

# Module 3 Assignment 3

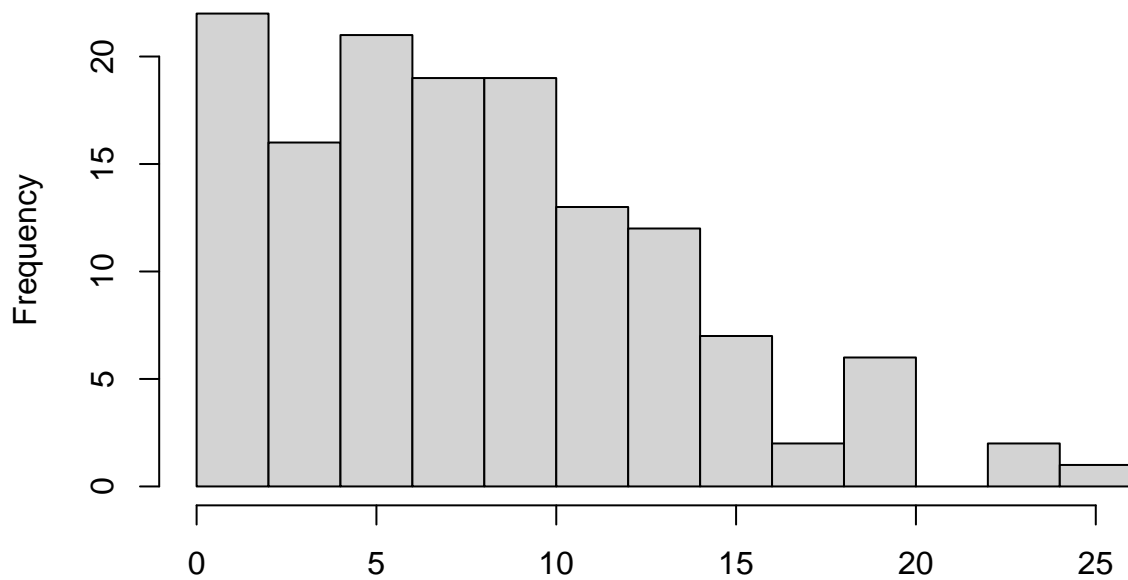
Ellen Bledsoe

2024-04-15

1.

```
##      group_id  length
## 1          1 116.4946
## 2          2 116.4946
## 3          3 116.4946
## 4          4 116.4946
## 5          5 116.4946
## 6          6 116.4946
## 7          7 116.4946
## 8          8 116.4946
## 9          9 116.4946
## 10         10 116.4946
```

**Histogram of saguaro\$distance**



2.

3.

```
## [1] 0 4 8 12 16 20
```

4.

```
## Warning in formatDistData(saguaro, distCol = "distance", transectNameCol =
## "group", : The transects were converted to a factor
```

```
##           [0,4] (4,8] (8,12] (12,16] (16,20]
## AB, JA, SK      5      7      1      0      0
## AB, SS, ML      7      4      4      4      1
## CB, CC, MZ      3      4      2      0      3
## EF, LB, YX      5      8      9      4      0
## HA, JB, BD, VM  4      3      2      1      1
## HB, SI, BM      1      1      4      0      0
## JG, AV, MN      2      2      3      3      0
## KH, NT, BS      2      2      2      0      0
## KT, MRD, BC     3      3      4      2      1
## NL, MS, MM      6      6      1      5      2
```

5.

```
## Data frame representation of unmarkedFrame object.
```

```
##           y.1 y.2 y.3 y.4 y.5
## AB, JA, SK      5      7      1      0      0
## AB, SS, ML      7      4      4      4      1
## CB, CC, MZ      3      4      2      0      3
## EF, LB, YX      5      8      9      4      0
## HA, JB, BD, VM  4      3      2      1      1
## HB, SI, BM      1      1      4      0      0
## JG, AV, MN      2      2      3      3      0
## KH, NT, BS      2      2      2      0      0
## KT, MRD, BC     3      3      4      2      1
## NL, MS, MM      6      6      1      5      2
```

7.

```
##           nPars      AIC delta  AICwt cumltvWt
## Half Normal      2 196.66  0.00 5.3e-01    0.53
## Hazard Rate      3 196.93  0.27 4.7e-01    1.00
## Exponential      2 226.19 29.53 2.1e-07    1.00
## Uniform          1 226.19 29.53 2.1e-07    1.00
```

9.

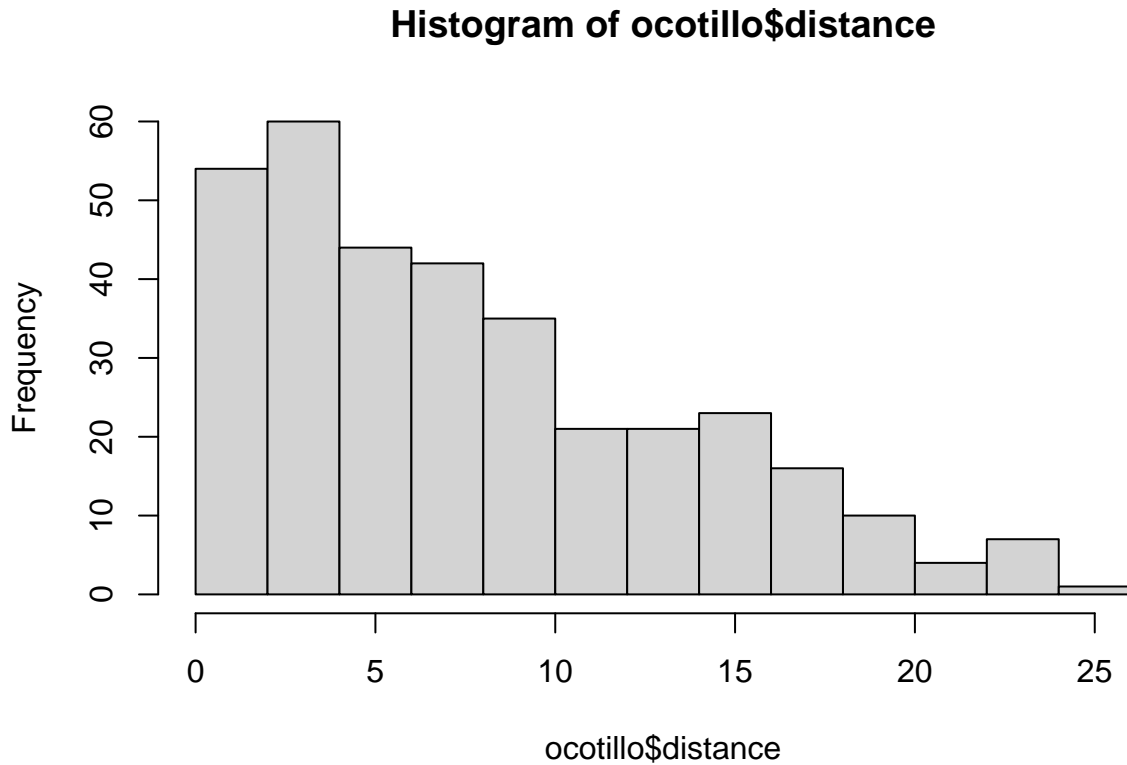
```
## Backtransformed linear combination(s) of Density estimate(s)
```

```
##
## Estimate SE LinComb (Intercept)
##      47.8 5.46      3.87          1
```

```
##
## Transformation: exp
```

```
##           0.025      0.975
## lam(Int) 38.16831 59.76423
```

11.



12.

13.

```
## [1] 0 5 10 15 20 25
```

14.

```
## Warning in formatDistData(ocotillo, distCol = "distance", transectNameCol =
## "group", : The transects were converted to a factor
```

##	[0,5]	(5,10]	(10,15]	(15,20]	(20,25]
## AB JA SK	10	8	2	0	0
## AB, SS, ML	17	9	9	7	4
## CB, CC, MZ	9	17	8	11	5
## EF, LB, YX	4	8	3	3	0
## HA, JB, BD, VM	22	16	6	6	0
## HB, SI, BM	3	7	5	2	0
## JG, AV, MN	17	6	6	4	0
## KH, NT, BS	13	15	2	0	0
## KT, MRD, BC	14	7	2	0	0
## NL, MS, MM	26	7	8	7	3

15.

```
## Data frame representation of unmarkedFrame object.
##          y.1 y.2 y.3 y.4 y.5
## AB JA SK    10  8  2  0  0
```

## AB, SS, ML	17	9	9	7	4
## CB, CC, MZ	9	17	8	11	5
## EF, LB, YX	4	8	3	3	0
## HA, JB, BD, VM	22	16	6	6	0
## HB, SI, BM	3	7	5	2	0
## JG, AV, MN	17	6	6	4	0
## KH, NT, BS	13	15	2	0	0
## KT, MRD, BC	14	7	2	0	0
## NL, MS, MM	26	7	8	7	3

17.

```
## Backtransformed linear combination(s) of Density estimate(s)
##
## Estimate SE LinComb (Intercept)
##      108 7.6    4.68          1
##
## Transformation: exp

##      0.025    0.975
## lam(Int) 94.34775 124.2356
```