

Putting plots together

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Putting plots together

The packages

There are three excellent packages for putting separate `ggplot` graphs together in panels.

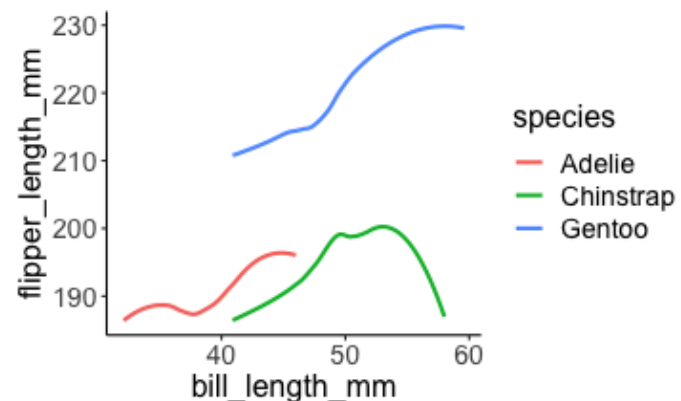
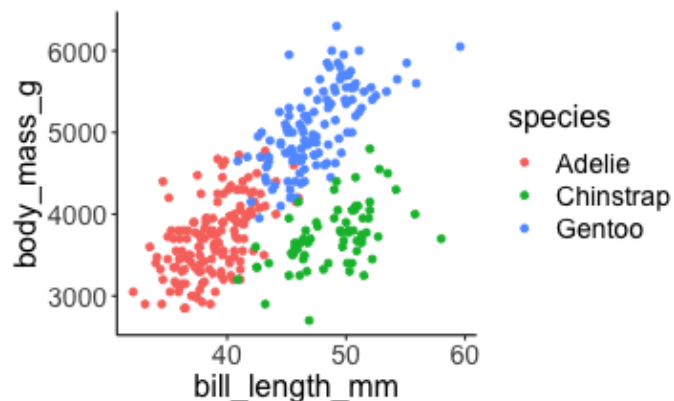
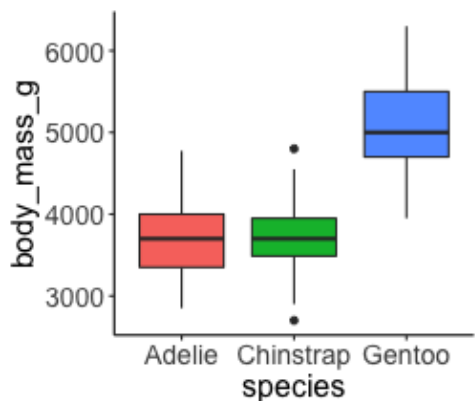
1. **`ggpubr`**
2. **`cowplot`**
3. **`patchwork`**

The graphs

```
plt1 <- ggplot(penguins, aes(x = species, y = body_mass_g, fill=species)) +
  geom_boxplot()

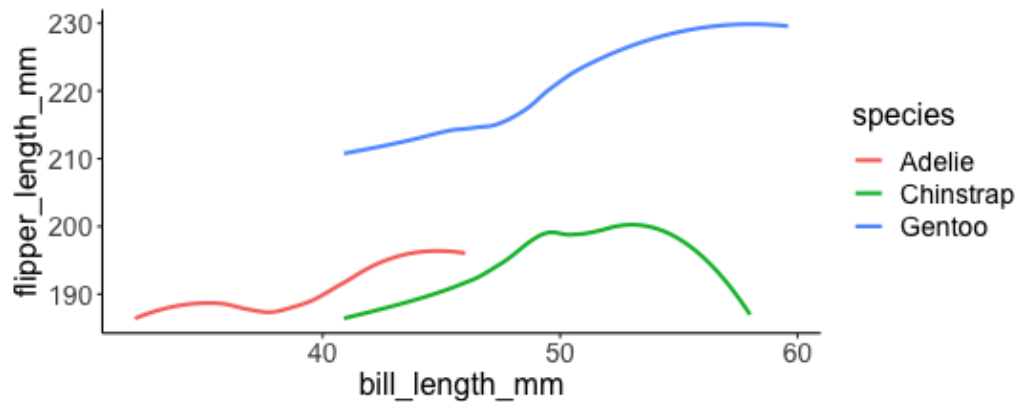
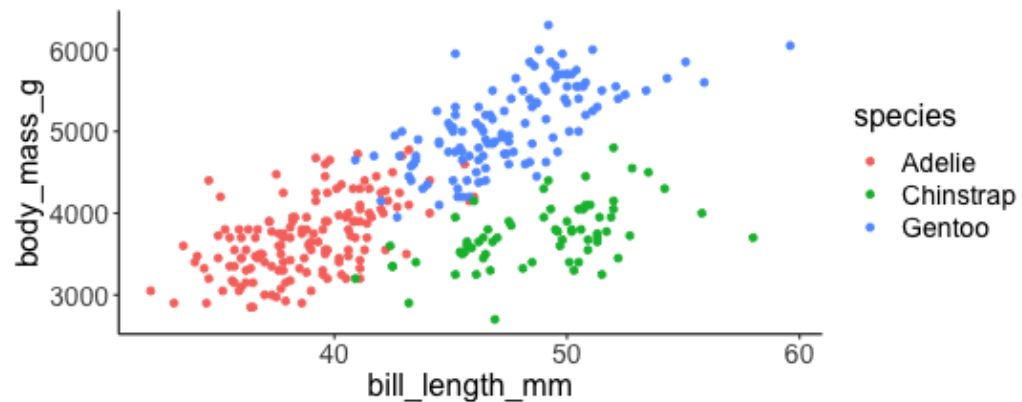
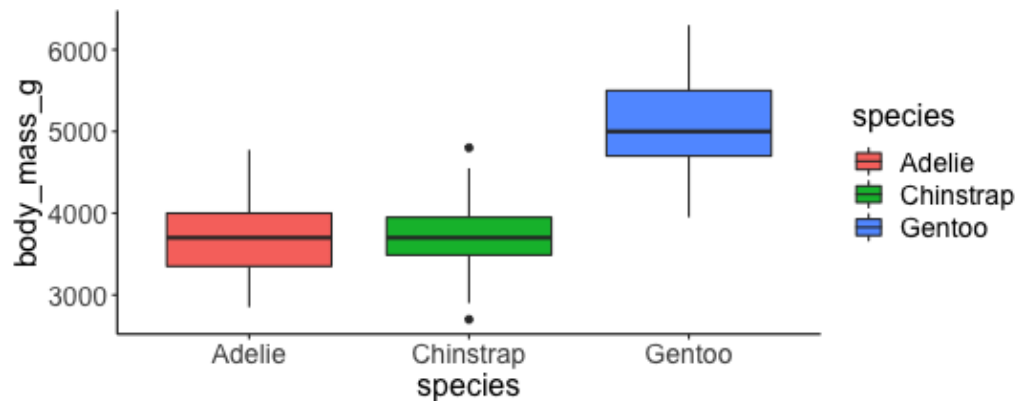
plt2 <- ggplot(penguins, aes(x = bill_length_mm, y = body_mass_g,
  color = species))+
  geom_point()

plt3 <- ggplot(penguins, aes(x = bill_length_mm, y = flipper_length_mm,
  color = species))+
  geom_smooth(se=F)
```



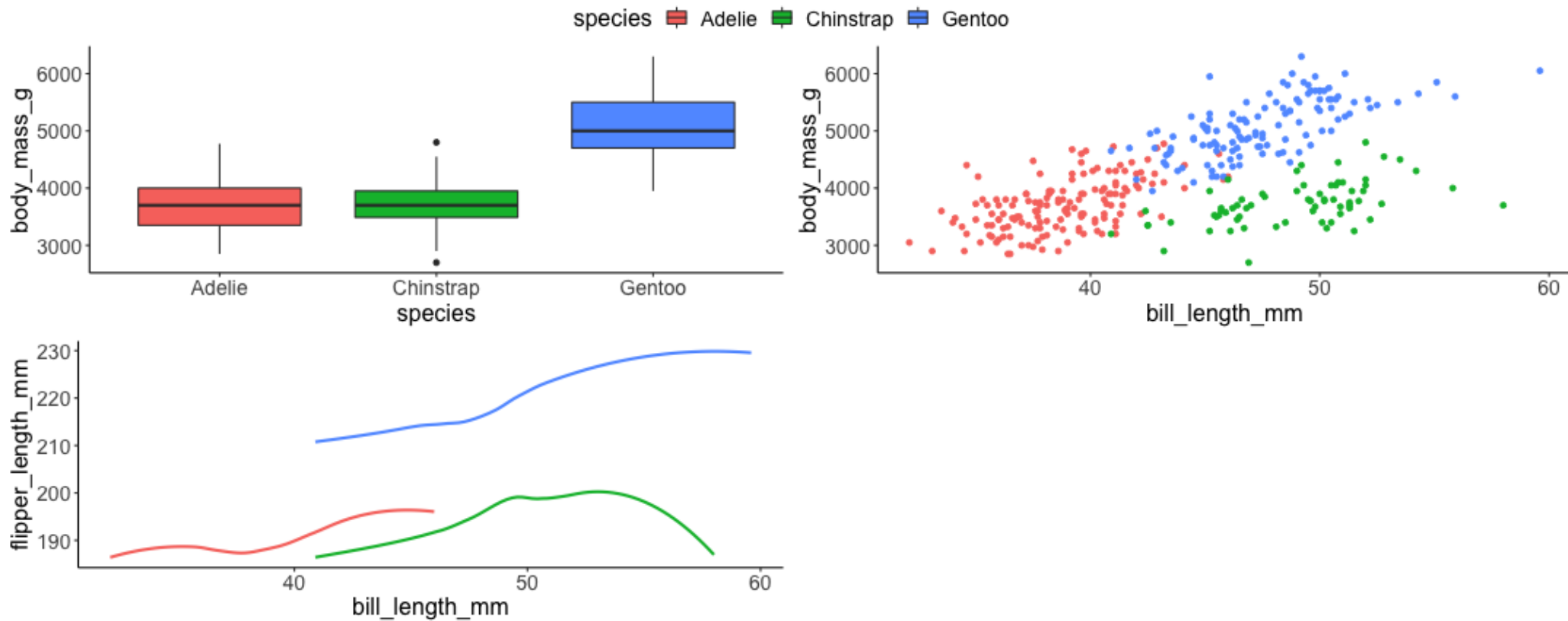
ggpubr

```
ggarrange(plt1, plt2, plt3, ncol = 2, nrow=2)
```



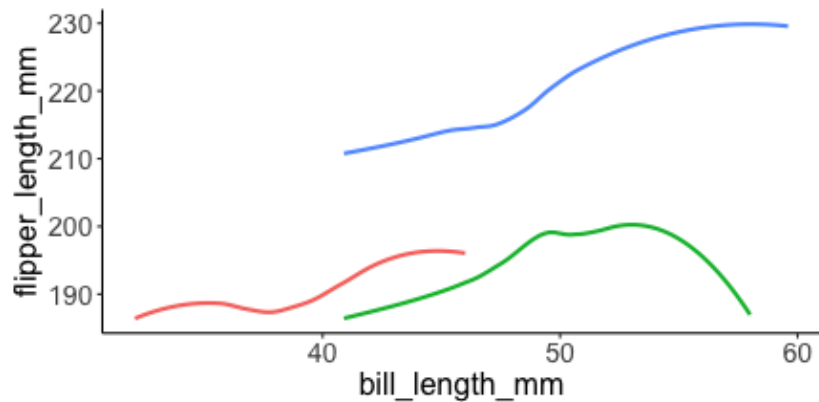
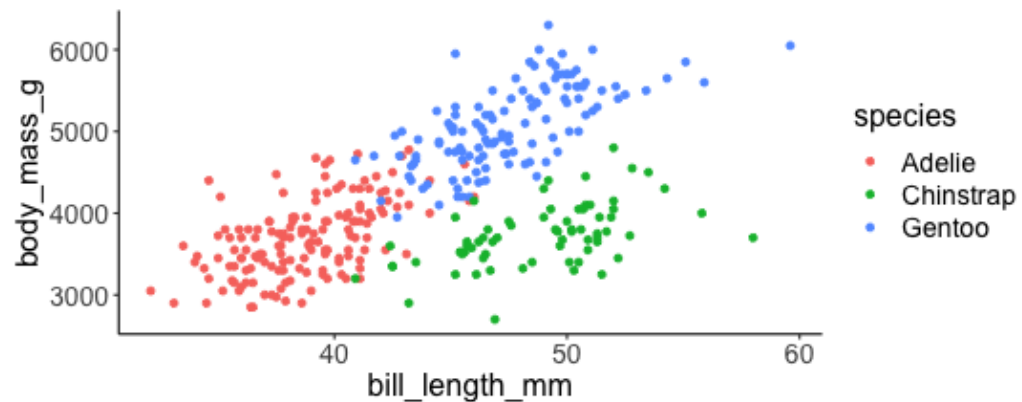
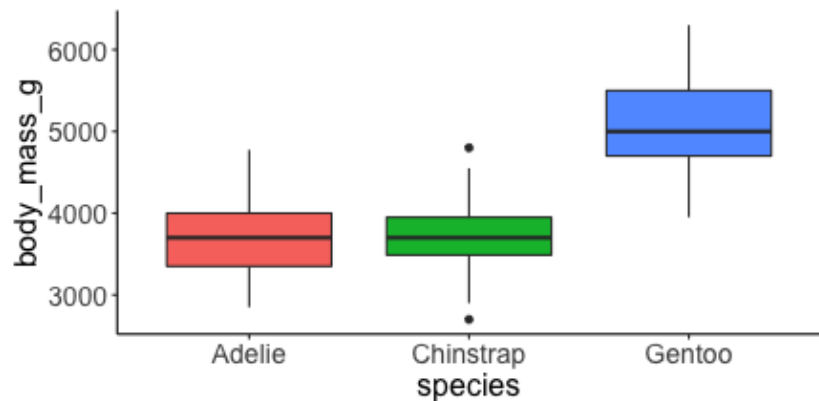
ggpubr

```
ggarrange(plt1, plt2, plt3, ncol = 2, nrow=2, common.legend = TRUE)
```



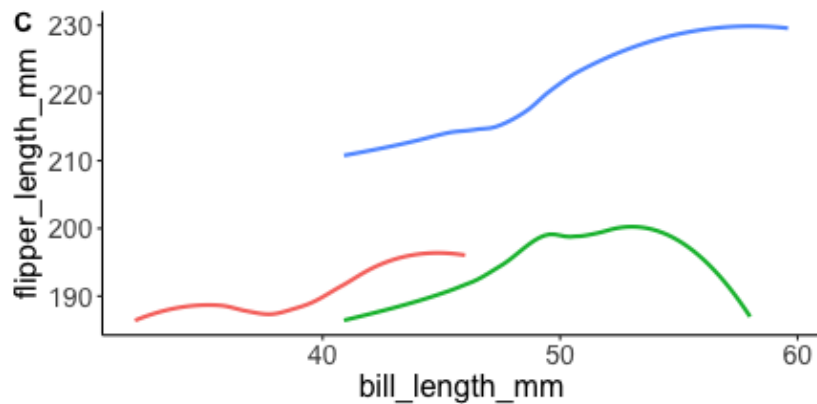
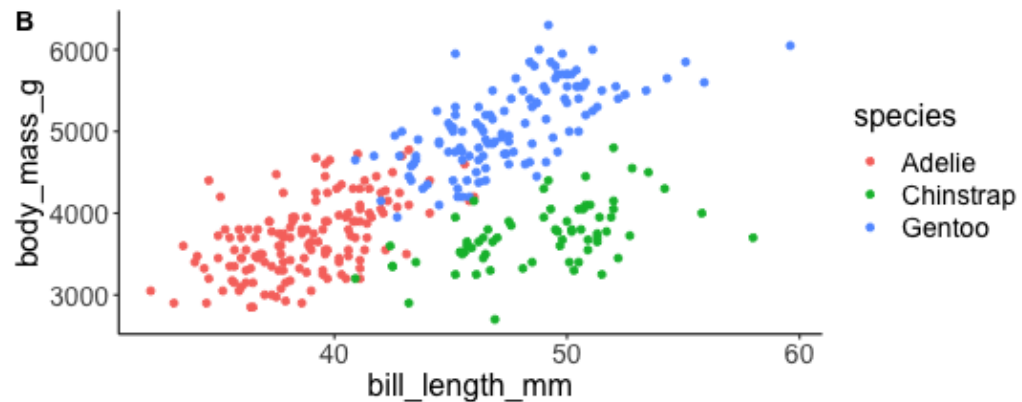
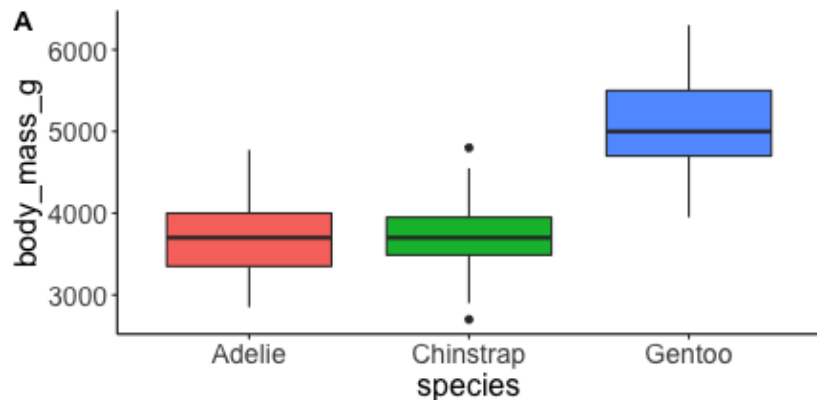
cowplot

```
cowplot::plot_grid(plt1, plt2, plt3, nrow = 2, ncol = 2)
```



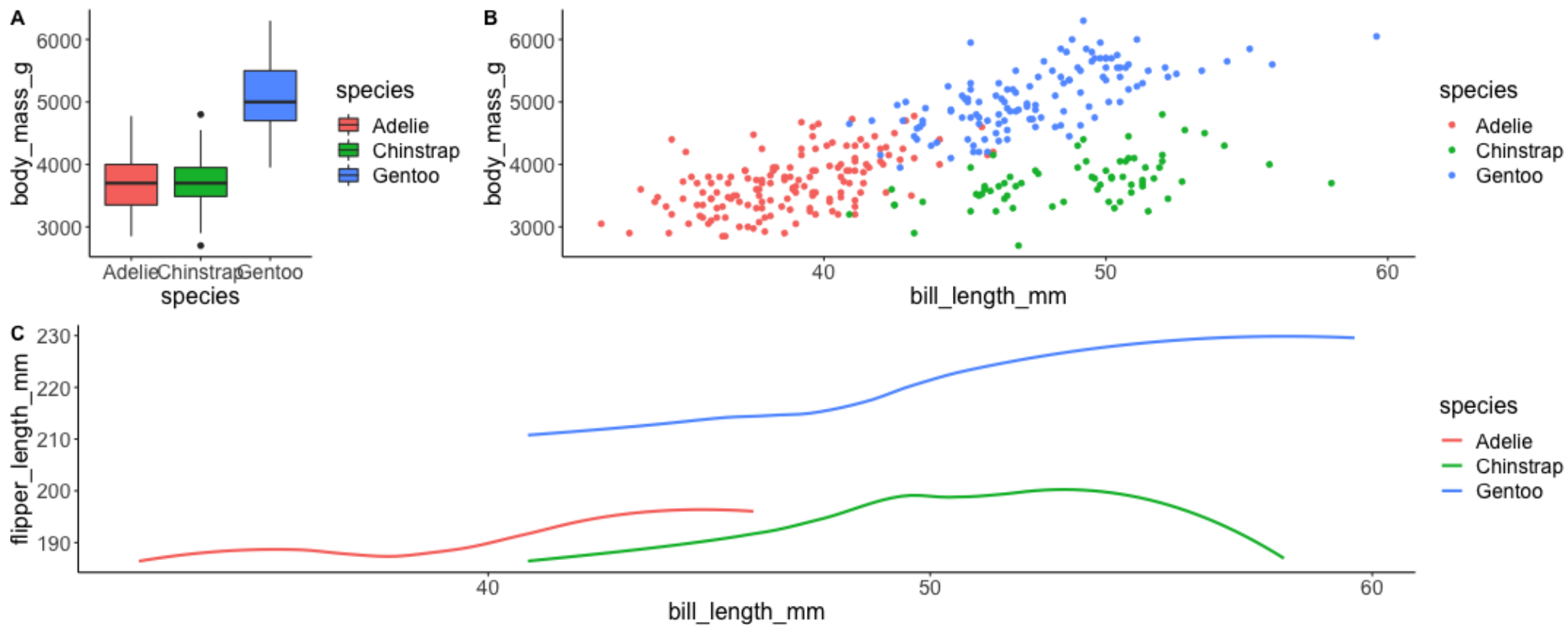
cowplot

```
cowplot::plot_grid(plt1, plt2, plt3, nrow = 2, ncol = 2, labels = c('A', 'B', 'C'))
```



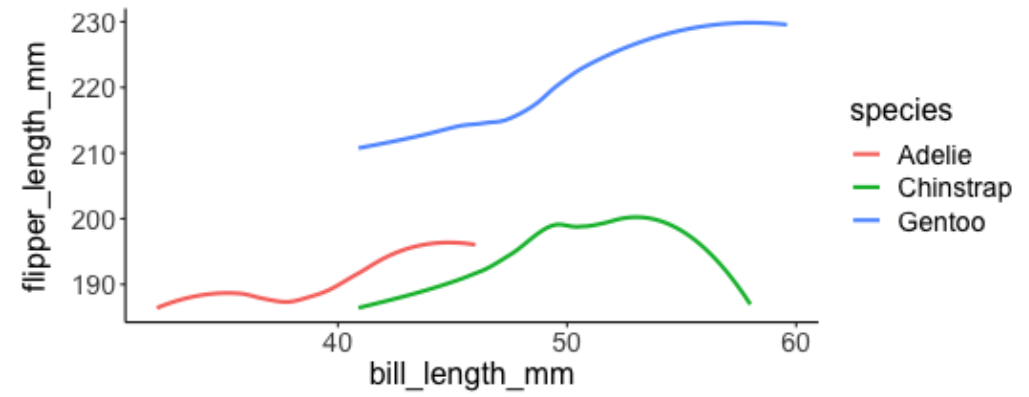
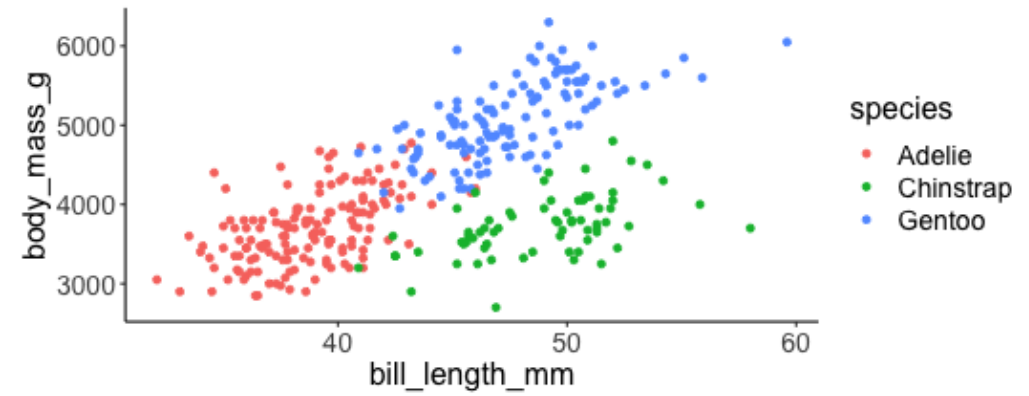
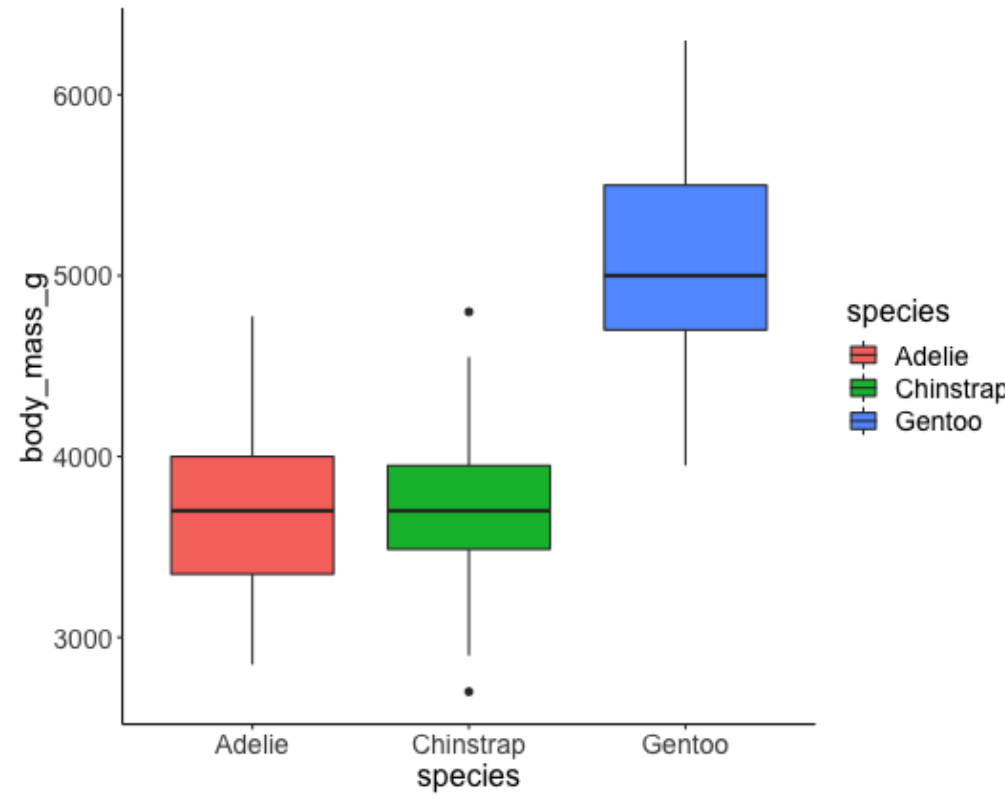
cowplot

```
grid1 = cowplot::plot_grid(plt1, plt2, nrow = 1, rel_widths=c(0.3, 0.7),
                           labels=c('A', 'B'))
cowplot::plot_grid(grid1, plt3, nrow=2, labels = c('', 'C'))
```



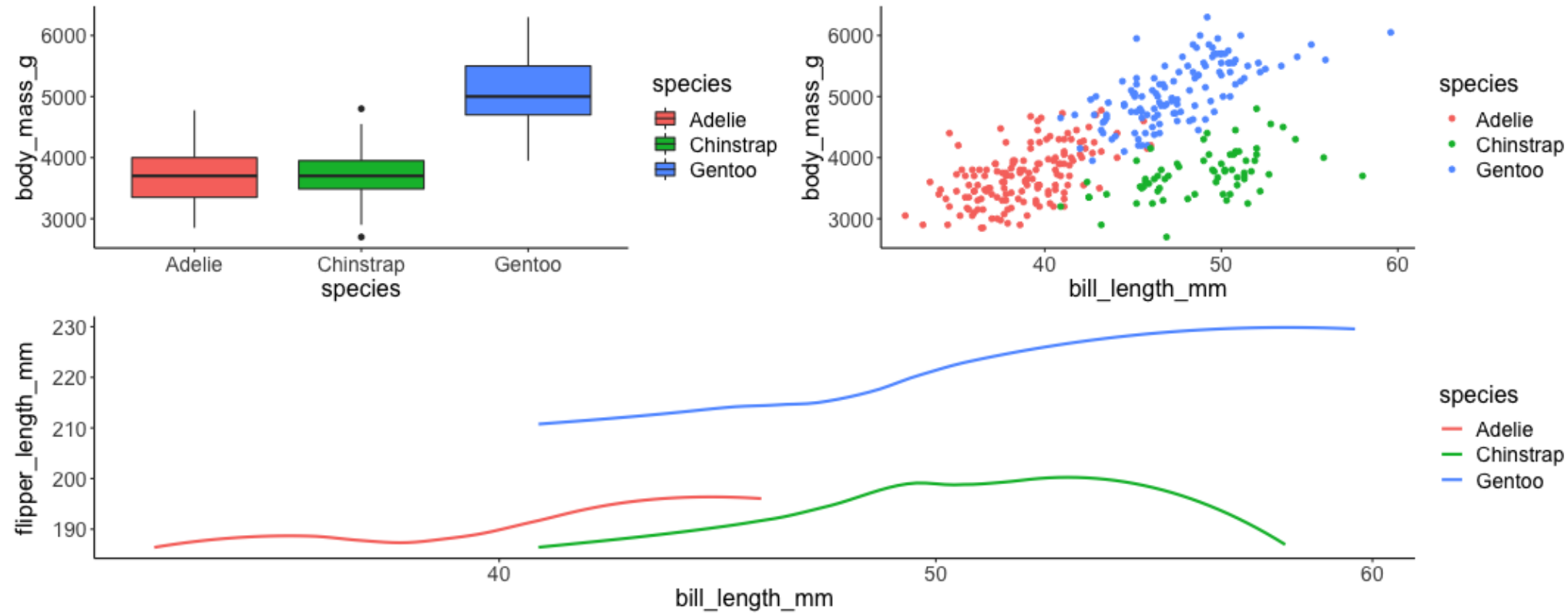
patchwork

```
plt1 | plt2 / plt3
```



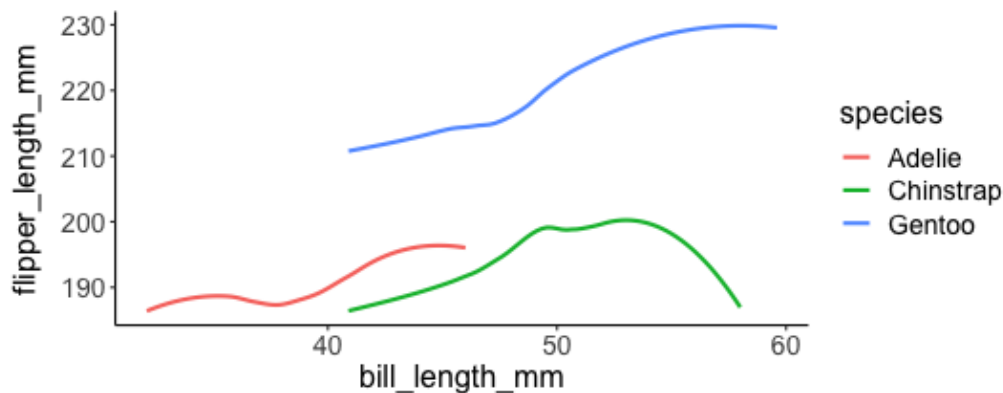
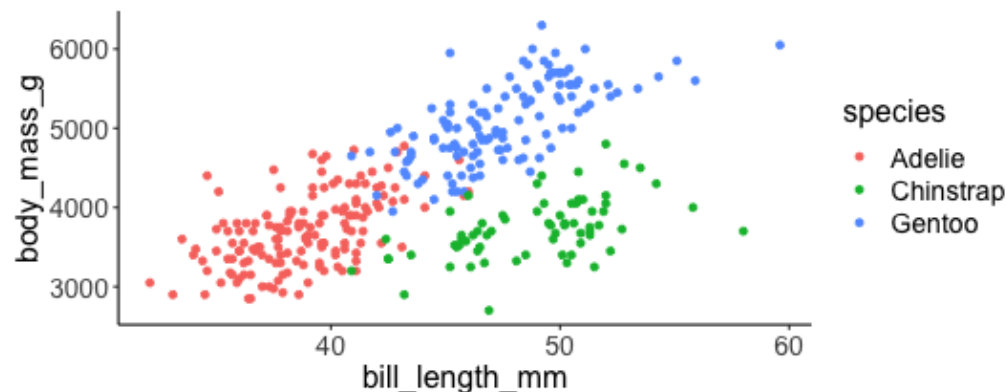
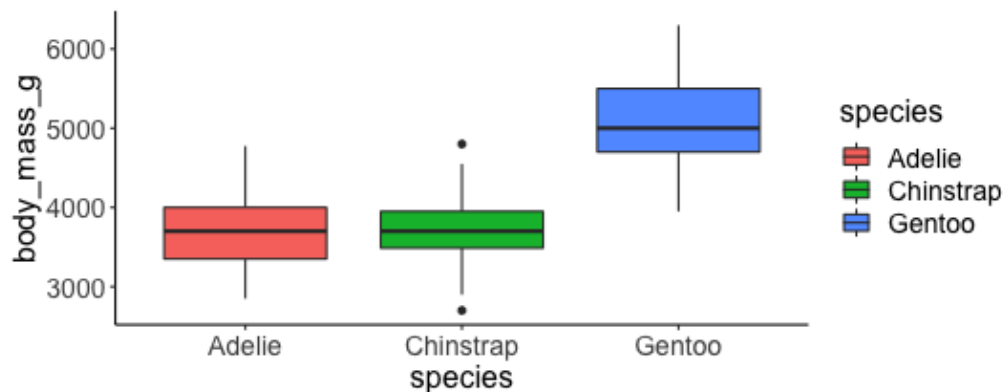
patchwork

```
(plt1 | plt2) / plt3
```



patchwork

```
plt1 + plt2 + plt3 + plot_layout(ncol = 2)
```



Further references

ggpubr: <https://rpkgs.datanovia.com/ggpubr/>

cowplot: <https://wilkelab.org/cowplot/index.html> and Fundamentals of Data Visualization

patchwork: <https://patchwork.data-imaginist.com/index.html>