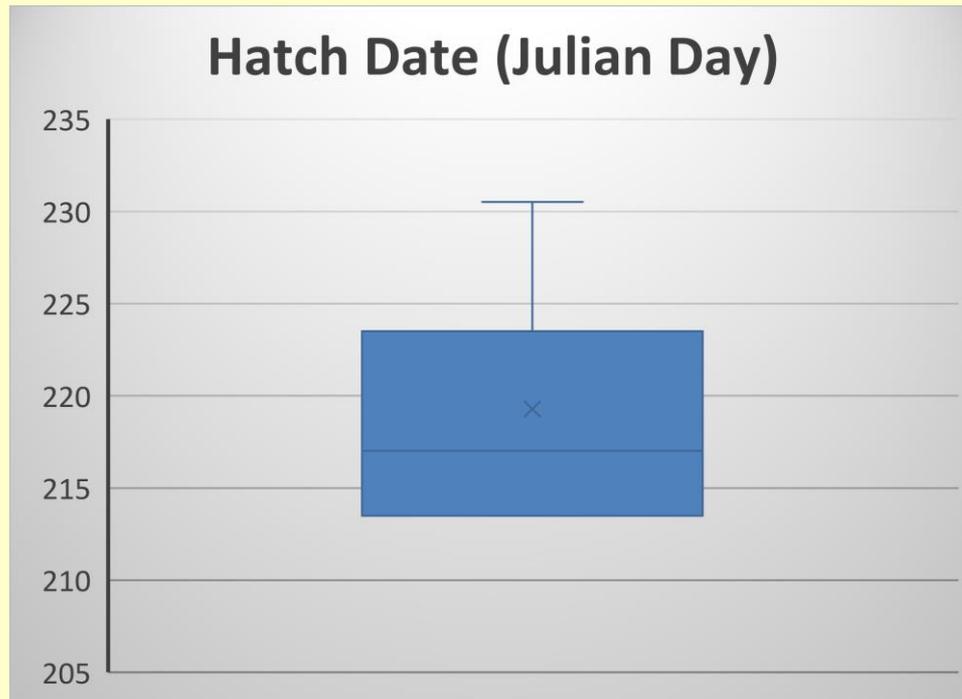


Seabird Growth Analysis - Mass / Wing

- Or... how does the timing (Phenology) of hatching impact chick growth and development

(i) distribution of hatching dates (suggest a box plot)



median	217
mean	219.3
std	6.1
min	213.5
max	230.5

Figure 1: Distribution of chick hatching dates (Julian Days) from the Blackpoint colony on Oahu, Hawaii.

Seabird Growth Analysis - Mass / Wing

(ii) distributions of weekly chick masses (g)

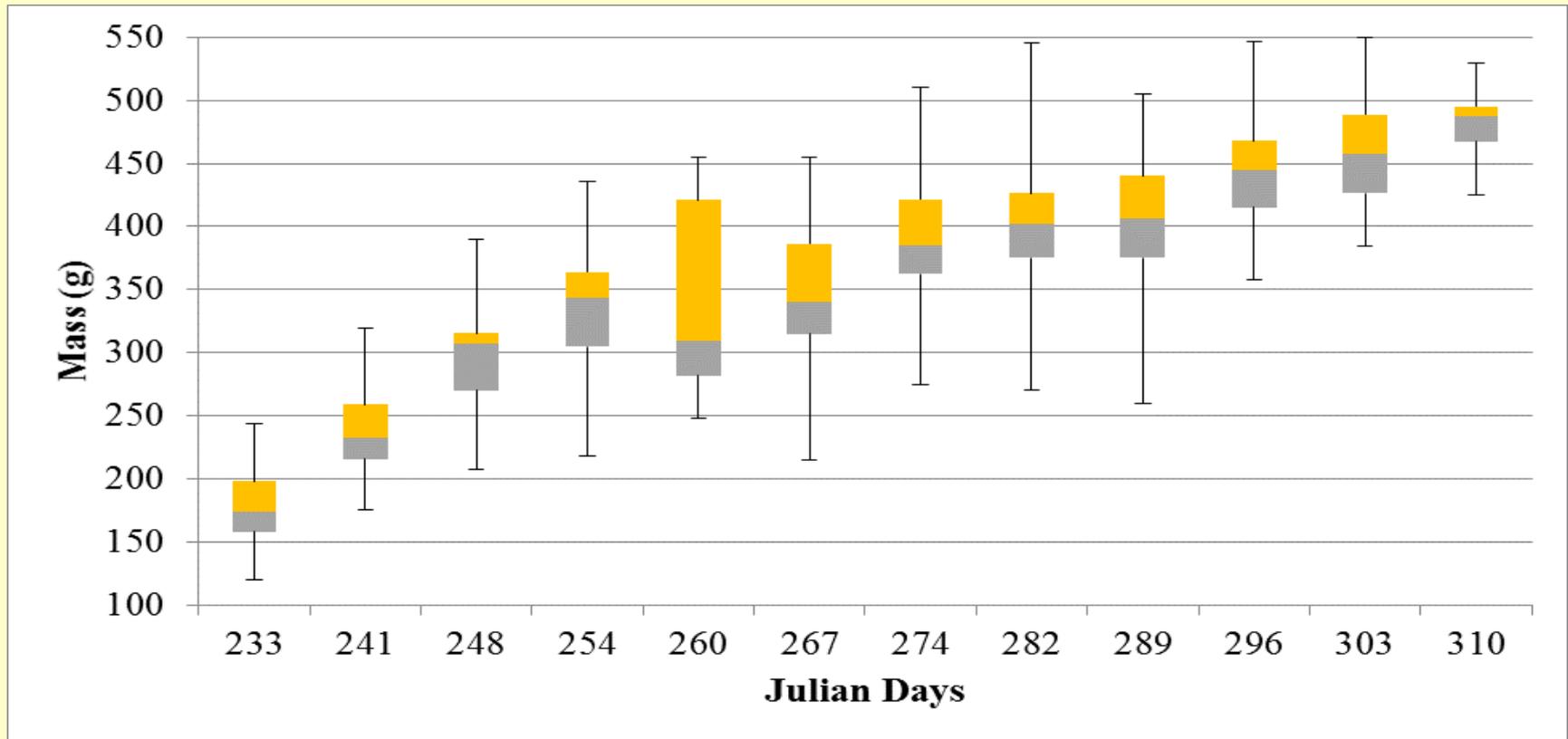


Figure 2: Distribution of chick masses (in grams) measured weekly over a twelve week growing season.

Seabird Growth Analysis - Mass / Wing

(iii) distribution of weekly chick wing chords (mm)

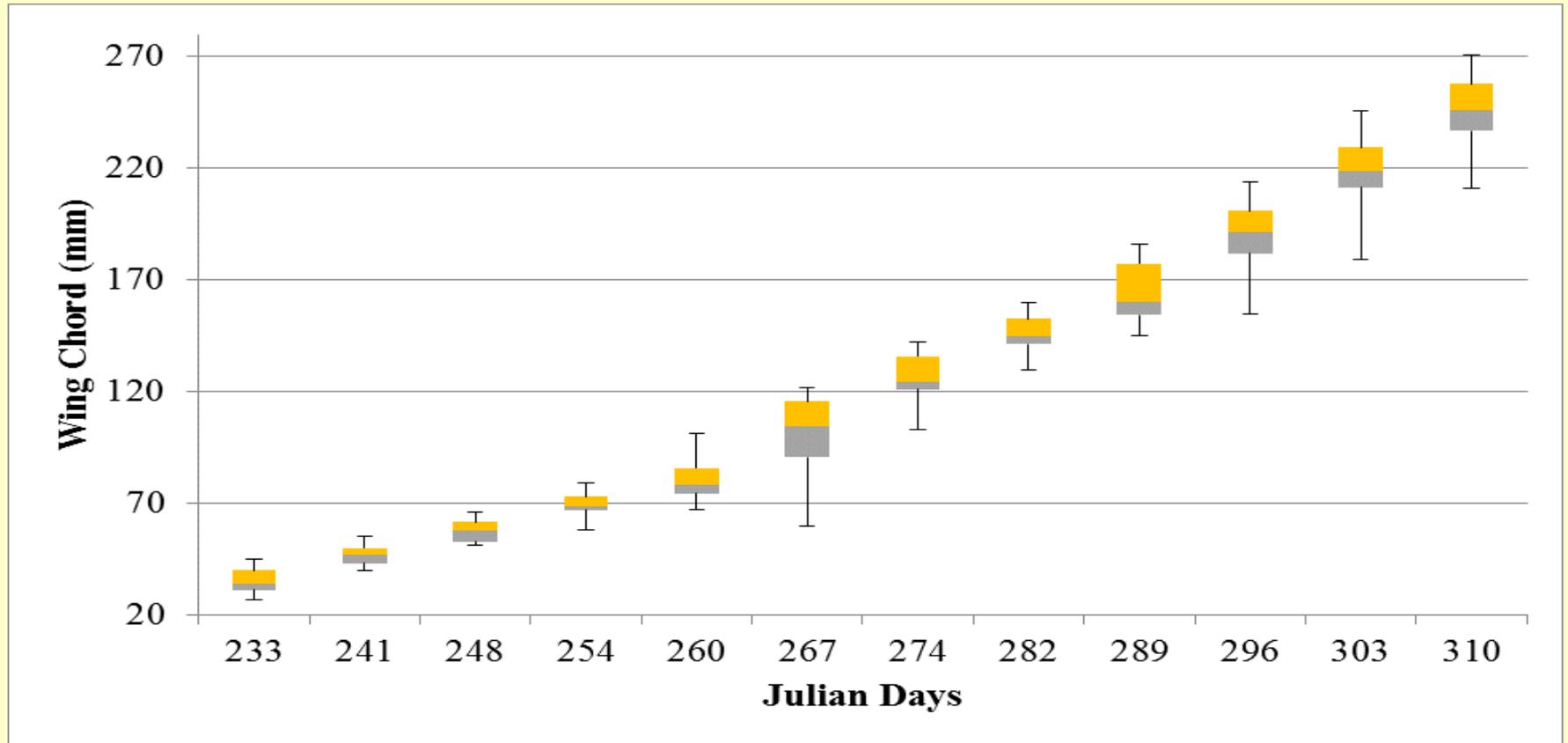


Figure 3: Distribution of chick wing chords (in mm) measured weekly over a twelve week growing season.

Seabird Growth Analysis - Mass / Wing

(iii) distribution of weekly chick condition, expressed as the ratio of the mass to the wing chord (g / mm)

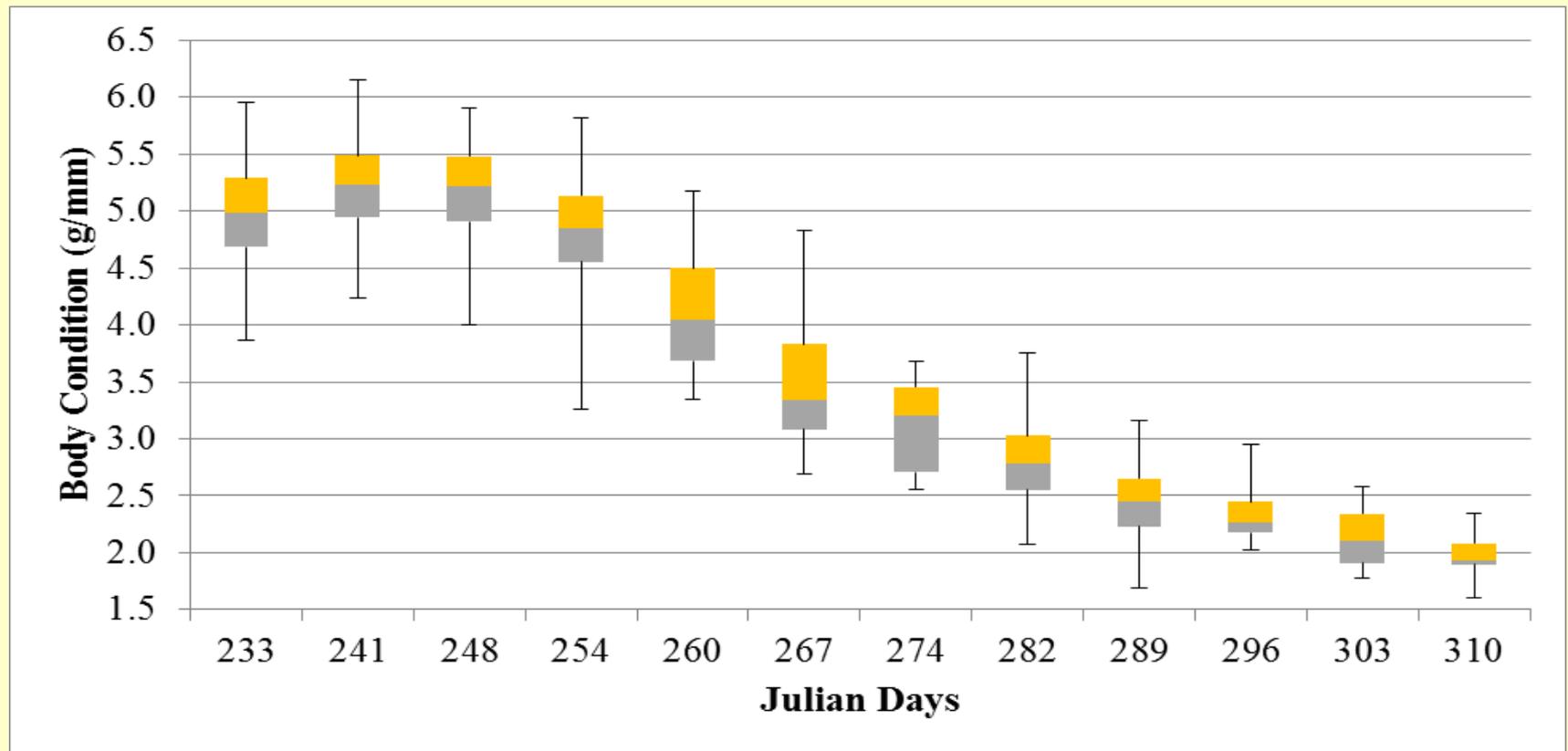


Figure 4: Distribution of chick body condition, expressed as the ratio of mass divided by wing chord over a twelve week growing season.

Influence of Phenology - Predictions

hatch date X peak mass:

hatch date X peak mass date:

hatch date X growth rate (mass):

hatch date X growth rate (wing):

Influence of Phenology - Results

hatch date X peak mass: correlation: -0.213 (p value > 0.05)

There is a weak linear relationship between the hatch date and the peak mass: suggesting that birds that hatch sooner, reach a larger peak mass

hatch date X peak mass date: correlation: 0.267 (p value > 0.05)

There is a positive linear relationship between the hatch date and the date of the peak mass: suggesting that birds that hatch sooner, reach a larger peak mass sooner

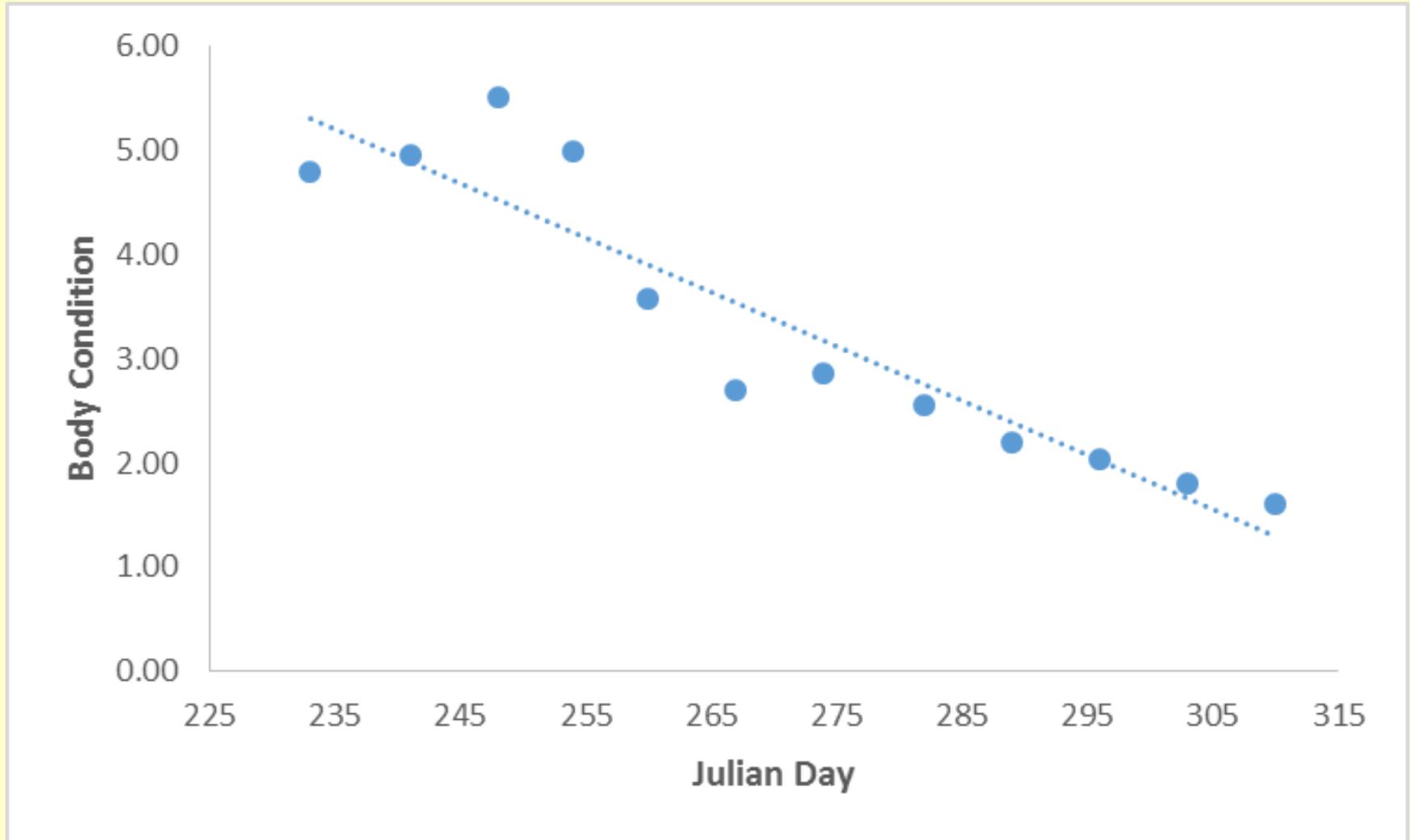
hatch date X growth rate (mass): correlation: 0.131 (p value > 0.05)

There is a significant positive linear relationship between the hatch date and the growth rate of the chick: suggesting that birds that hatch later, gain mass faster

hatch date X growth rate (wing): correlation: 0.582 (p value < 0.05)

There is a significant positive linear relationship between the hatch date and the growth rate of the wing: suggesting that birds that hatch later, grow their wings faster

Trend in Body Condition - Unstandardized



NOTE: This is Not a Linear Pattern

Trend in Body Condition - Standardized

Deviation = (Bird_Value - Mean) / SD).

