Kona Percent Cover Tally

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This point-intercept data was collected at 10 sites along the coast of Kona, Hawai‘i. Up to 10 10-meter transects were surveyed per site, with 16 points within 1/2 meter quads. Substrate type, live cover type, and where applicable: Genus and species are counted and tallied.

Packages loaded for all:

```
library(dplyr)
library(ggplot2)
library(pivottabler)
```

Output by site

Site 3 – Honokohau

Load and prepare data

```
hono <- read.csv("honokohau_3.csv")
```

Convert all columns to factors

```
hono$Site <- as.factor(as.character(hono$Site))
hono$Transect.Number <- as.factor(hono$Transect.Number)
hono$Date <- as.factor(hono$Date)
hono$Time <- as.factor(hono$Time)
hono$Meter <- as.factor(as.character(hono$Meter))
hono$Point <- as.factor(as.character(hono$Point))
hono$Substrate <- as.factor(hono$Substrate)
hono$Living.cover <- as.factor(hono$Living.cover)
hono$Genus <- as.factor(hono$Genus)
hono$Species <- as.factor(hono$Species)
```

Make a column that puts Genus and species together

```
hono$Genus_species <- as.factor(paste(hono$Genus, hono$Species, sep = "_"))
```

Make a column that puts site and transect number together

```
hono$site_transect <- as.factor(paste(hono$Site, hono$Transect.Number, sep = "_"))
```

Pivot data to provide total counts for each row (transect) and column (Genus_species)

```
pt <- PivotTable$new()
pt$addData(hono)
pt$addColumnDataGroups("Genus_species")
pt$addRowDataGroups("site_transect")
pt$defineCalculation(calculationName = "Total", summariseExpression = "n()")
#pt$renderPivot()
print(pt)
```

```
##          _  _  ah_  ah_uc  chae_at  chae_uc  cl_uc  cy_  cy_uc  ec_ma  Ec_ma  ja_  ja_uc  Po_uc  ral
## 3_15
## 3_16
## 3_17-T
## 3_2
## 3_3
## 3_32
## 3_33T
## 3_4
## 3_49
## 3_51
## Total
```

Pivot data to provide total counts for each row (transect) and column (Substrate)

#{r} pt1 <- PivotTable$new() pt1$addData(hono) pt1$addColumnDataGroups("Substrate") pt1$addRowDataGroups("site_transect") pt1$defineCalculation(calculationName = "Total", summariseExpression = "n()") pt1$renderPivot()

Pivot data to provide total counts for each row (transect) and column (Live cover)

#{r} pt2 <- PivotTable$new() pt2$addData(hono) pt2$addColumnDataGroups("Living.cover") pt2$addRowDataGroups("site_transect") pt2$defineCalculation(calculationName = "Total", summariseExpression = "n()") pt2$renderPivot()