

Lecture 20 - R Software

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CLEVELAND DOT CHARTS

An alternative to the pie chart is a Cleveland dot plot. We can create Cleveland dot plots using the `dotchart()` command.

```
> data11; data8
```

```
[1] 3 5 7 5 3 2 6 8 5 6 9 8
```

```
[1] "Jan" "Feb" "Mar" "Apr" "May" "Jun" "Jul" "Aug" "Sep" "Oct"
"Nov" "Dec"
```

```
> dotchart(data11, labels = data8)
```

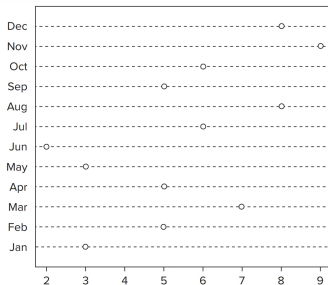


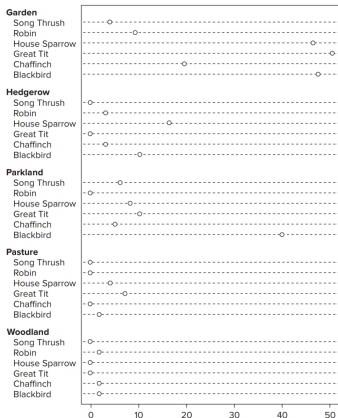
TABLE 7-3: Some Graphical Instructions for the `dotchart()` Command

| INSTRUCTION | EXPLANATION |
|------------------------------------|---|
| <code>color = 'color.name'</code> | Specifies the color to use for the plotted points and the main labels . |
| <code>gcolor = 'color.name'</code> | Specifies the color to use for the group labels and group data points (if specified) . |
| <code>gdata = group.data</code> | You can specify a value to show for each group . This will typically be a mean . |
| <code>lcolor = 'gray'</code> | Specifies the color to use for the lines across the chart . |
| <code>cex = 1</code> | Sets the character expansion factor for points and all the labels on the axes . |
| <code>xlab = 'text.label'</code> | You can specify a label/title for the x-axis . You can also specify one for the y-axis, but this will usually overlap the labels from the data . Use the <code>title()</code> command afterwards to place an axis label/title . |
| <code>xlim = c(start, end)</code> | Sets the limits of the x-axis . You specify the start and end points . |
| <code>bg = 'color.name'</code> | Sets the background color for the plotting symbols . This works only with an open style of symbol . |

> bird

| | Garden | Hedgerow | Parkland | Pasture | Woodland |
|-------------|--------|----------|----------|---------|----------|
| ⋮ | ⋮ | ⋮ | ⋮ | ⋮ | ⋮ |
| Song Thrush | 4 | 0 | 6 | 0 | 0 |

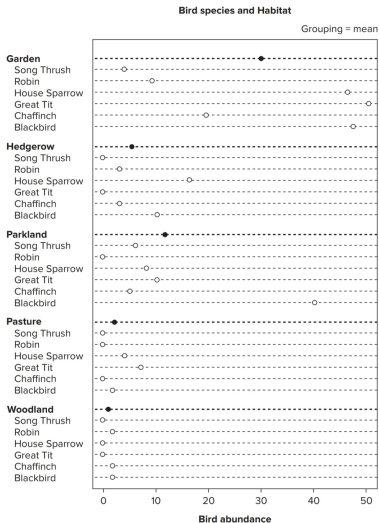
> dotchart(bird, color = 'gray30', gcolor = 'black', lcolor = 'gray30',
cex = 0.8, bg = 'gray90', pch = 21)



- ```

> dotchart(bird, gdata = colMeans(bird), gpch = 16, gcolor = 'blue')
> mtext('Grouping = mean', side = 3, adj = 1)
> title(main = 'Bird species and Habitat')
> title(xlab = 'Bird abundance')

```



**NOTE:** The first line of command draws the main plot; the mean is taken by using the `colMeans()` command and applying it to the plot via the `gdata =` instruction.

- The second line adds some text to the margin of the plot; here we use the top axis (`side = 1` is the bottom, `2` is the left)
- Adjust the text to be at the extreme end (`adj = 0` would be at the other end of the axis).