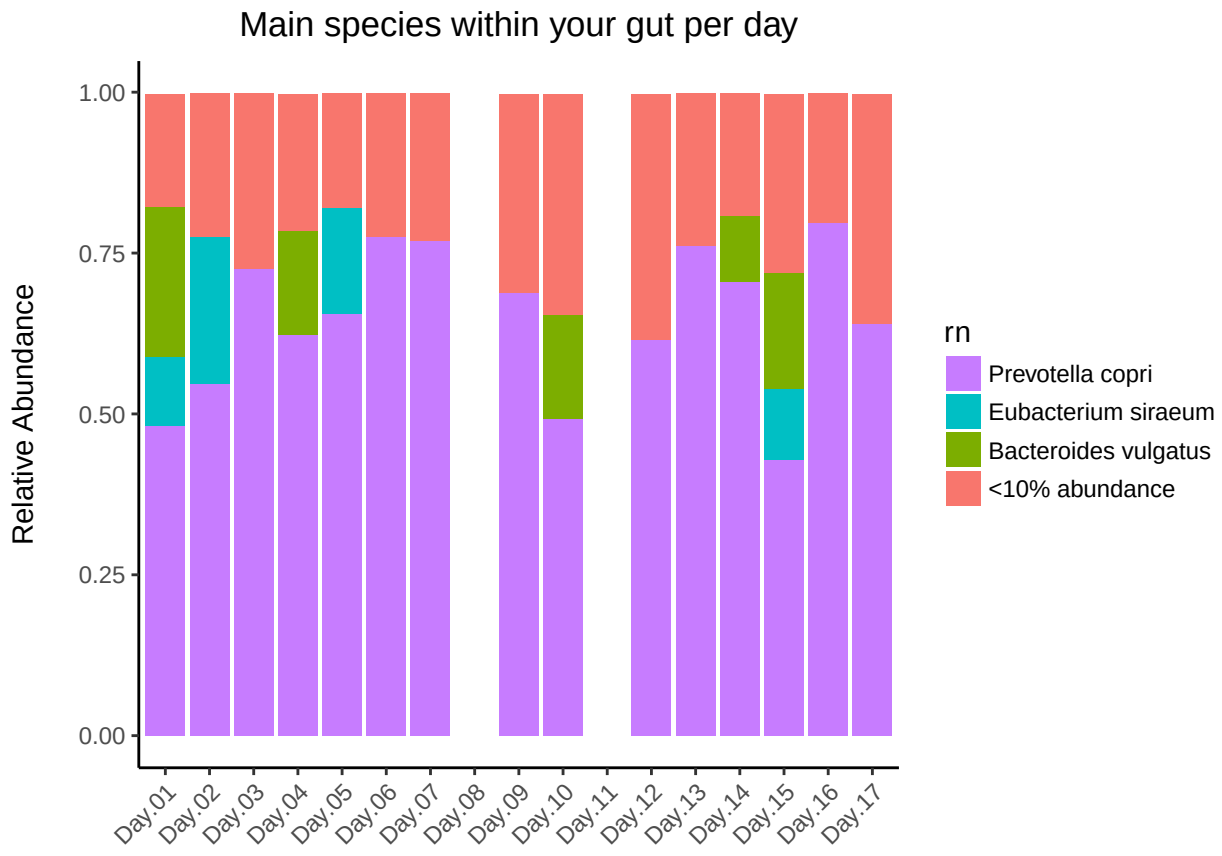
Microbiome Daily Relative Abundance

```
# make ggplot bar chart of top 10 most abundant species per day
#melt subtaxasp to get our dataframe in the long format for future usage
  meltdf<- melt(subtaxasp)
```

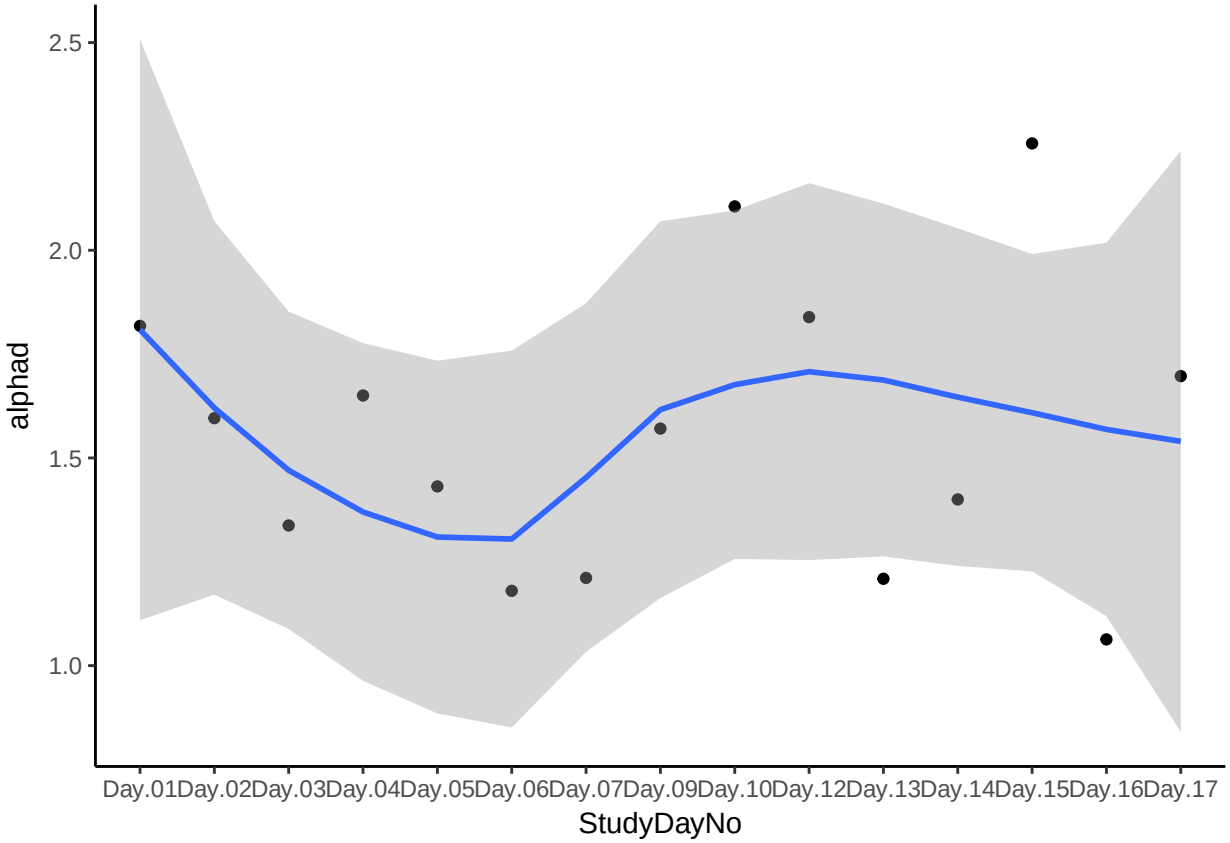
```
## Warning in melt.data.table(subtaxasp): To be consistent with reshape2's
## melt, id.vars and measure.vars are internally guessed when both are 'NULL'.
## All non-numeric/integer/logical type columns are conisdered id.vars, which
## in this case are columns [rn]. Consider providing at least one of 'id' or
## 'measure' vars in future.
```

```
  #merge to get access to Day var
  mergedf<- merge(x=meltdf, y=map, by.x = "variable", by.y= "X.SampleID", all.x=TRUE)

  #convert our dataframe species (rn) column to a character
  mergedf$rn <- as.character(mergedf$rn)

  #series of gsub commands meant to neaten and clarify legend content
  mergedf$rn <- gsub(".*s__", "", mergedf$rn)
  mergedf$rn <- gsub("\\[", "",mergedf$rn)
```

```
  mergedf$rn <- gsub("\\]", "",mergedf$rn)
  mergedf$rn <- gsub("_", " ",mergedf$rn)


  #create <10% abundance category
  mergedf$rn[mergedf$value < 0.1] <- "<10% abundance"


ggplot(mergedf, aes(x = StudyDayNo, y = value, fill = rn)) +
  geom_bar(stat = "identity") +
  scale_x_discrete(drop = FALSE) +
  theme_classic() +
  theme(strip.text.y = element_text(angle = 0, size = 8, face = "italic"),
        axis.text.x = element_text(angle = 45, hjust = 1),
        axis.title.x = element_blank(),
        plot.title = element_text(hjust = 0.5),
        strip.background = element_rect(color = "grey")) +
  guides(fill = guide_legend(reverse = TRUE,
                             keywidth = 1,
                             keyheight = 1,
                             ncol = 1)) +
  ylab("Relative Abundance\n") +
  ggtitle("Main species within your gut per day")
```




```
## `geom_smooth()` using method = 'loess'
```


2.5
2.0
1.5
1.0
alphad
Day.01Day.02Day.03Day.04Day.05Day.06Day.07Day.09Day.10Day.12Day.13Day.14Day.15Day.16Day.17
StudyDayNo