EDA

```
library(tidyverse)

#metadata
mdata <- read_csv("data/expta_metadata.csv")
knitr::kable(mdata)
```

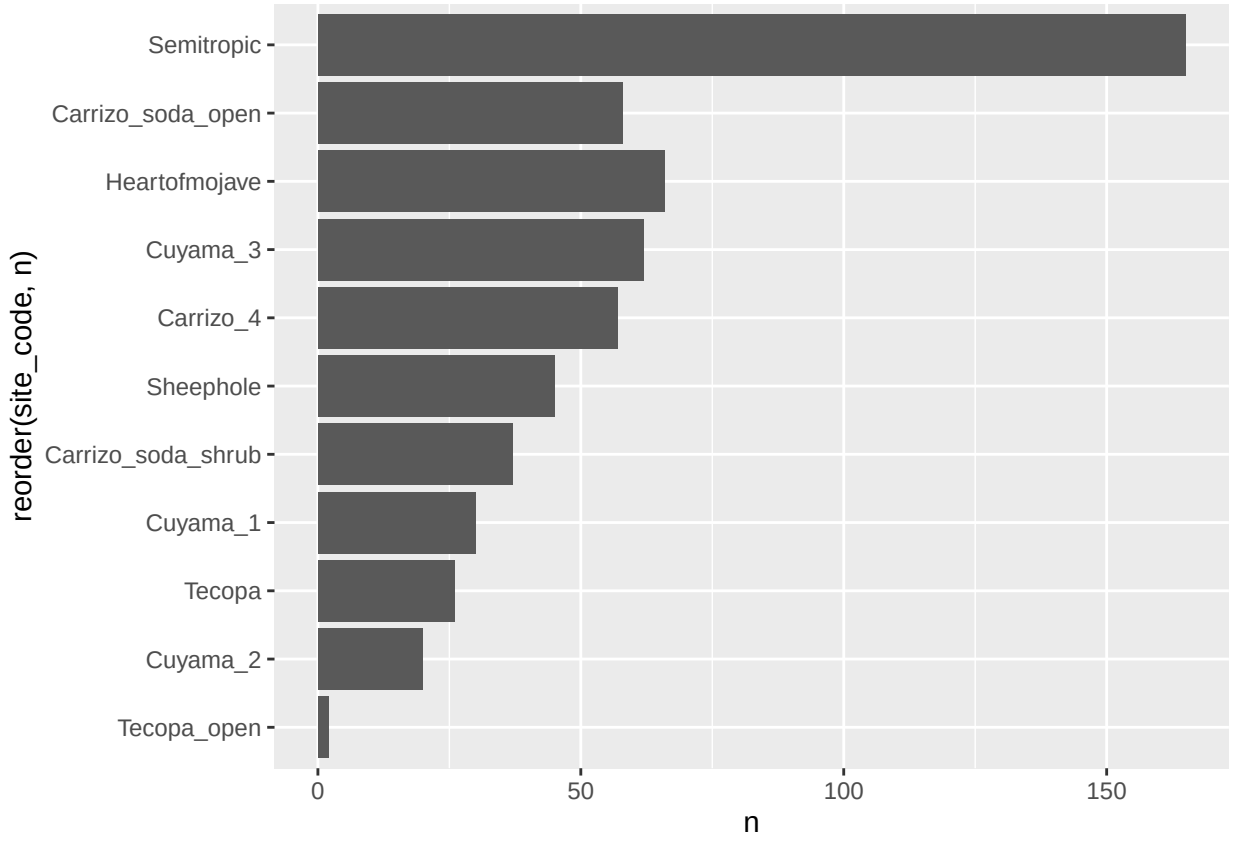
attribute	description
experiment a	spatial associations
year	calendar year
census	1, 2, 3
date	calendar date in d/m/year format
site_code	match to regional key file
rep	just a sequential ordering for burrows you spot, reset at each new site
microsite	shrub or open, eyeball it, within 1m of shrub = shrub
lat	degrees decimal
long	degrees decimal
diameter	burrow diameter at widest point
activity	evidence of digging or current use, just yes or no here
sites.csv	the sites csv file lists plot size, site_code, and lat long of centroids

```
sites <- read_csv("data/expta_sites.csv")
knitr::kable(sites)
```

year	census	date	site_code	lat	long	plot_size_m2	plot_dims
2023	1	20/02/2022	Tecopa	35.85114	-116.1859	2500	50 x 50
2023	1	20/02/2023	Tecopa_open	35.85537	-116.1786	2500	50 x 50
2023	1	22/02/2023	Carrizo_4	35.11974	-119.6290	500	10 x 50
2023	1	23/02/2023	Semitropic	35.65999	-119.6051	1250	50 x 25
2023	1	23/02/2023	Carrizo_soda_open	35.05619	-119.6000	625	25 x 25
2023	1	28/02/2023	Heartofmojave	34.69762	-115.6836	2500	50 x 50
2023	1	28/02/2023	Sheephole	34.20535	-115.7181	2500	50 x 50
2023	1	02/03/2023	Carrizo_soda_shrub	35.07029	-119.6438	625	25 x 25
2023	1	03/03/2023	Cuyama_3	34.93829	-119.4803	625	25 x 25
2023	1	03/03/2023	Cuyama_1	34.84841	-119.4833	625	25 x 25
2023	1	03/03/2023	Cuyama_2	34.85328	-119.4860	625	25 x 25

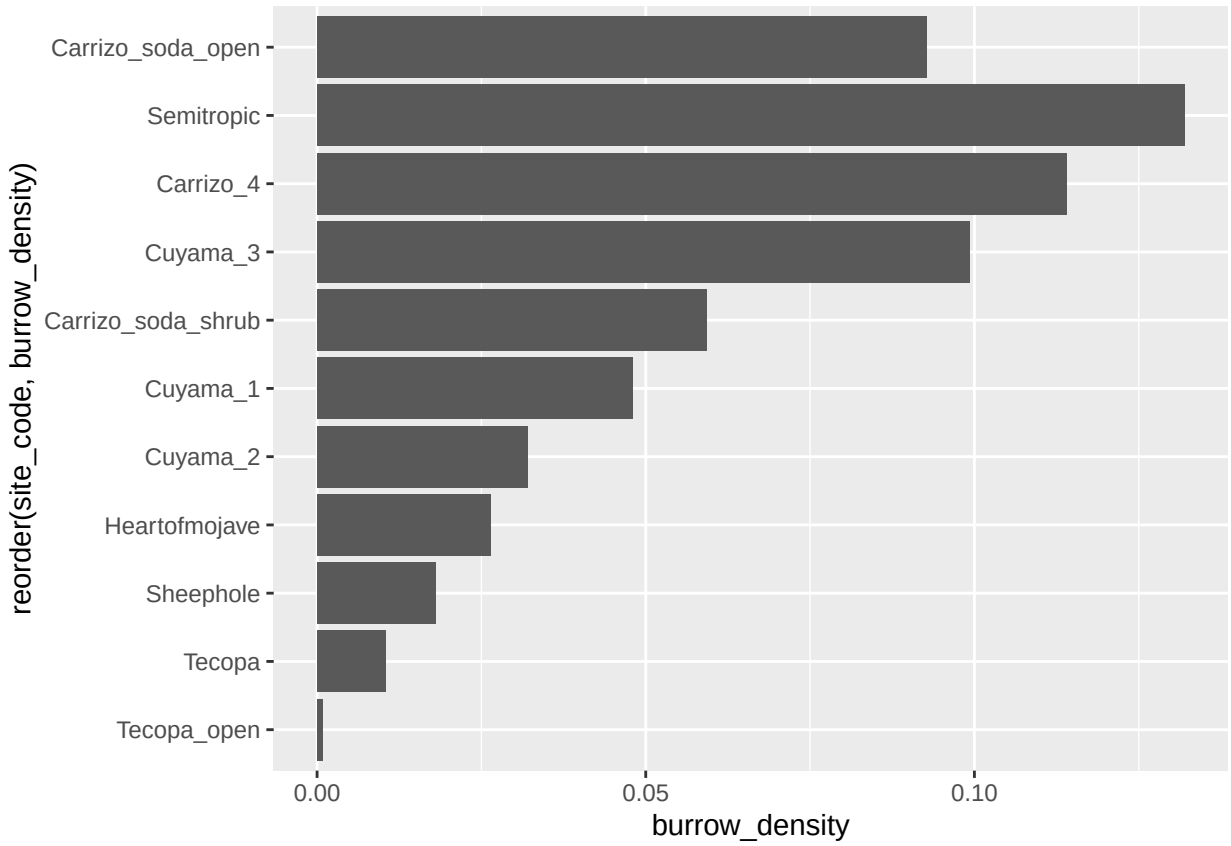
```
plots <- sites %>%
  select(site_code, plot_size_m2)

#data
data <- read_csv("data/expta.csv")
#str(data)

d1 <- data %>%
  group_by(site_code, microsite) %>%
  summarise(n = n())

d1 <- left_join(d1, plots) %>%
  mutate(burrow_density = n/plot_size_m2)
```

```
ggplot(d1, aes(reorder(site_code, n), n)) +
  geom_col() +
  coord_flip()
```

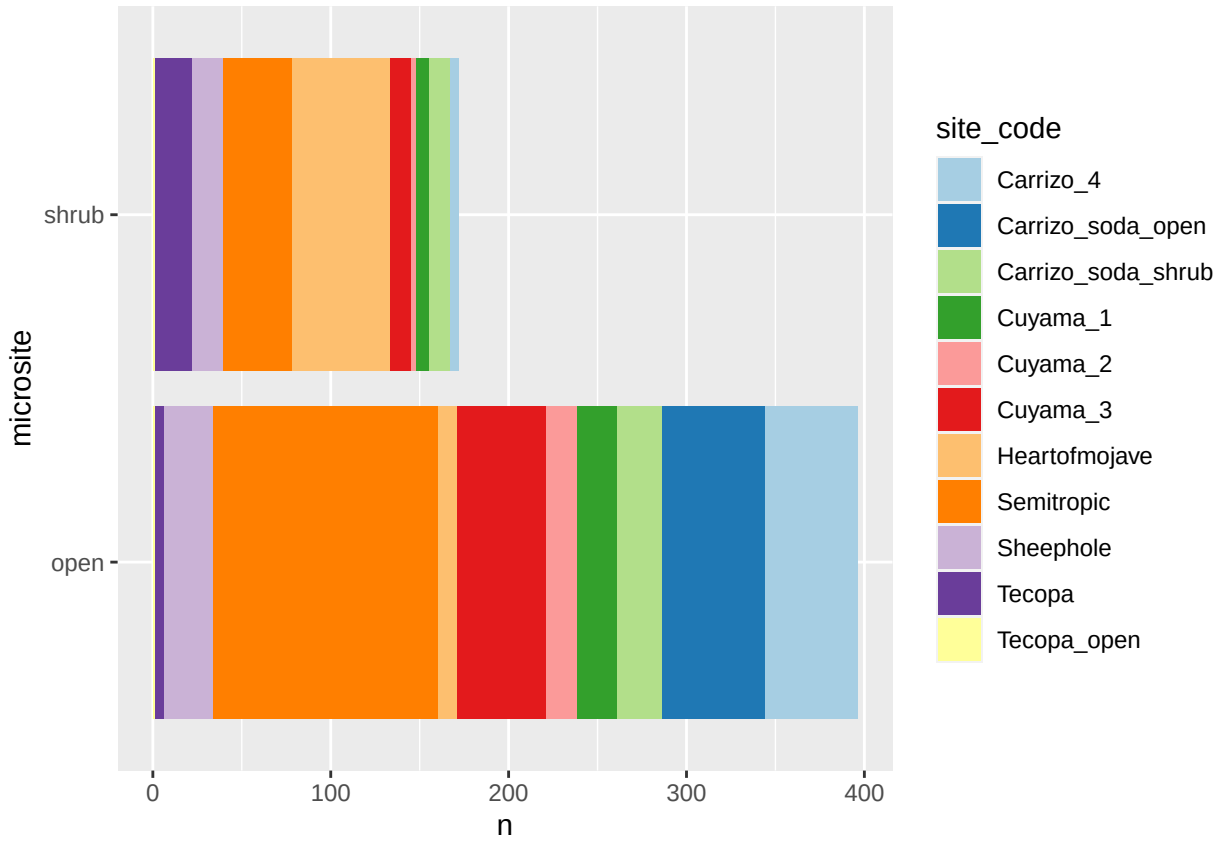


Viz

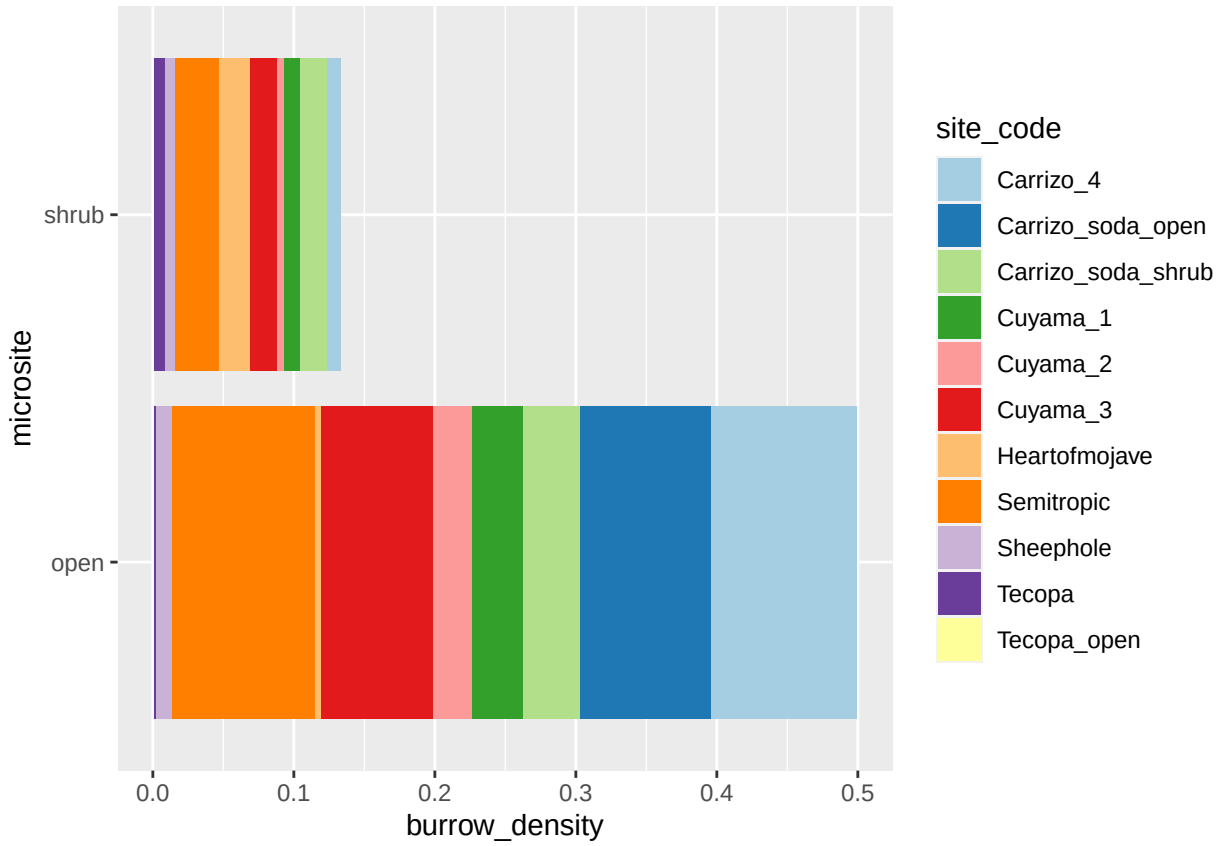
```
ggplot(d1, aes(reorder(site_code, burrow_density), burrow_density)) +
  geom_col() +
  coord_flip()
```




```
ggplot(d1, aes(microsite, n, fill = site_code)) +
  geom_col() +
  coord_flip() +
  scale_fill_brewer(palette = "Paired")
```




```
ggplot(d1, aes(microsite, burrow_density, fill = site_code)) +
  geom_col() +
  coord_flip() +
  scale_fill_brewer(palette = "Paired")
```


microsite
shrub
open
0.0
0.1
0.2
0.3
0.4
0.5
burrow_density
site_code
Carrizo_4
Carrizo_soda_open
Carrizo_soda_shrub
Cuyama_1
Cuyama_2
Cuyama_3
Heartofmojave
Semitropic
Sheephole
Tecopa
Tecopa_open