Module 3 Assignment 3
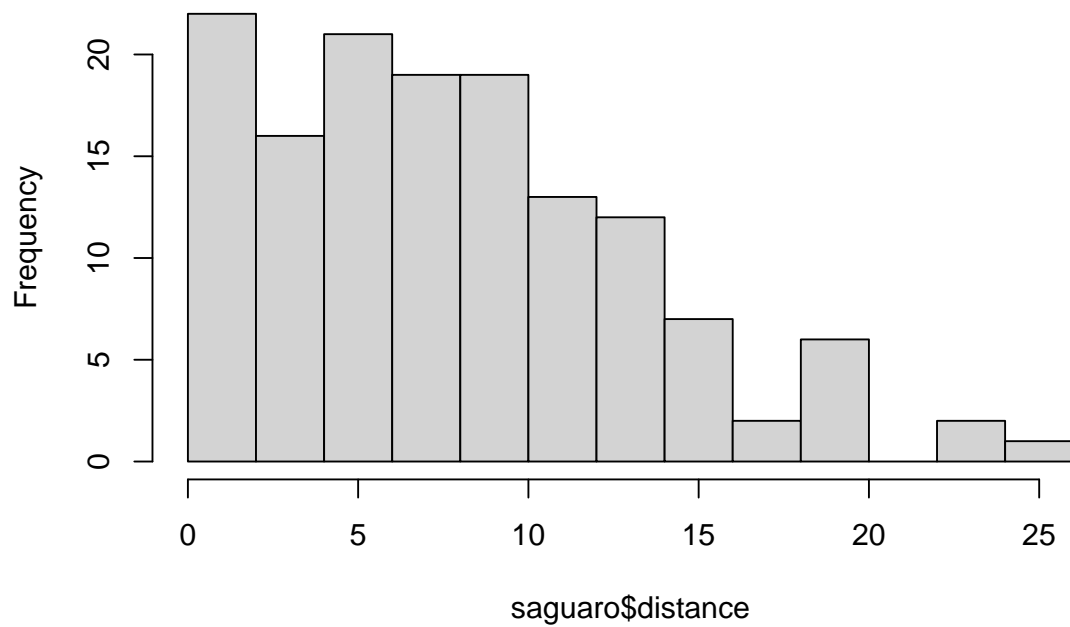
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1.

```
##    X1.10   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
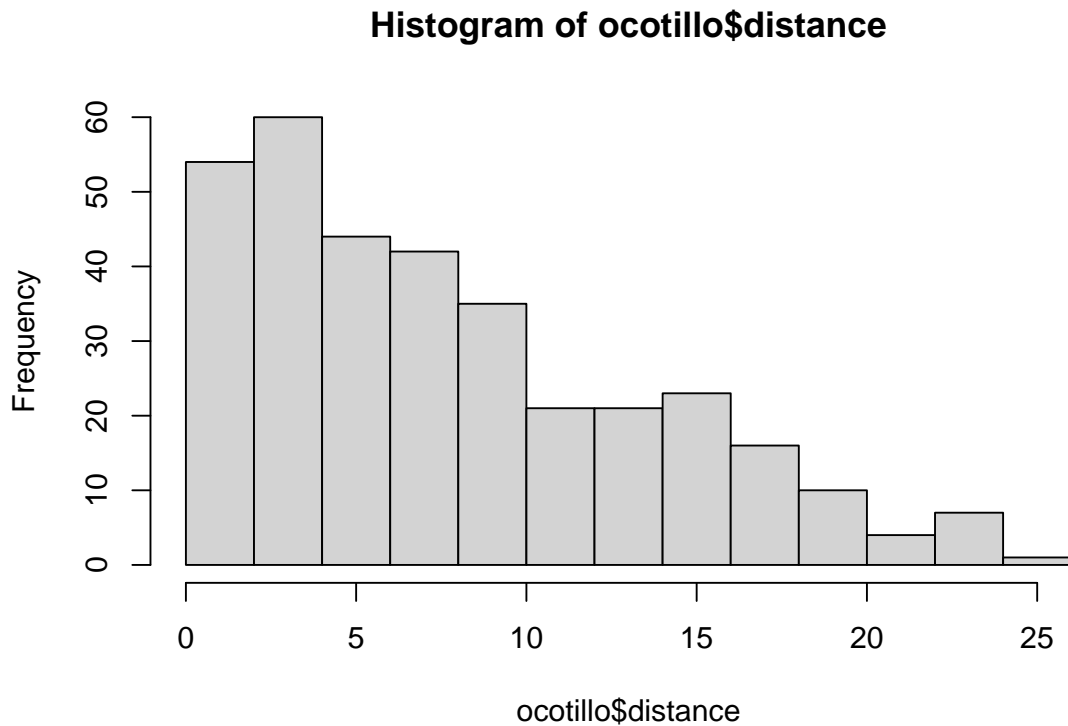```

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.

Histogram of ocotillo$distance

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
```