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# CHNS 2022 Phenology

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# CHNS Phenology

- Phenology is the study of the timing of life cycle events at the population level.
  - This is especially important with climate change impacting our wildlife.
  - Since 2006 Chi Nats members have recorded Phenology Data of 12 lifecycle events.
  - For each of the 12 indicator events a graph is provided.
    - Each graph shows the mean day of first observation, for each year sampled.
    - A regression line, non of which were statistically significant, has been added to each graph to show a possible long term trend. Therefore, if a species is generally being observed earlier, the line will slope down from left to right. If the line is sloping up from left to right, then the species is generally being observed later.
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# Which lifecycle events are recorded ?

- First appearance in local area of :
    - Chiff-chaff
    - Brimstone butterfly
    - Honey bee
    - Frog spawn
    - Orange tip butterfly
    - Swallow
    - Large red damselfly
    - Swift
    - Cuckoo
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# Which lifecycle events are recorded ?

- First flowering of :
  - Primrose
  - Hawthorn
  - Horse Chestnut



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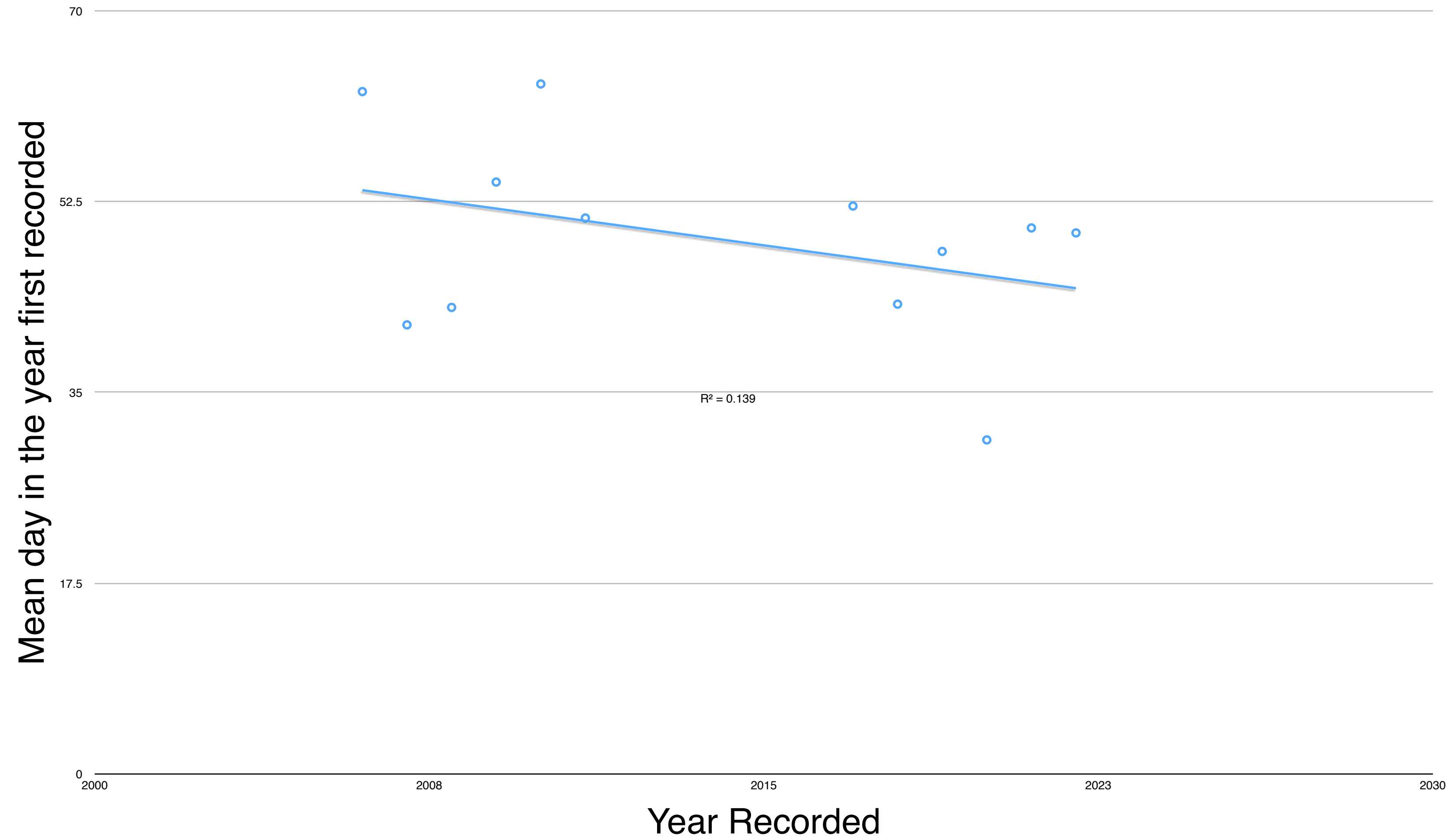
# 2022 Notes

- 15 sheets were submitted.
- Trend lines are included on each graph, however none of them are statistically significant. Although the trend of Swifts appearing later is the closest to becoming significant.



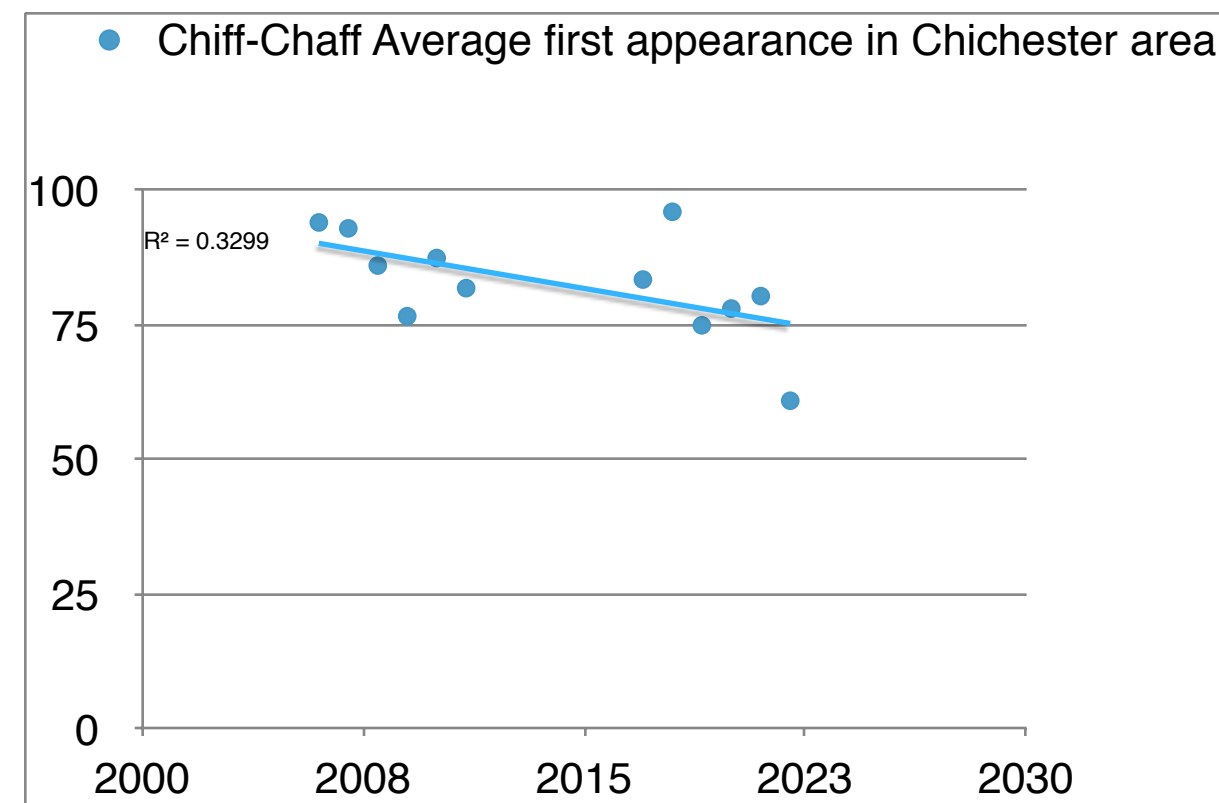
# Primrose

First appearance of Primrose in Flower



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# Chiff Chaff



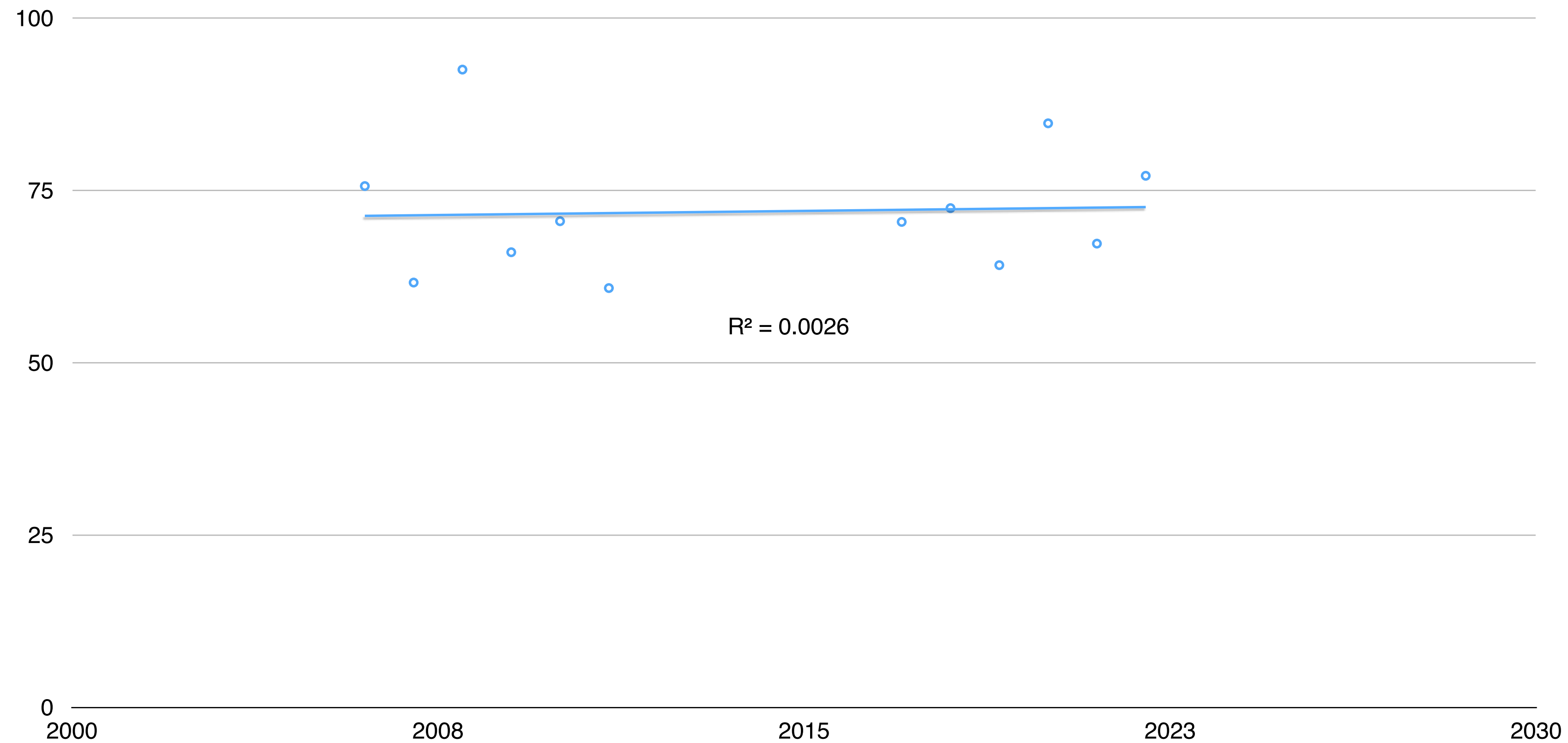
# Brimstone Butterfly



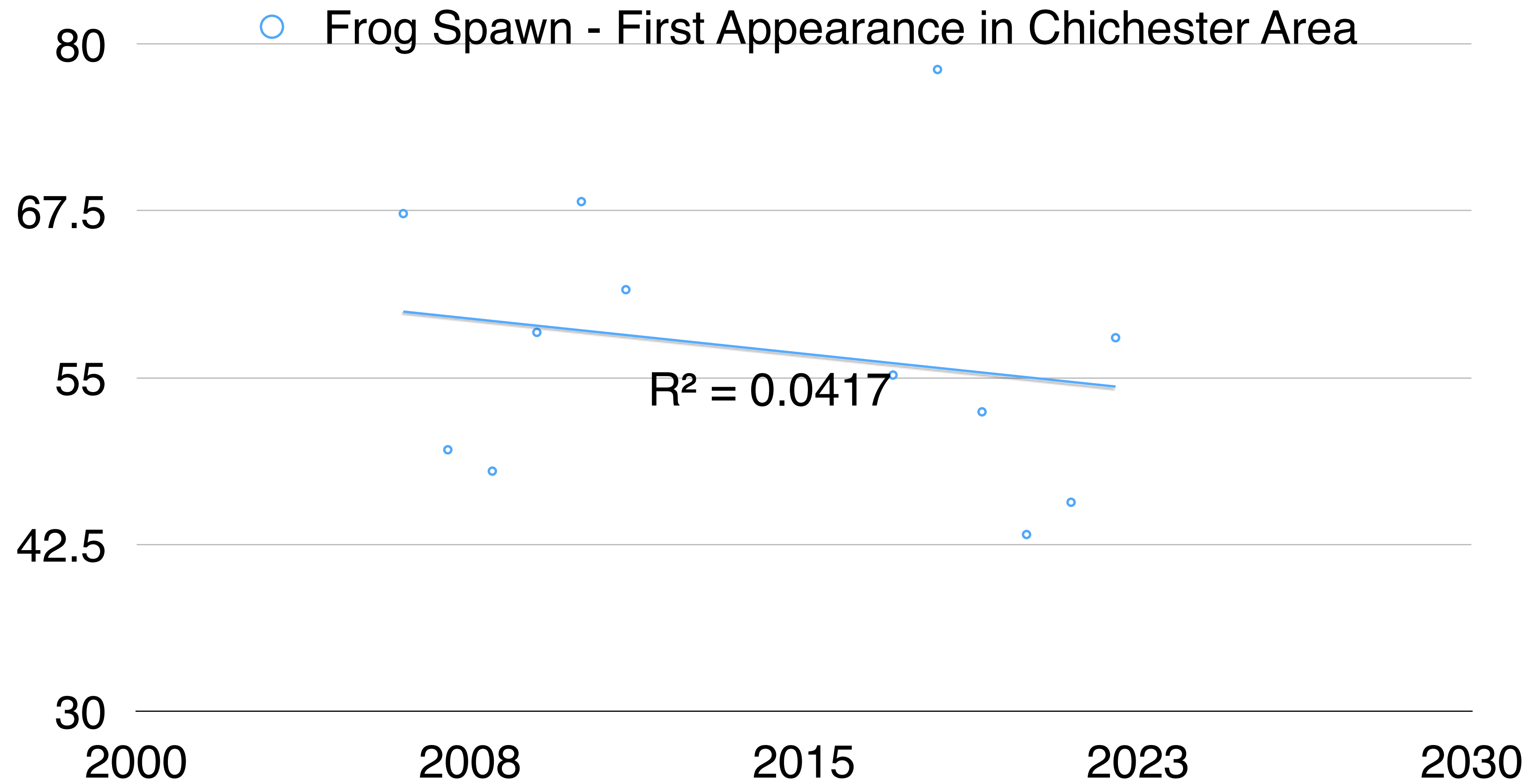


# Honey Bee

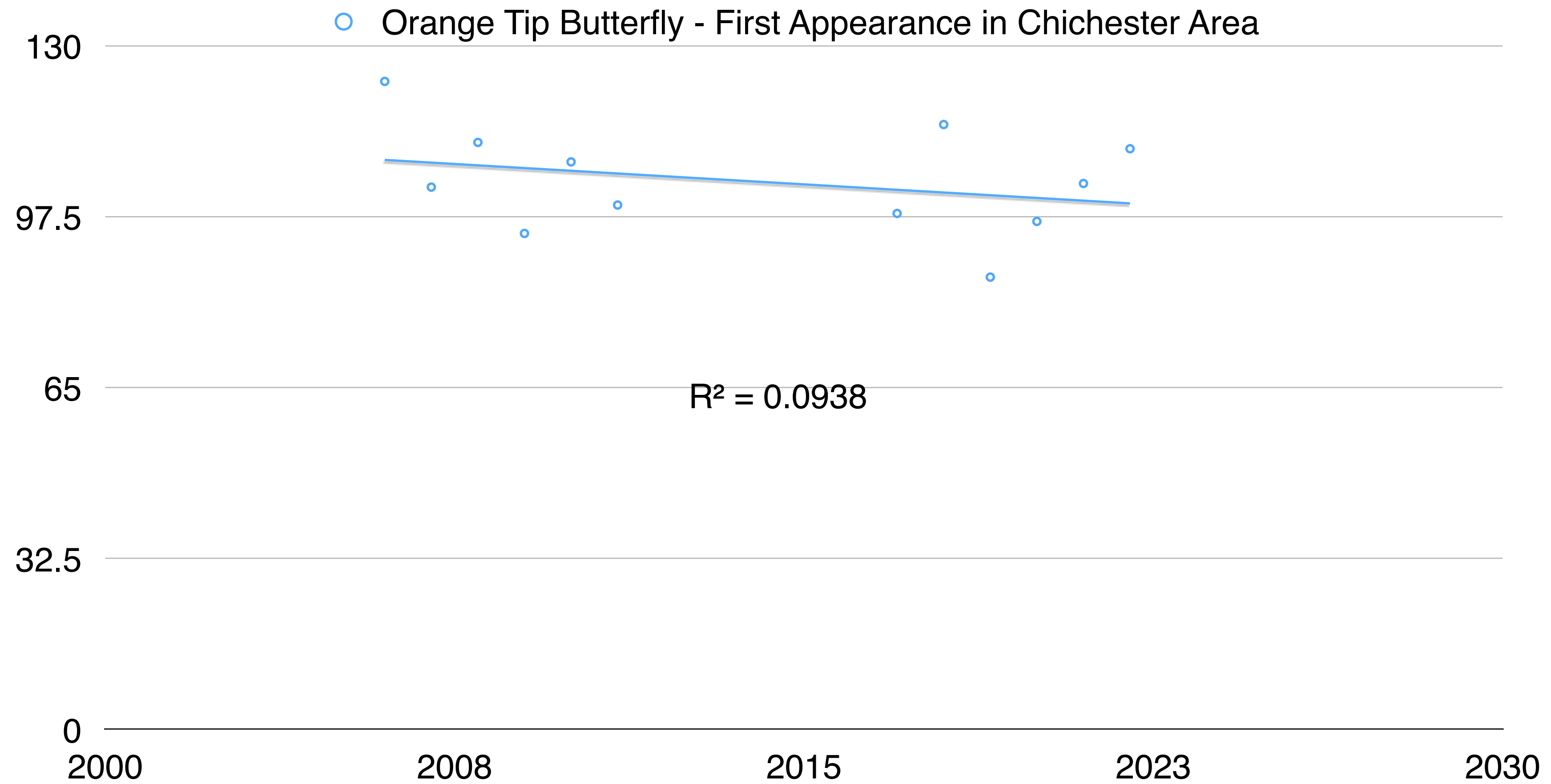
## First appearance of Honey Bee in Chichester



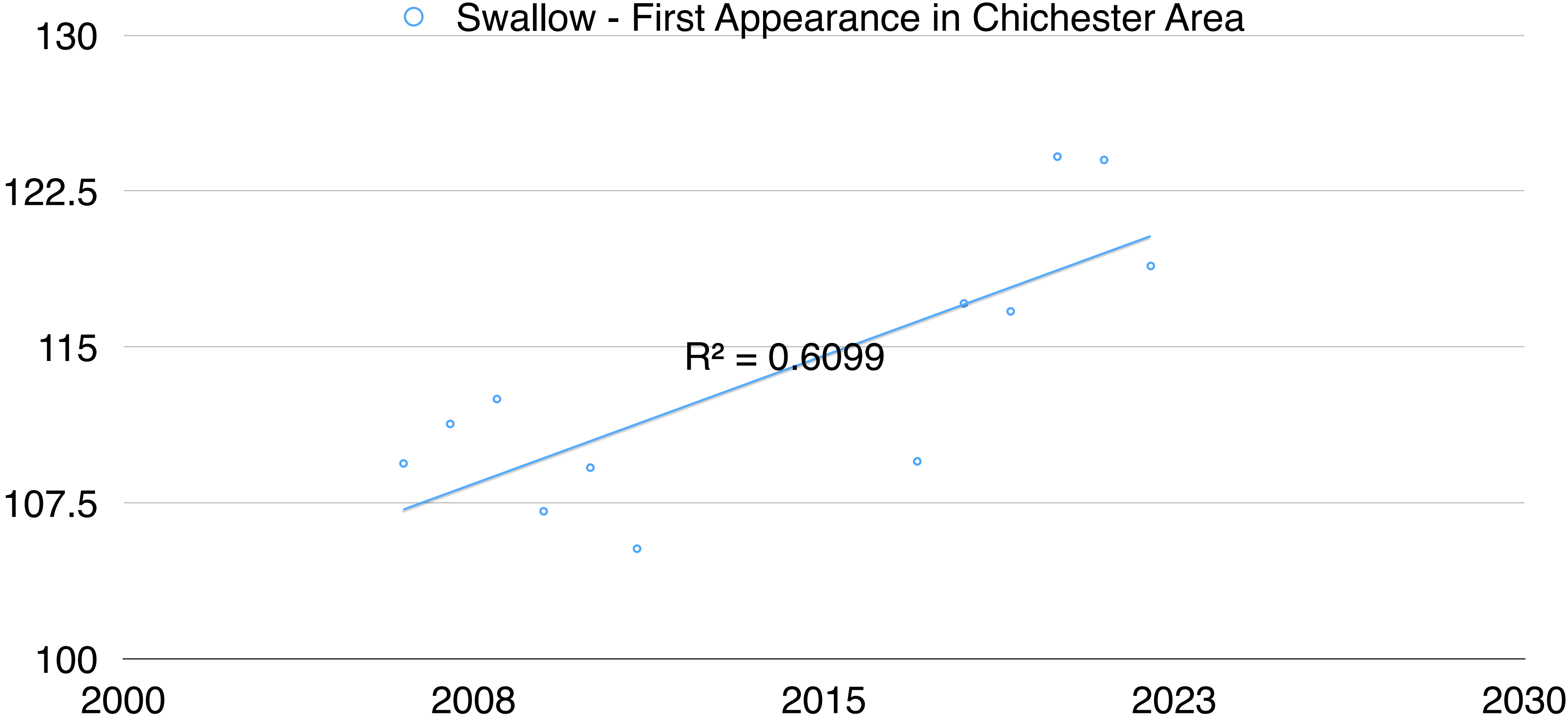
# Frogspawn



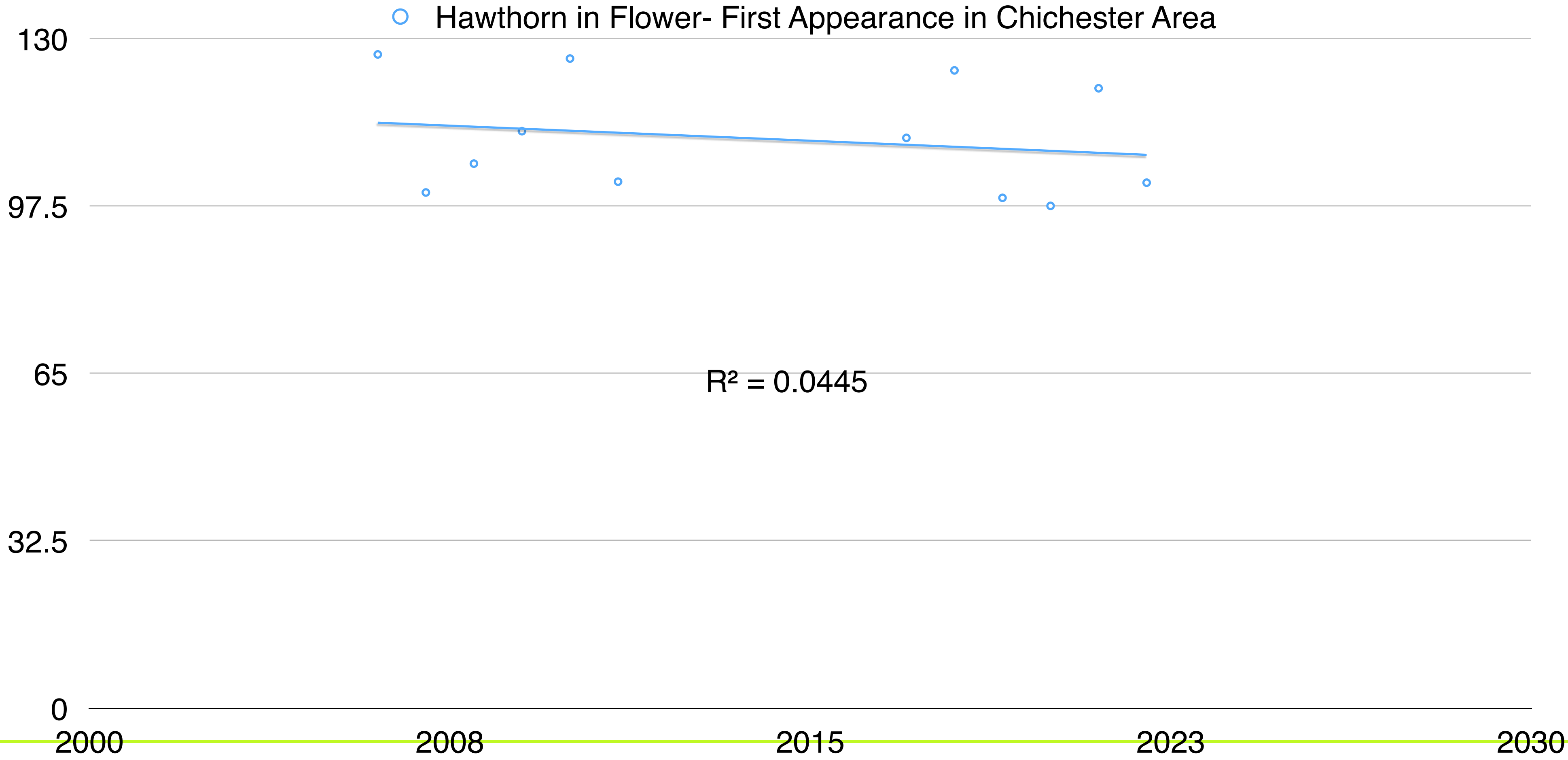
# Orange Tip Butterfly



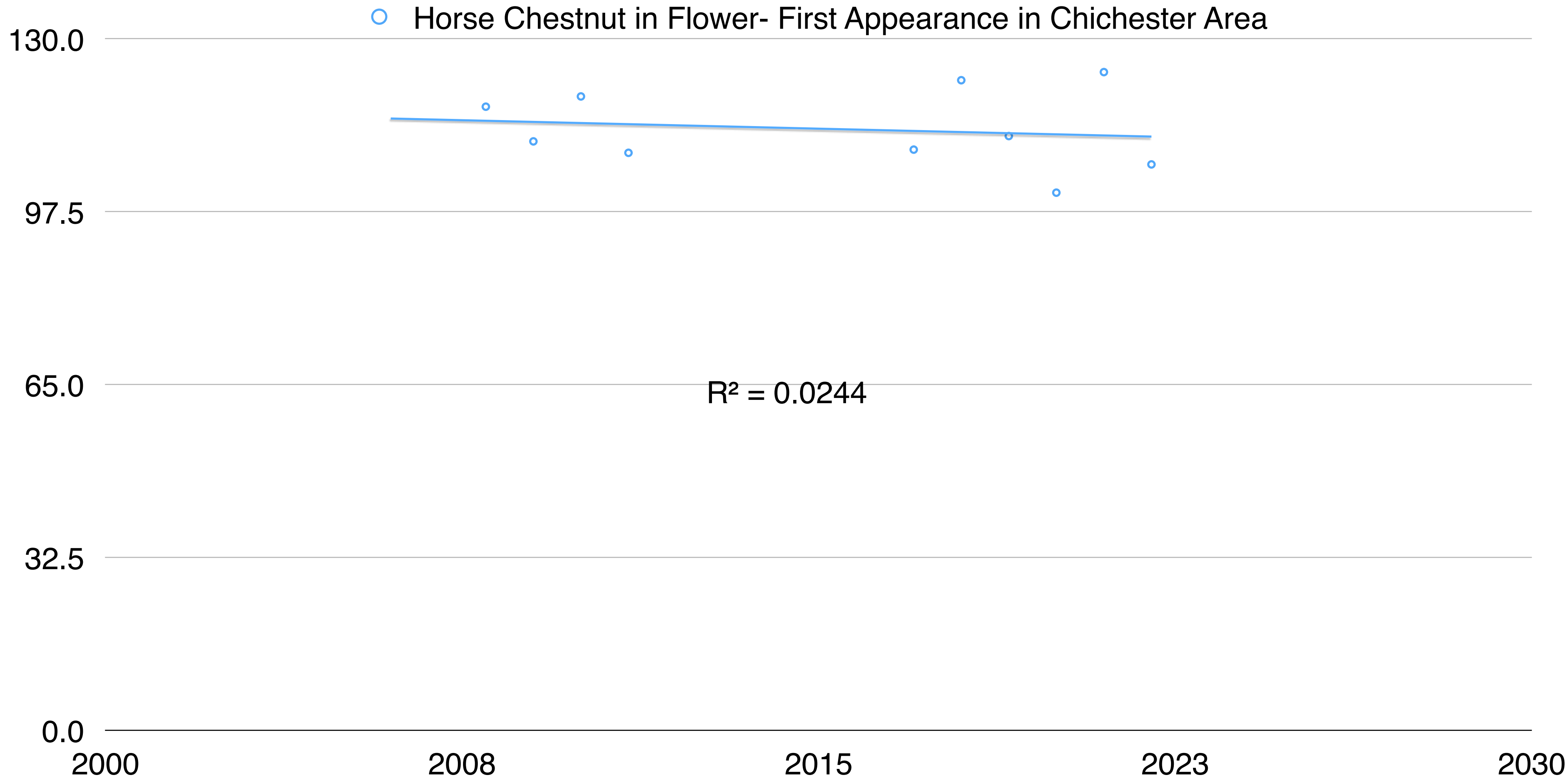
# Swallow



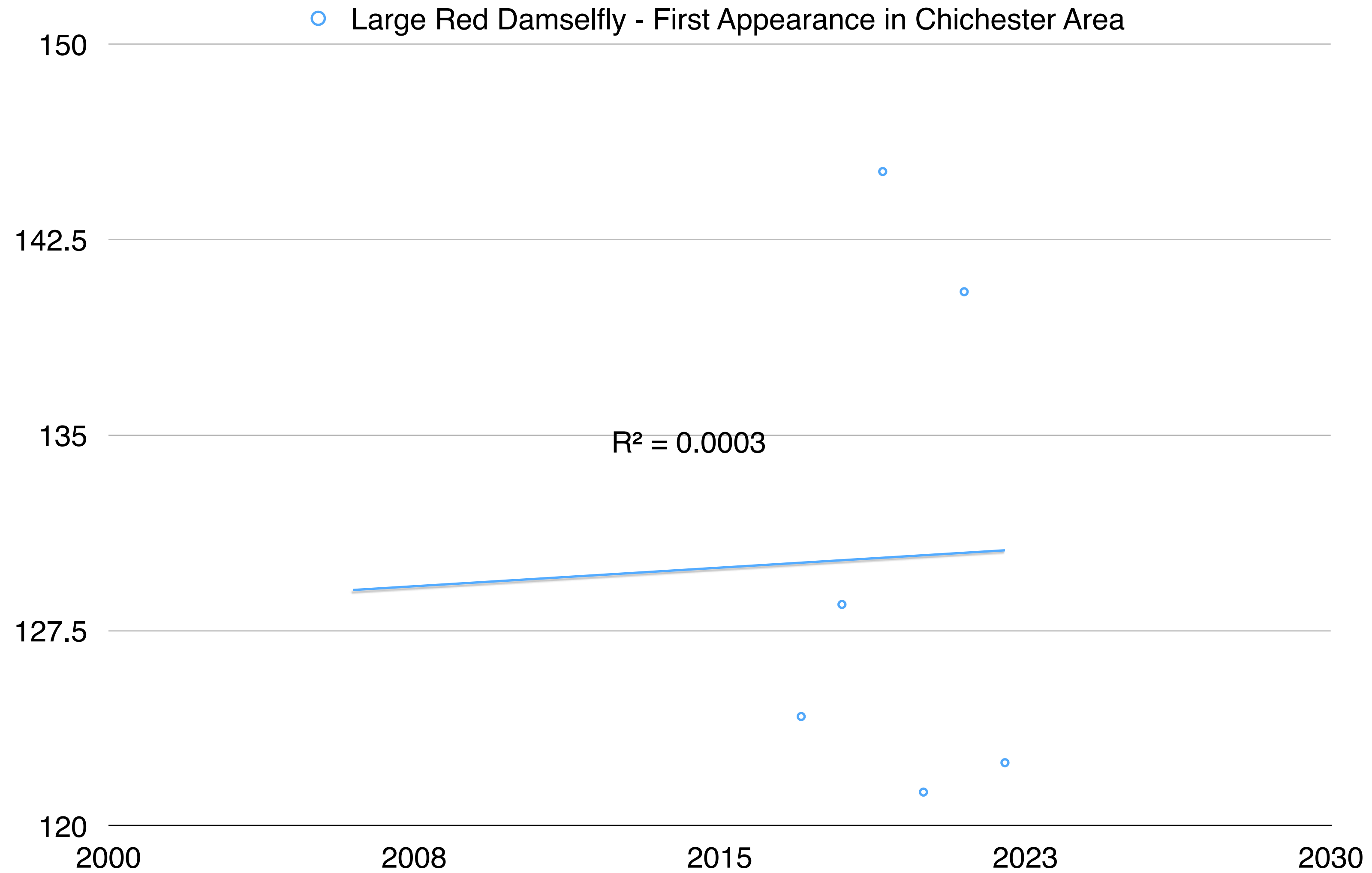
# Hawthorn in Flower



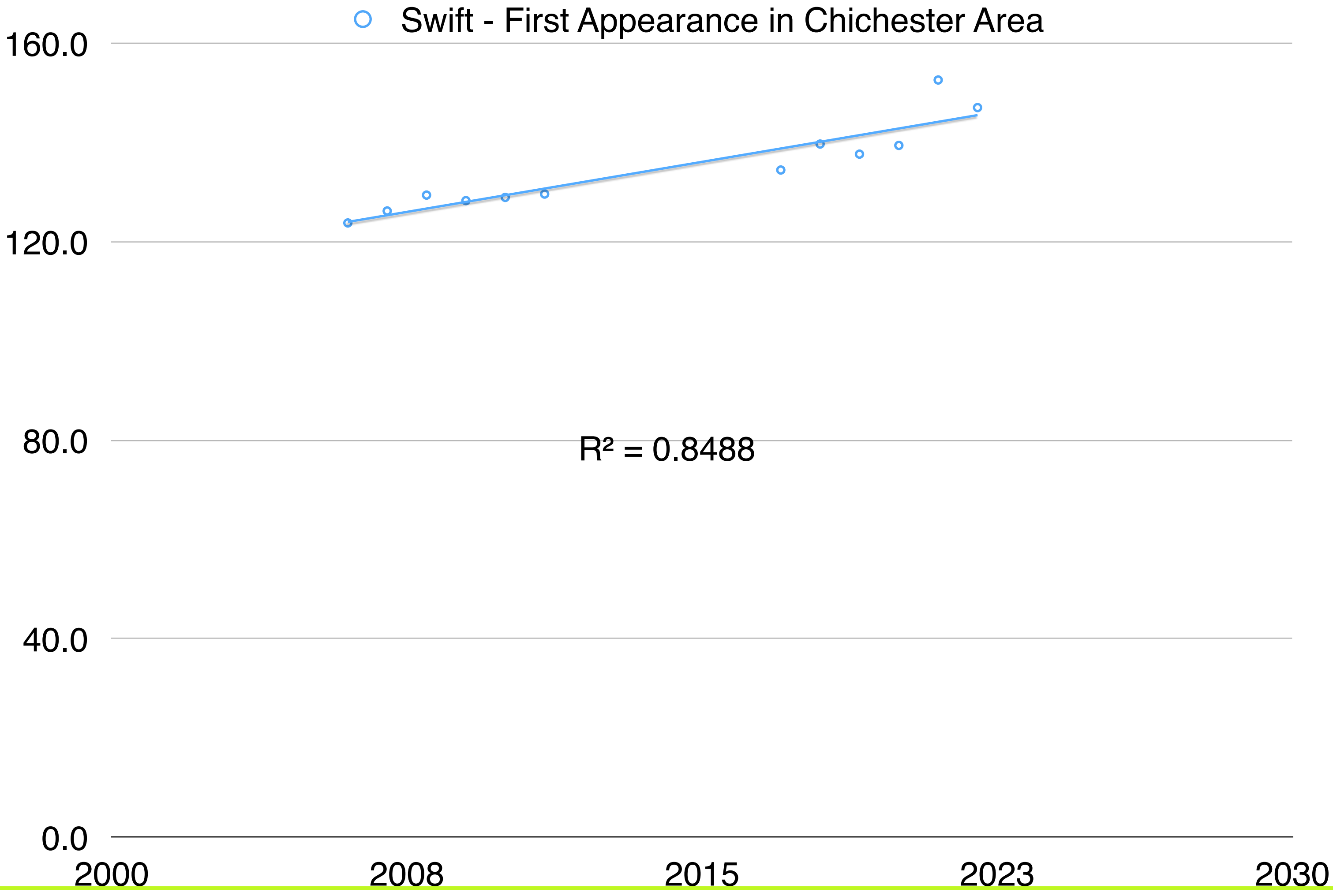
# Horse Chestnut



# Large Red Damselfly

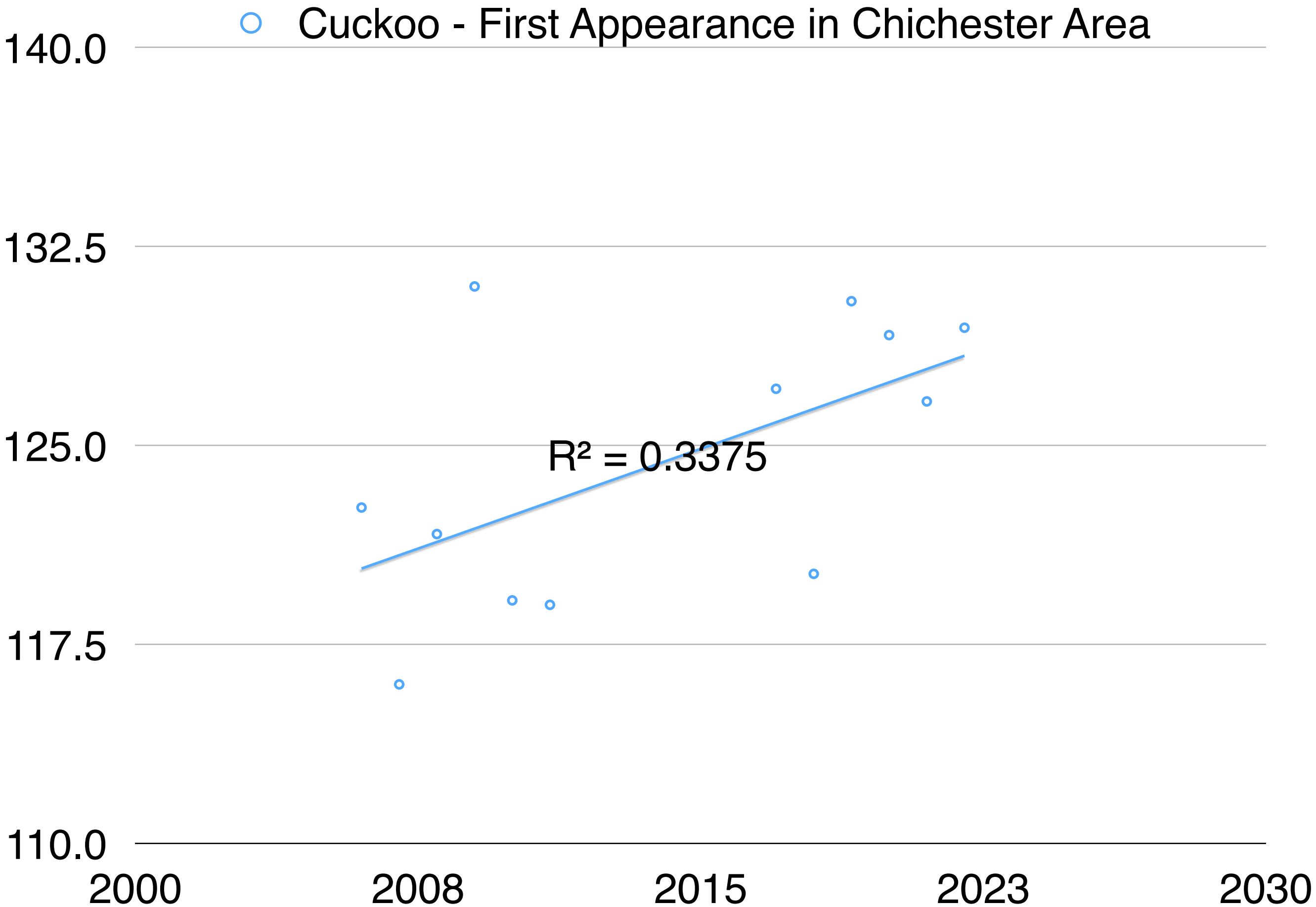


# Swift





# Cuckoo



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# 2022 Spring Climate

- What do the records show for the climatic conditions in early 2022 ?
  - “In the UK the 2022 spring was warmer than average, by up to 1.0 degC in most areas, largely due to daytime temperatures in March and night-time temperatures in May being higher than average” ([https://www.metoffice.gov.uk/binaries/content/assets/metofficegovuk/pdf/weather/learn-about/uk-past-events/summaries/uk\\_monthly\\_climate\\_summary\\_spring\\_2022.pdf](https://www.metoffice.gov.uk/binaries/content/assets/metofficegovuk/pdf/weather/learn-about/uk-past-events/summaries/uk_monthly_climate_summary_spring_2022.pdf)).
  - The average temperature in the UK continues to increase “All of the UK's top 10 warmest years, in the time series from 1884, have occurred this century” - <https://www.metoffice.gov.uk/research/climate/maps-and-data/about/state-of-climate>



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# Comments

- Unlike the Spring of 2021, the Spring of 2022 was warmer than the long term average.
  - Of our 12 indicator species 7 were earlier than average in 2021, 2 were about the same, and 3 were later.
  - Over the course of our study 3 events continue to occur a lot earlier in the year, (Primrose flowering, Chiff Chaff, Frog spawn).
  - Over the course of our study 3 events continue to occur a lot later, (Swallows, Swifts and Cuckoos).
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