

Module 3 Assignment 3

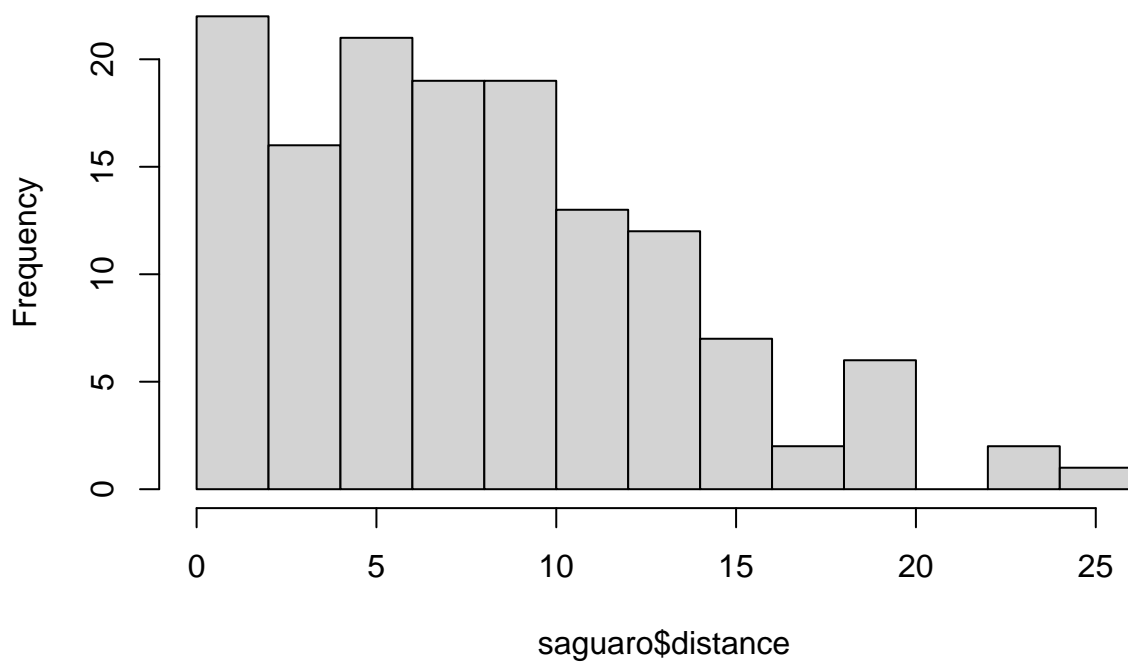
Ellen Bledsoe

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1.

```
## # A tibble: 10 x 2
##   group      length
##   <chr>      <dbl>
## 1 AB, JA, SK    164
## 2 AB, SS, ML    178.
## 3 CB, CC, MZ    136.
## 4 EF, LB, YX     59
## 5 HA, JB, BD, VM 113.
## 6 HB, SI, BM     48
## 7 JG, AV, MN     64
## 8 KH, NT, BS    126.
## 9 KT, MRD, BC    80.2
## 10 NL, MS, MM    155
```

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      2 213.10  0.00 5.3e-01    0.53
## Hazard Rate      3 213.37  0.27 4.7e-01    1.00
## Exponential      2 230.34 17.24 9.6e-05    1.00
## Uniform          1 242.62 29.53 2.1e-07    1.00
```

9.

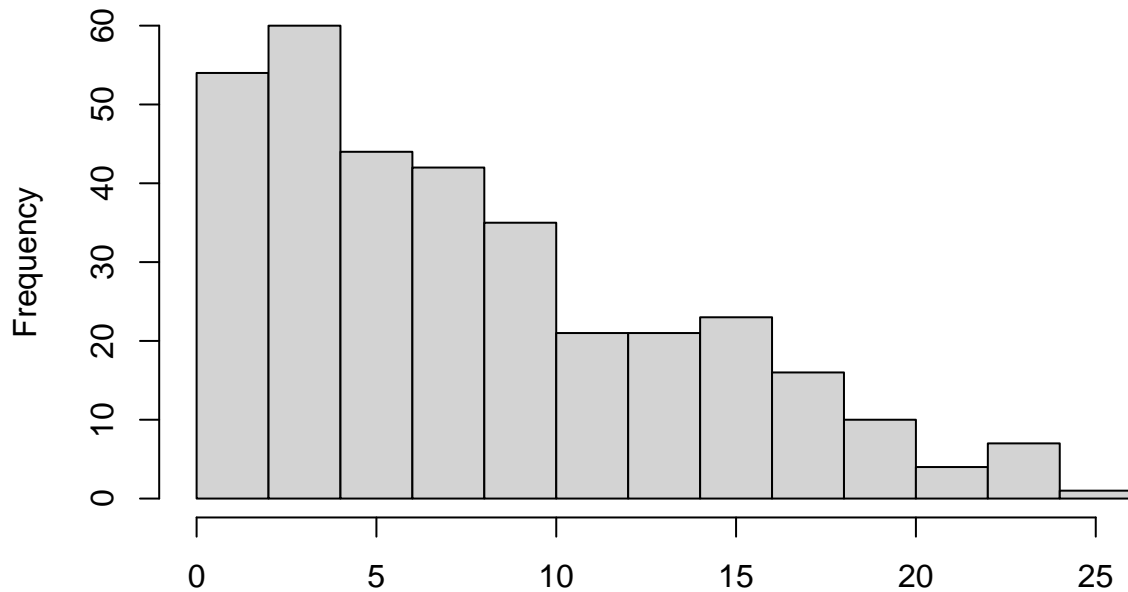
```
## Backtransformed linear combination(s) of Density estimate(s)
##
## Estimate SE LinComb (Intercept)
##      49.5 5.66      3.9      1
##
## Transformation: exp
```

```
##          0.025    0.975
## lam(Int) 39.57627 61.96885
```

11.

```
## # A tibble: 10 x 2
##   group      length
##   <chr>      <dbl>
## 1 AB JA SK      164
## 2 AB, SS, ML    178.
## 3 CB, CC, MZ    136.
## 4 EF, LB, YX     59
## 5 HA, JB, BD, VM 113.
## 6 HB, SI, BM     48
## 7 JG, AV, MN     64
## 8 KH, NT, BS    126.
## 9 KT, MRD, BC   80.2
## 10 NL, MS, MM    155
```

Histogram of ocotillo\$distance



12.

ocotillo\$distance

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)
##      118 8.3    4.77          1
##
## Transformation: exp
##
##      0.025    0.975
## lam(Int) 103.0058 135.6364
```