Seaborn

Импортируем необходимые библиотеки

In [ ]:
```
import seaborn as sns
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
```

Откроем набор данных с помощью **pandas**

In [ ]:
```
df = pd.read_csv('data\penguins_size.csv')
df.dropna(inplace=True)
df.drop(df.index[df['gender'] == '.'], inplace=True)
```

In [ ]:
```
df.head()
```

Out[ ]:

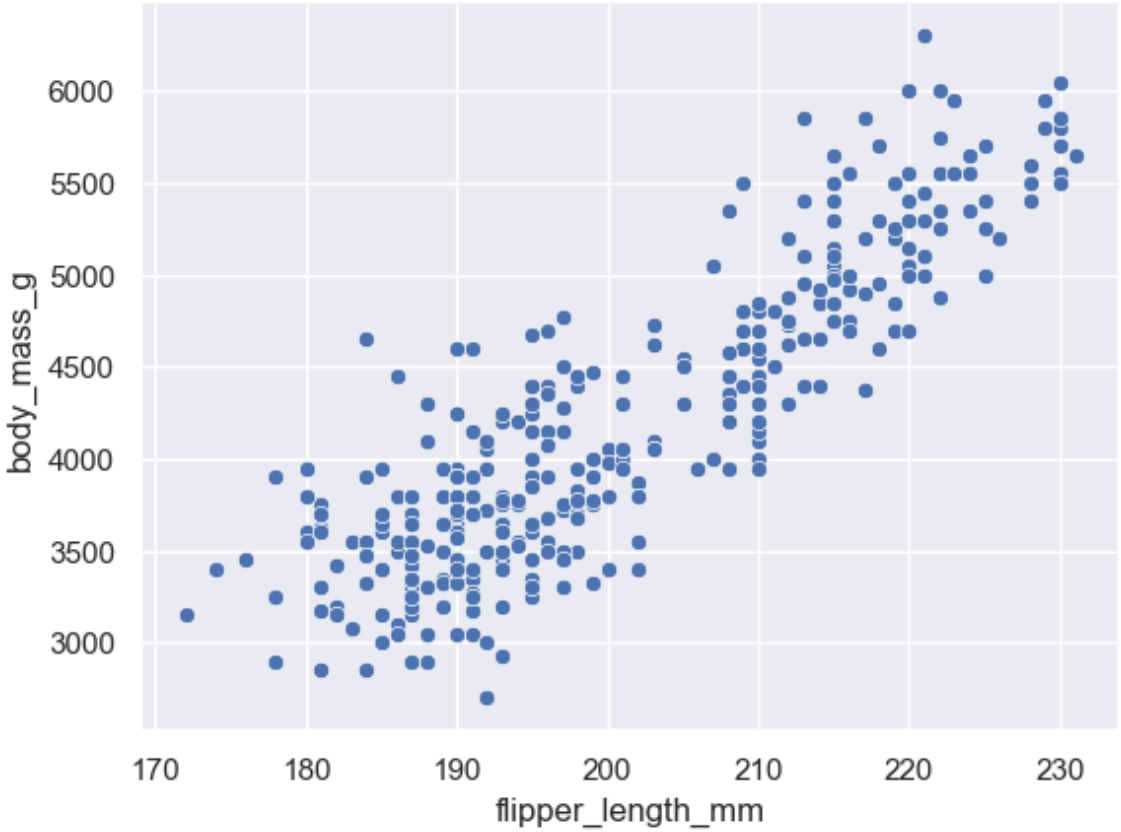
	species	island	culmen_length_mm	culmen_depth_mm	flipper_length_mm	body_mass_g
0	Adelie	Torgersen	39.1	18.7	181.0	3750.0
1	Adelie	Torgersen	39.5	17.4	186.0	3800.0
2	Adelie	Torgersen	40.3	18.0	195.0	3250.0
4	Adelie	Torgersen	36.7	19.3	193.0	3450.0
5	Adelie	Torgersen	39.3	20.6	190.0	3650.0

Для красоты попросим seaborn установить тему по умолчанию с помощью *sns.set_theme()* и отобразим типовые графики

In [ ]:
```
sns.set_theme()
```

ScatterPlot

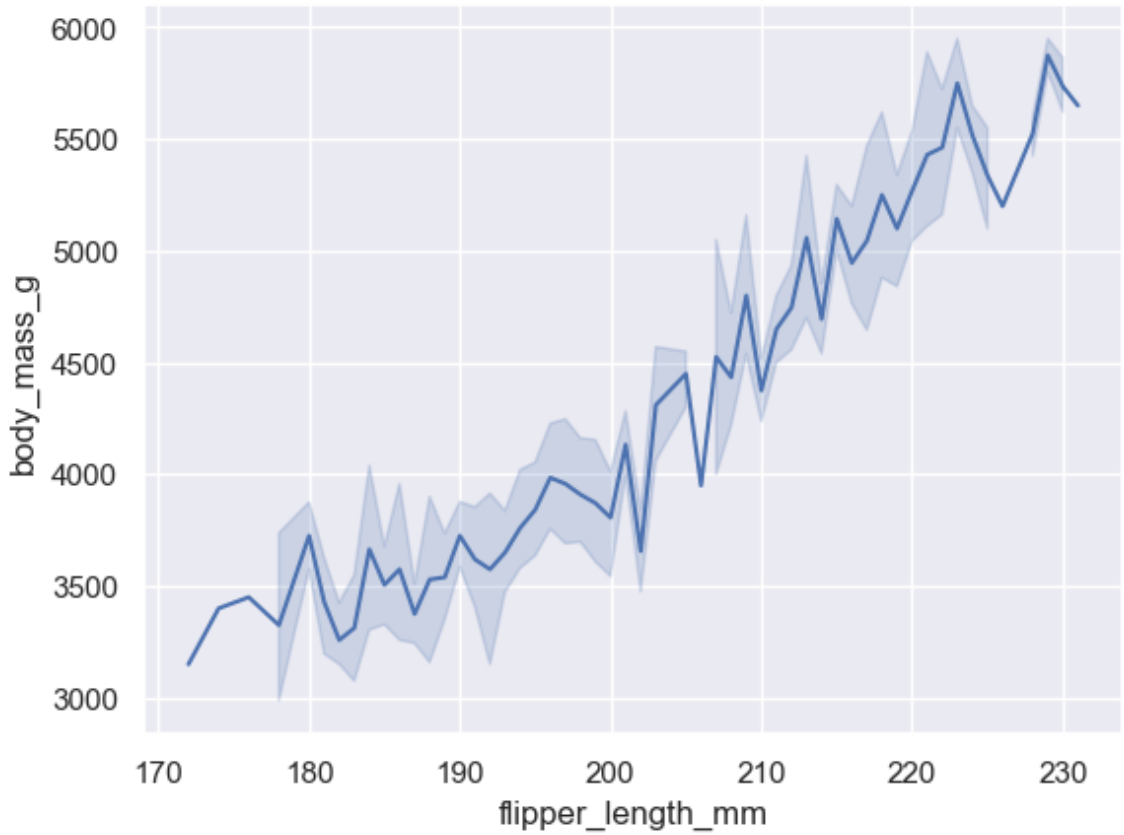
In [ ]:
```
sns.scatterplot(df, x='flipper_length_mm', y='body_mass_g')
plt.show()
```



LinePlot

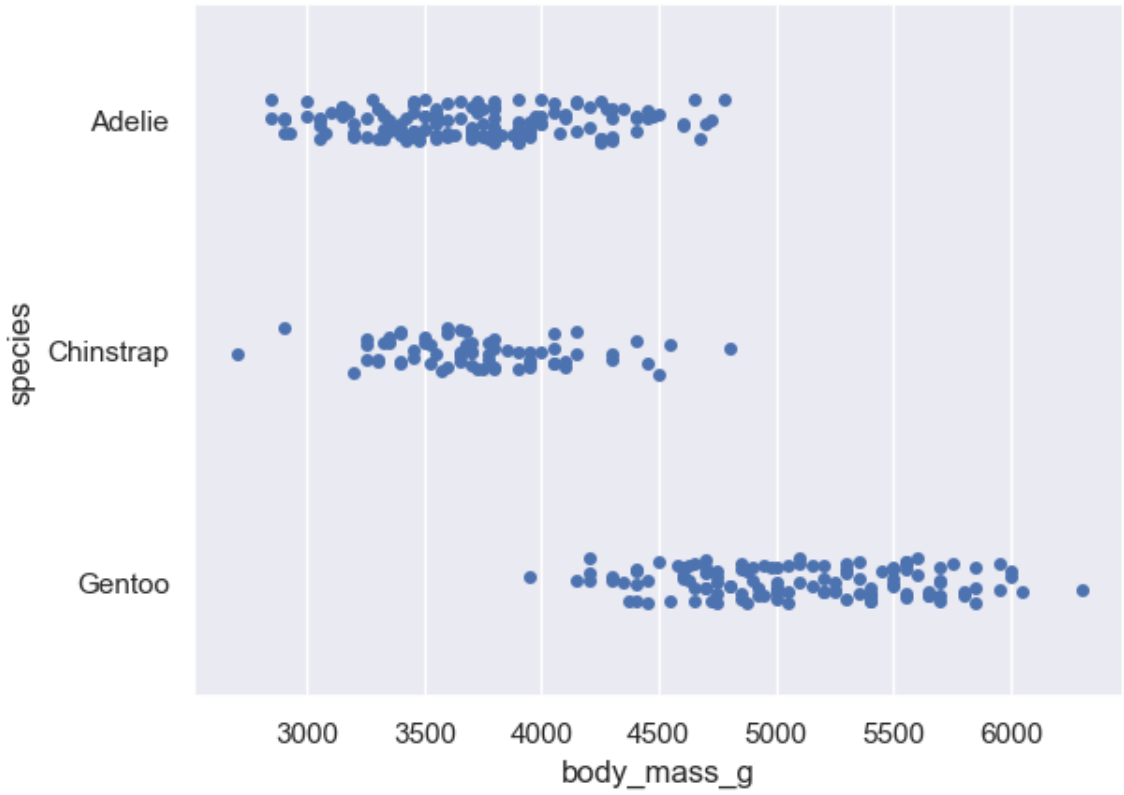
По умолчанию график показывает оценку центрального тенда и доверительный интервал для этой оценки.

In [ ]:
```
sns.lineplot(data=df, x="flipper_length_mm",  y="body_mass_g")
plt.show()
```



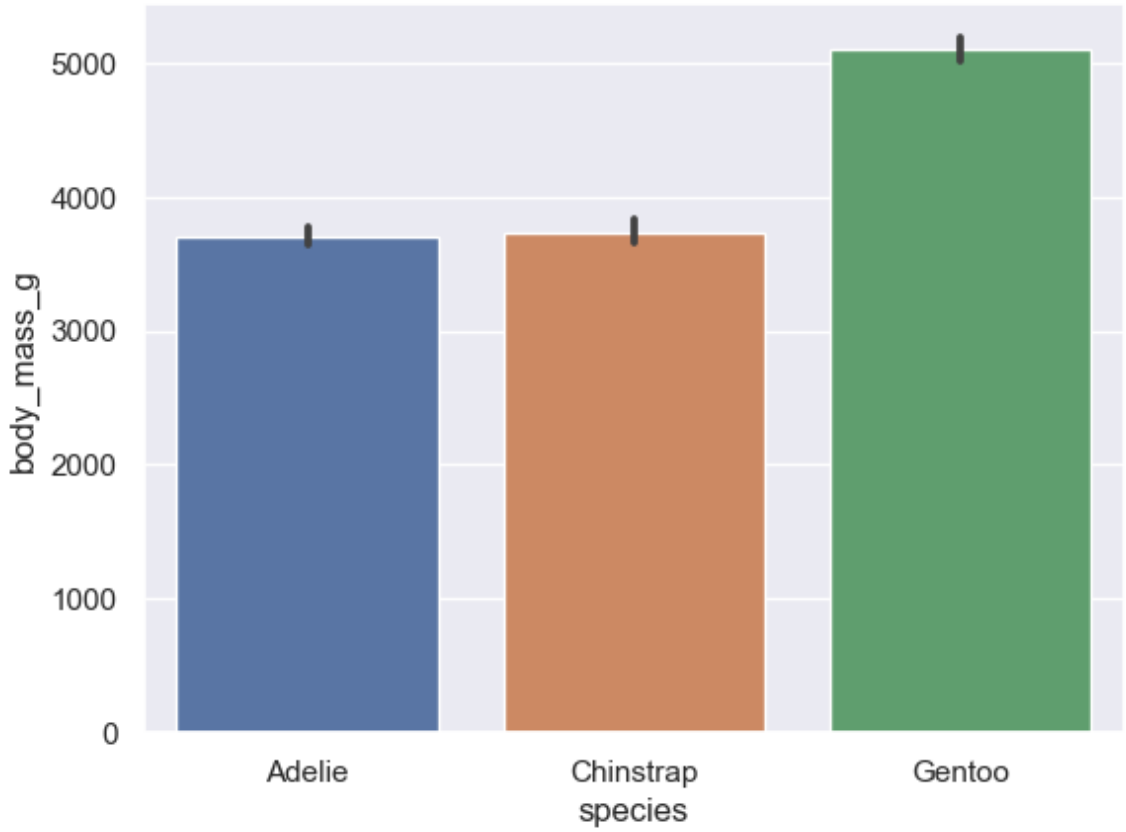
StripPlot

In [ ]:
```
sns.stripplot(data=df, x="body_mass_g", y="species")
plt.show()
```



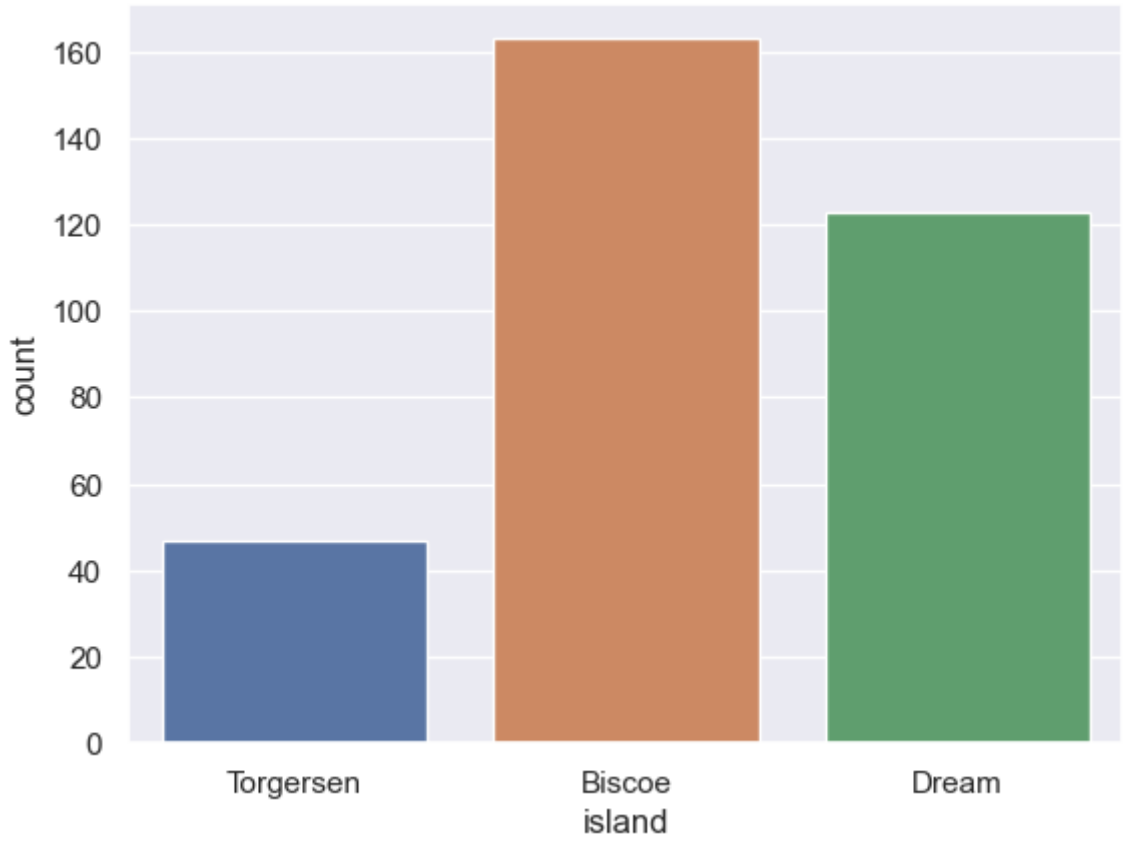
BarPlot

In [ ]:
```
sns.barplot(data=df, x="species", y="body_mass_g")
plt.show()
```



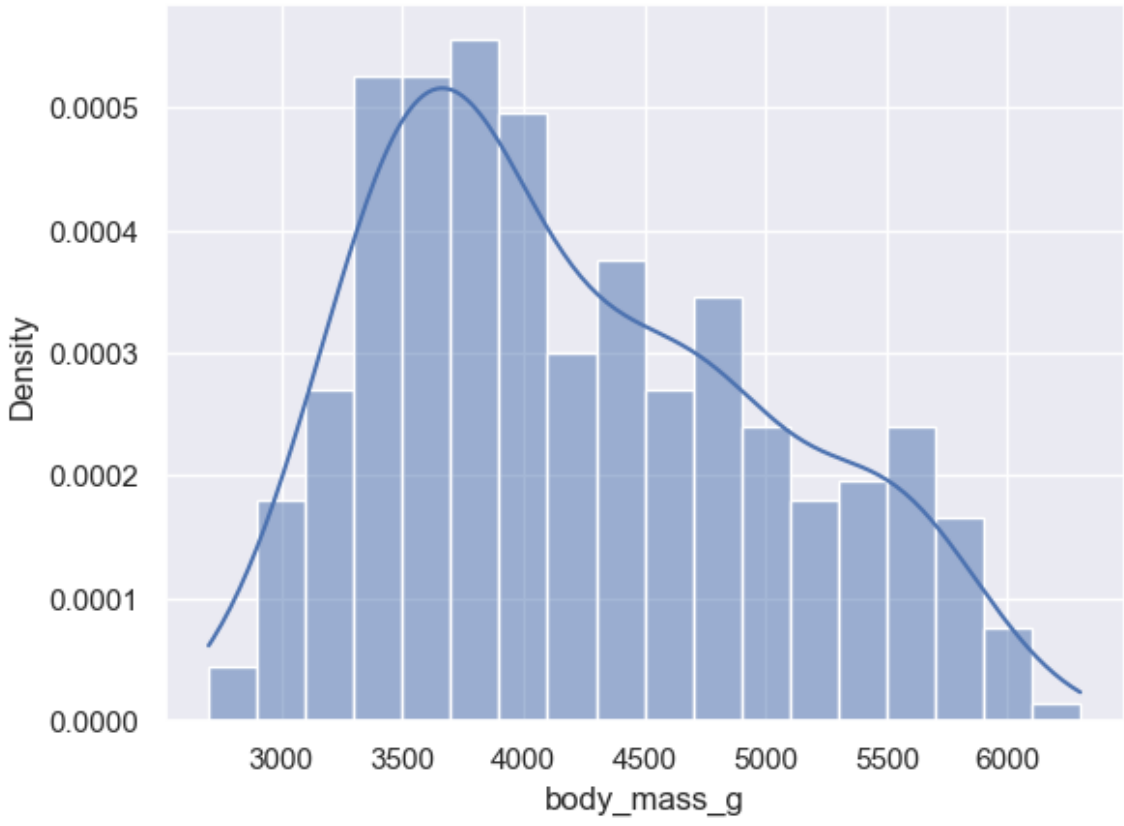
CountPlot

In [ ]:
```
sns.countplot(x='island', data=df)
plt.show()
```



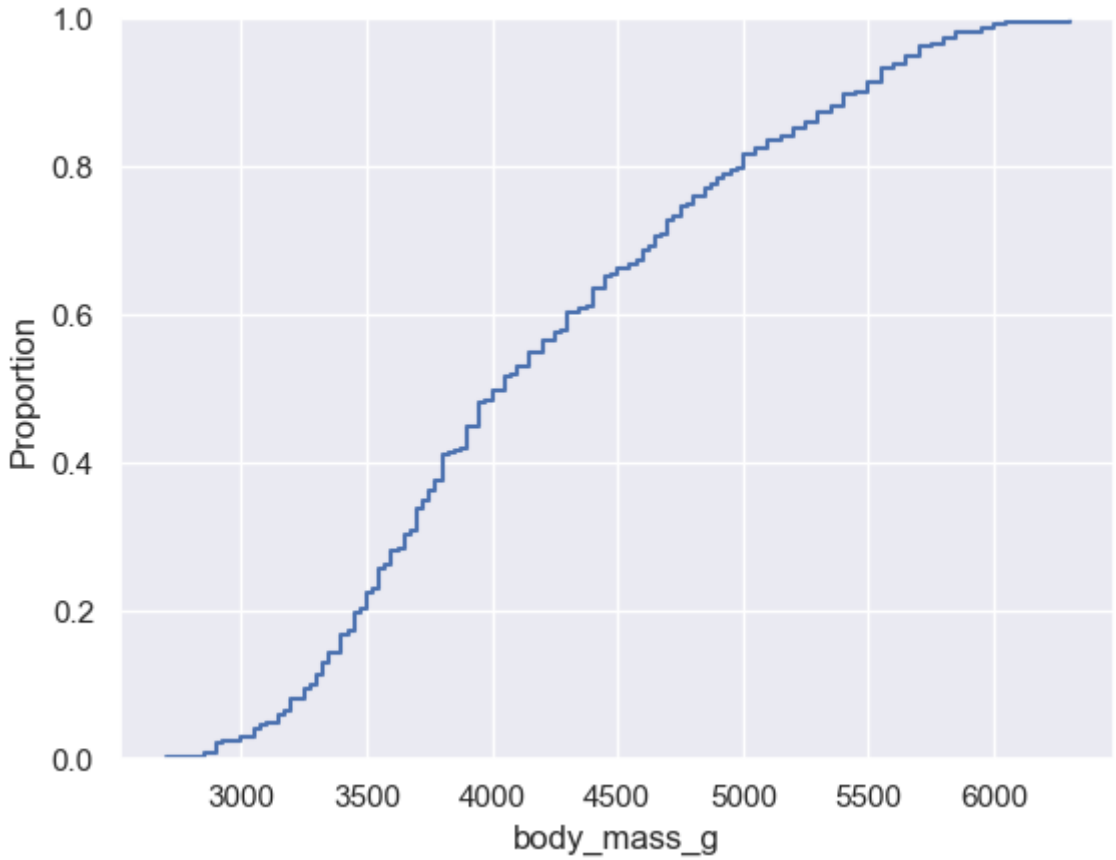
HistPlot

In [ ]:
```
sns.histplot(df["body_mass_g"], binwidth=200, kde=True, stat='density')
plt.show()
```



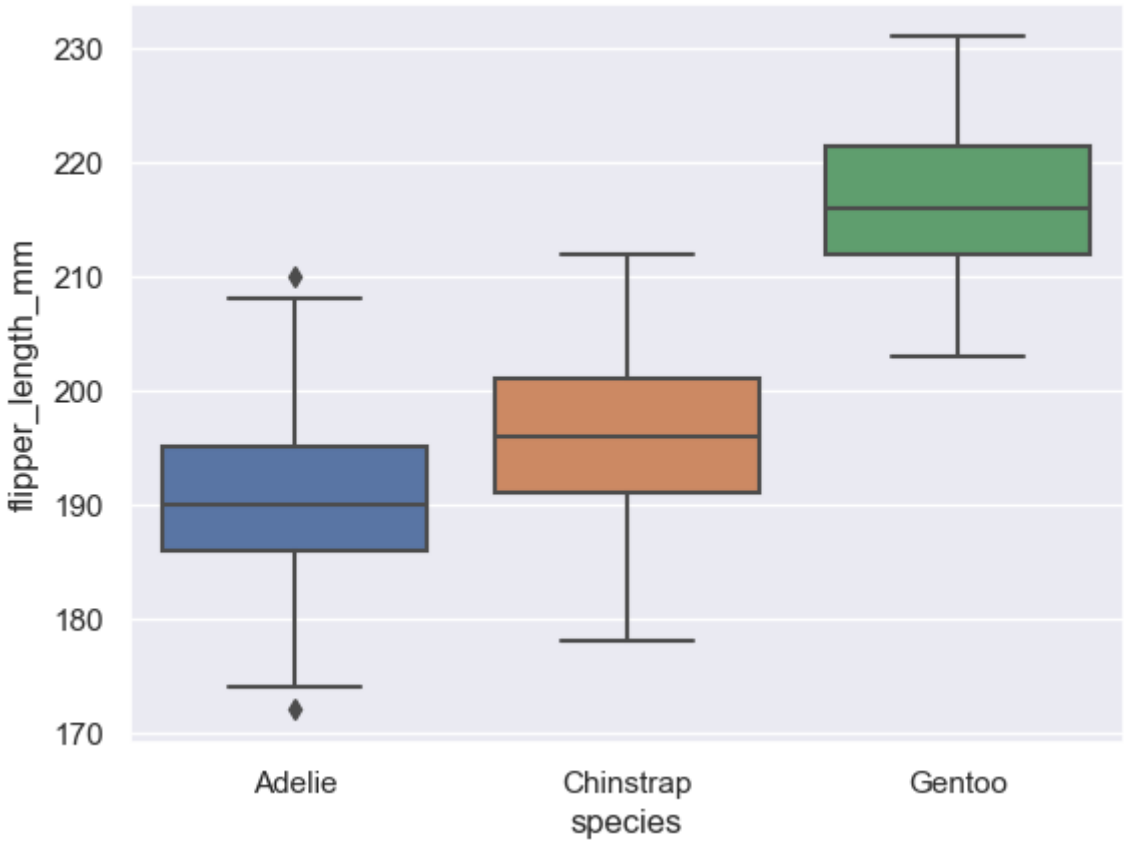
ECDfPlot

In [ ]:
```
sns.ecdfplot(data=df, x="body_mass_g")
plt.show()
```



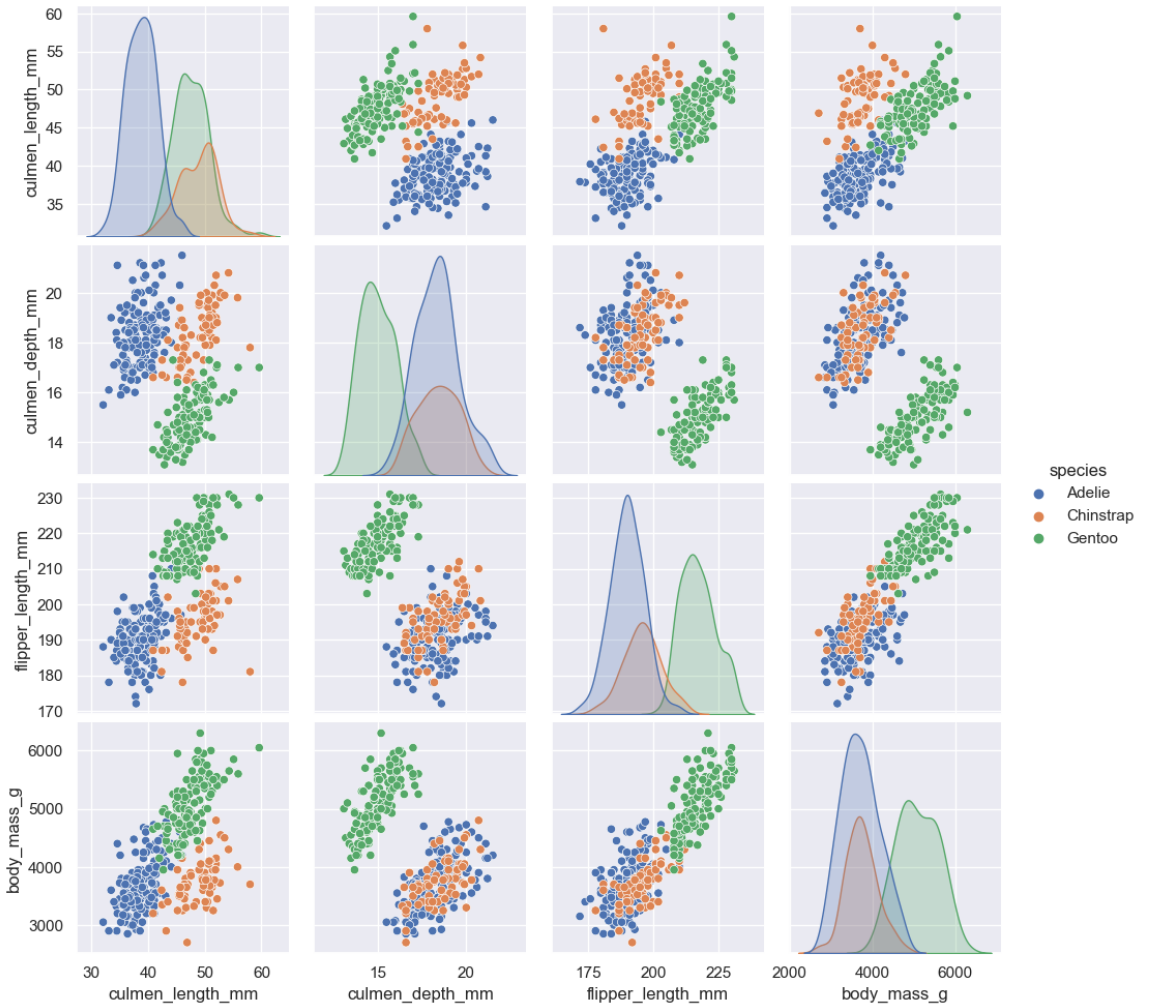
BoxPlot

In [ ]:
```
sns.boxplot(x='species', y='flipper_length_mm', data=df)
plt.show()
```



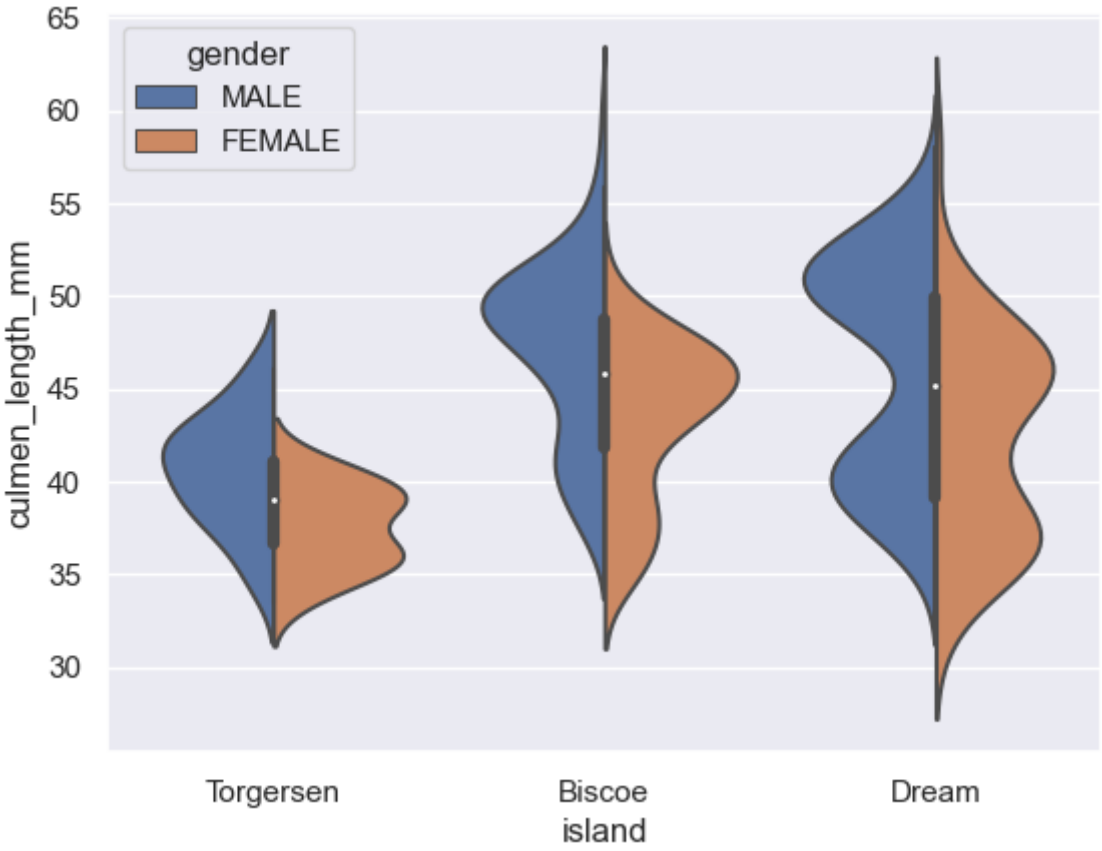
Pairplot

In [ ]:
```
sns.pairplot(df, hue="species")
plt.show()
```



ViolinPlot

In [ ]:
```
sns.violinplot(x=df['island'], y=df['culmen_length_mm'],
               hue=df['gender'], split=True)
plt.show()
```


gender
MALE
FEMALE
culmen_length_mm
65
60
55
50
45
40
35
30
Torgersen
Biscoe
Dream
island