



Who observes phenology?

Nature's Notebook video series





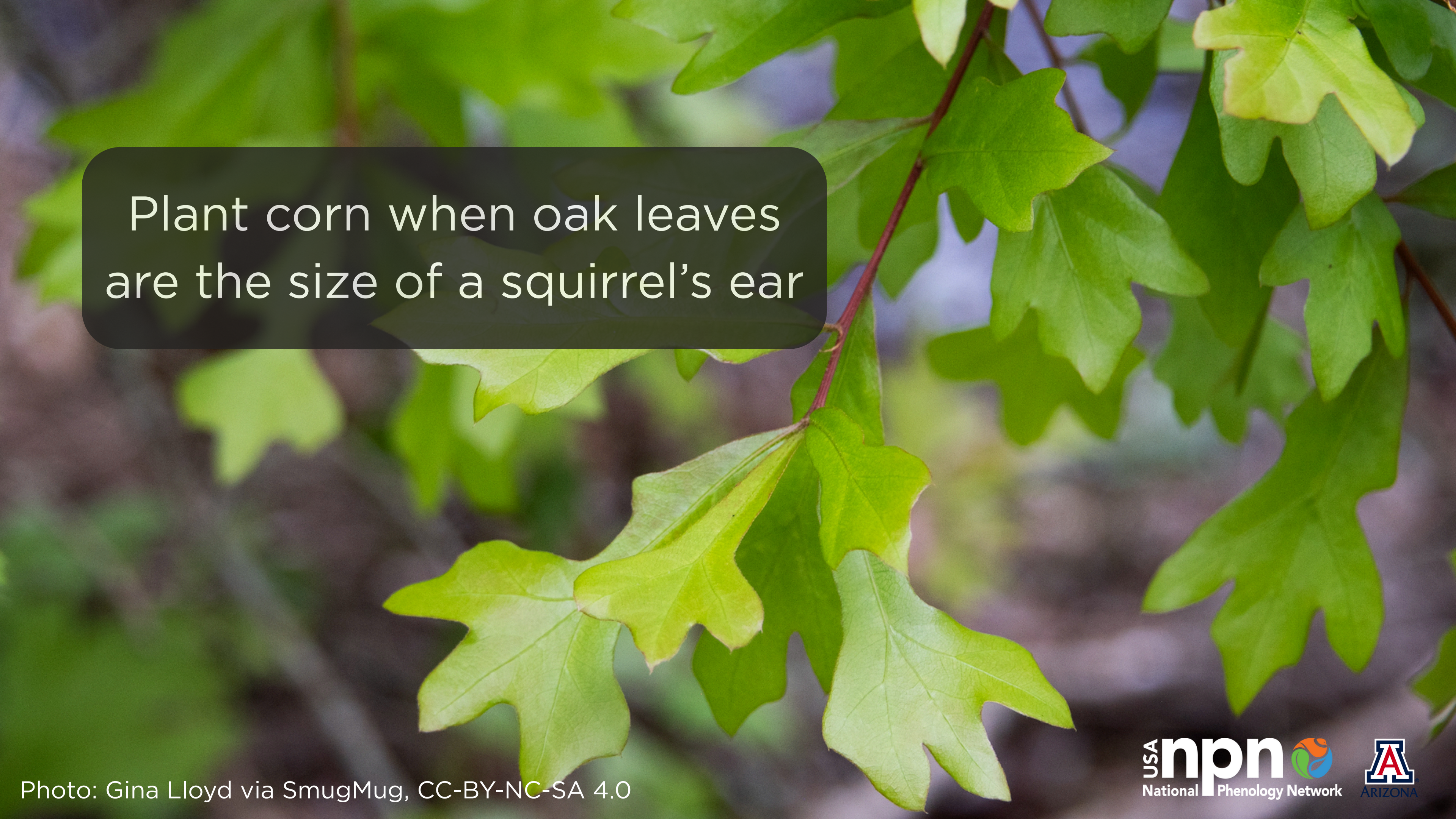
Photo: Brian F Powell



Photo: Elizabeth Murray English via Unsplash, Public Domain



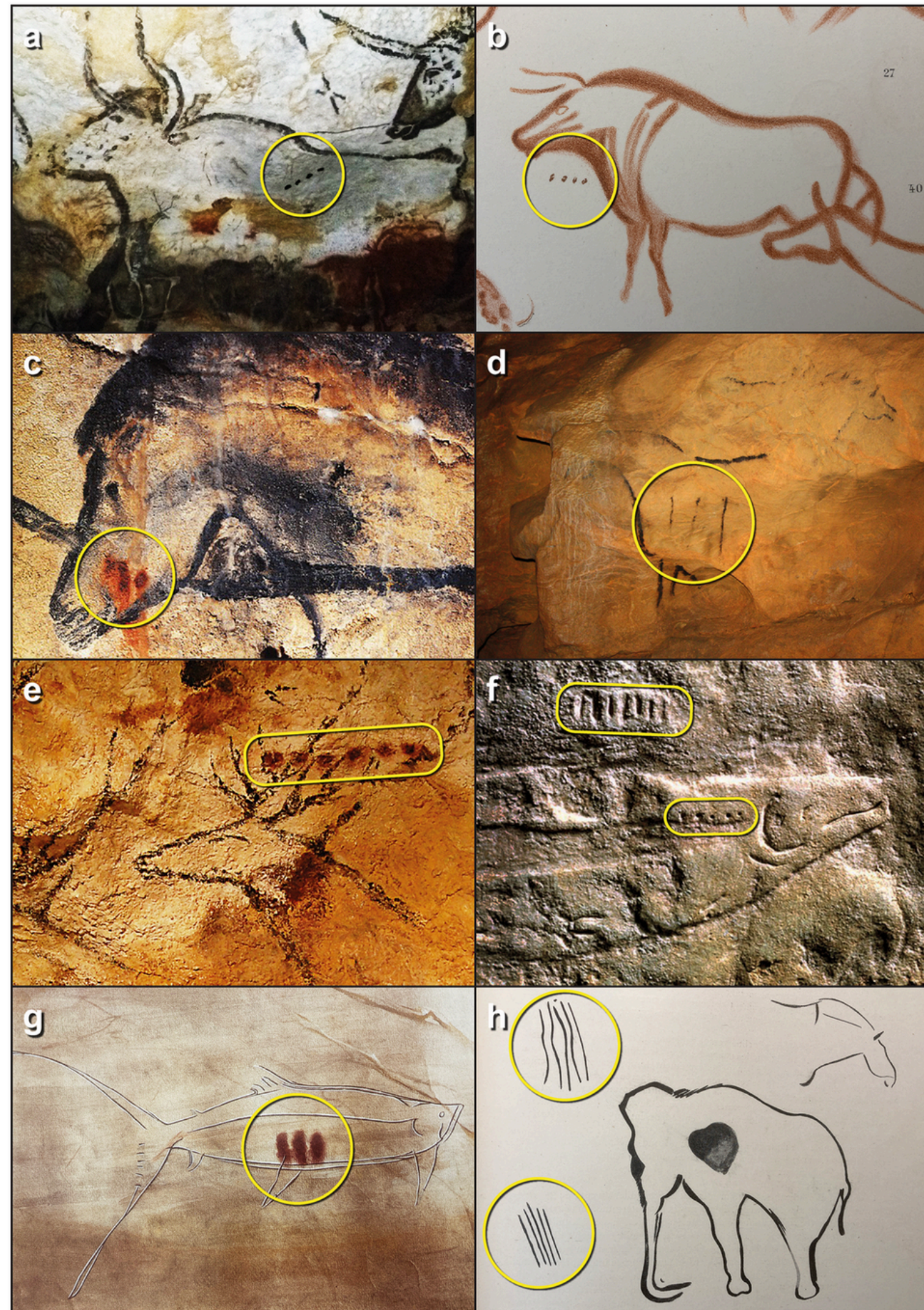
Photo: Jan Huber via Unsplash, Public Domain



Plant corn when oak leaves
are the size of a squirrel's ear



Photo: Luc-Henri Fage via Wikipedia, Public Domain



Credit: Bacon et al. 2023,
*Cambridge Archaeological
Journal*

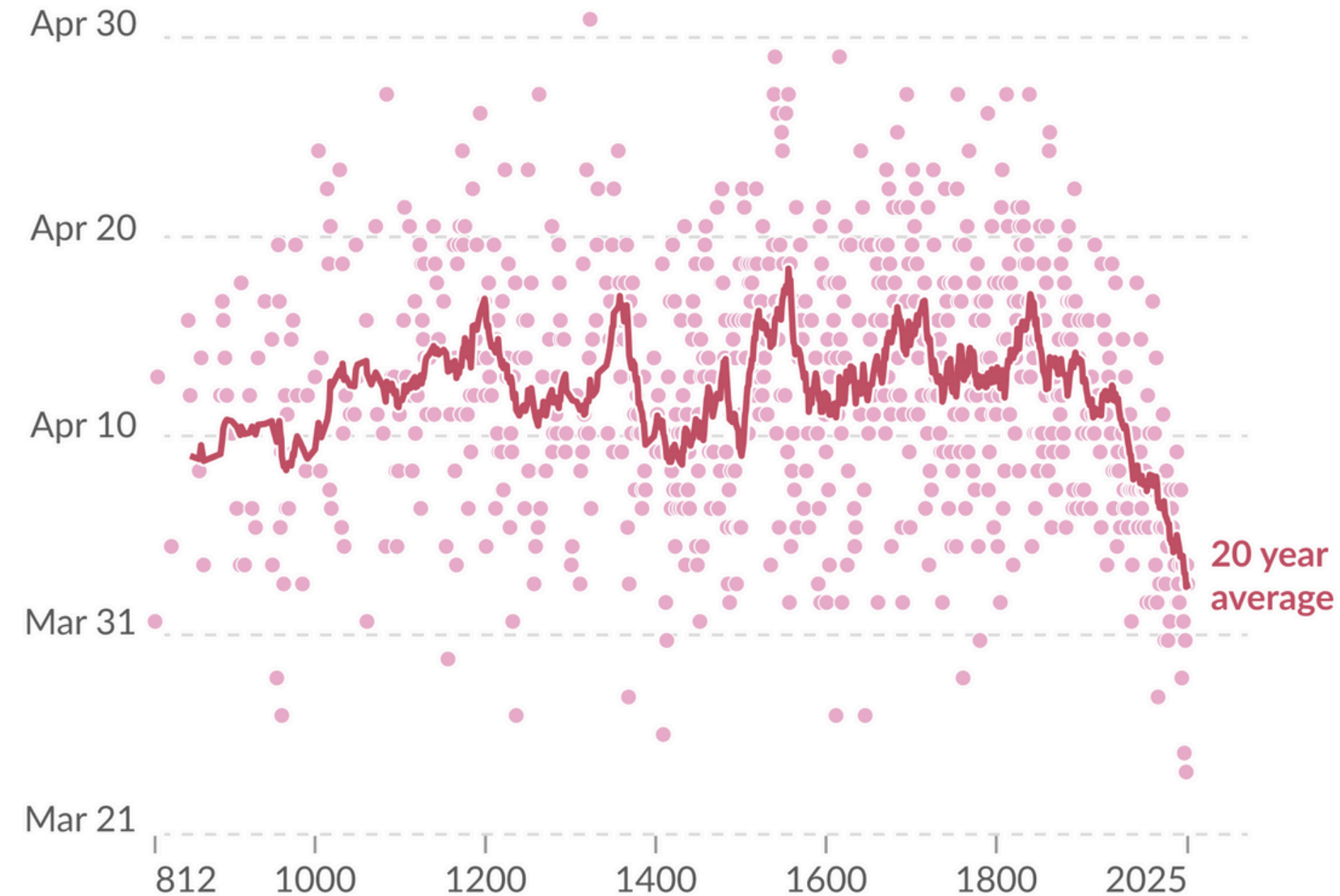


Photo: Galen Crout via Unsplash, Public Domain

Cherry trees have been blossoming earlier due to warmer spring temperatures

Our World
in Data

Date of peak cherry tree (*Prunus jamasakura*) blossom in Kyoto, Japan.



Note: The 20-year average is calculated when there are at least five years with data in the 20-year window. The dates are off by one day on leap years.

Data source: Yasuyuki Aono (2021; 2025)

CC BY

Credit: ourworldindata.org/data-insights/japans-cherry-trees-have-been-blossoming-earlier-due-to-warmer-spring-temperatures

Credit: Ephraim Chamber's 1728
Cyclopaedia via Wikipedia, Public
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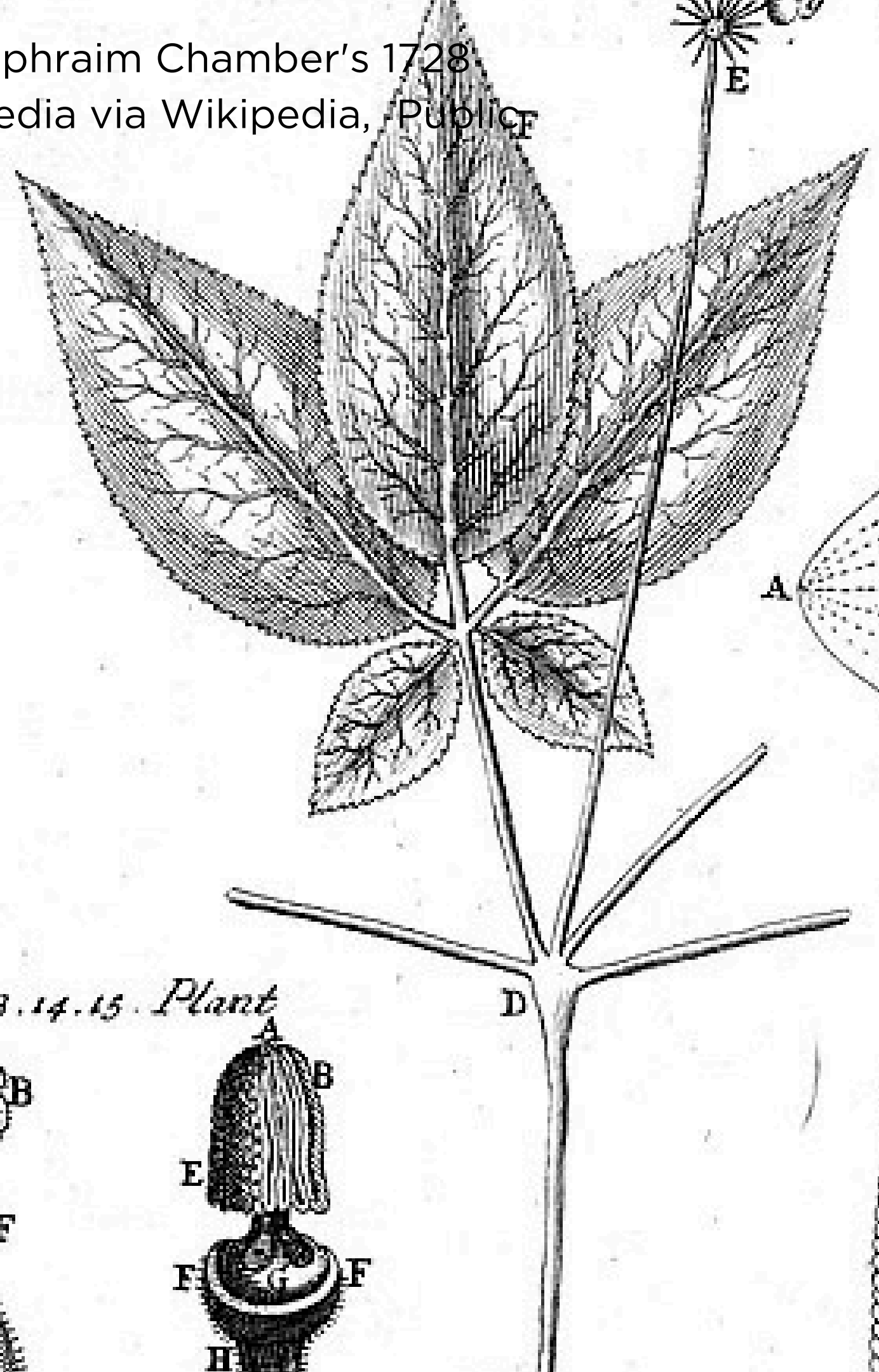


Fig. 11. Voice

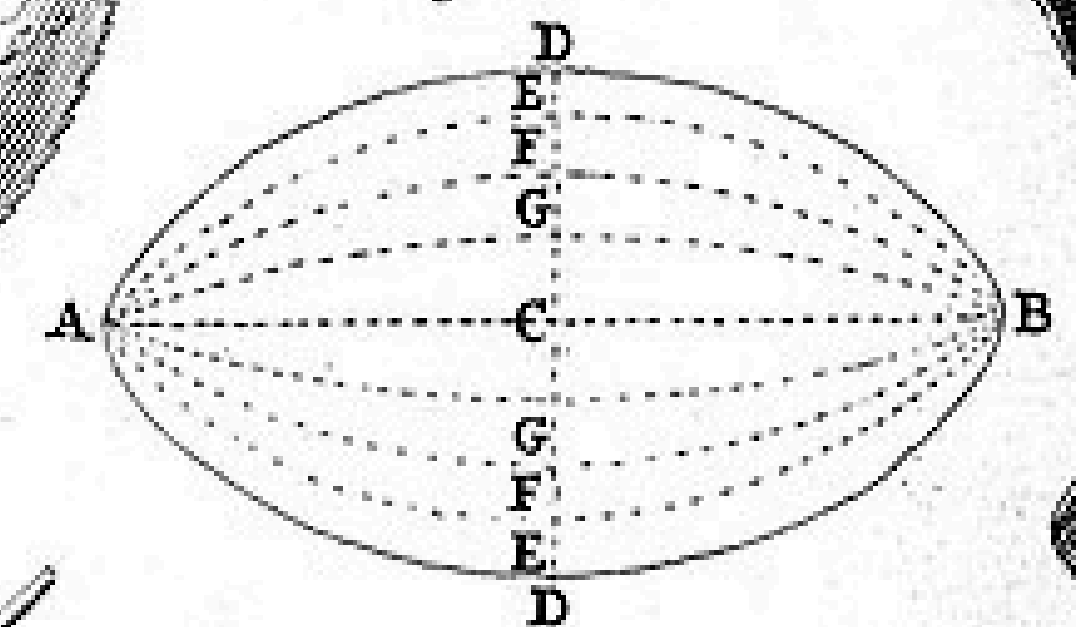


Fig. 12. Trochites

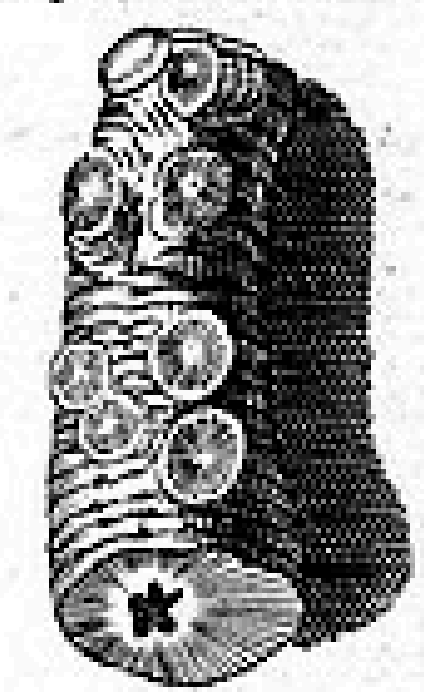
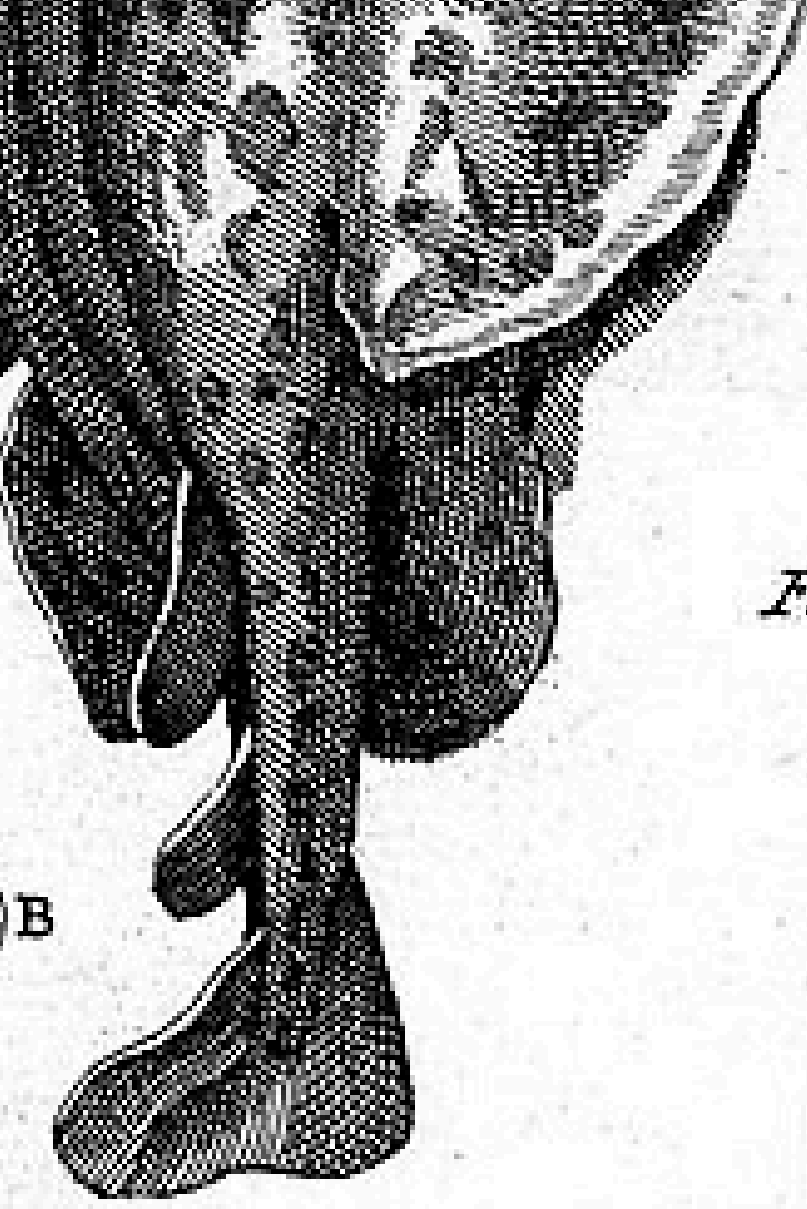


Fig. 12. Trochites



Fig. 12. Trochites



Fig. 13. 14. 15. Plant

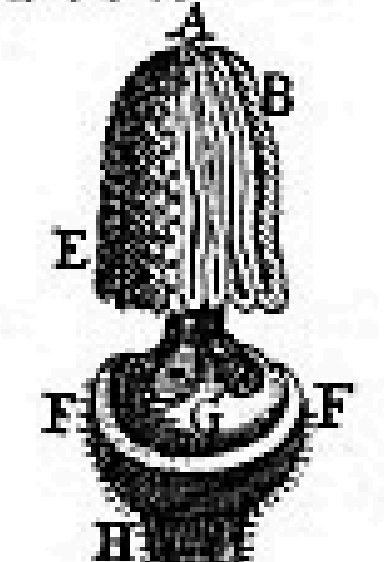
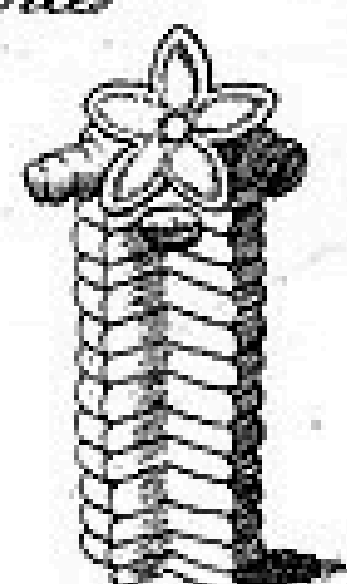
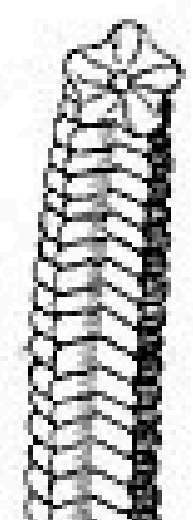


Fig. 14. Astroites



René de Réaumur



Photo: Metzeroth via Wikipedia, Public Domain

Franklin Hough



Photo: Library of Congress via Wikipedia, Public Domain

phe·nol·o·gy

Charles Morren

The study of
recurring
seasonal cycles
of plants and
animals

Photo: Walter Damry via
Wikipedia, Public Domain

phaínō

to show, bring to light, appear

Monticello



Photo: Billy Hathorn via Wikipedia, CC BY-SA 3.0



Thomas Jefferson

Photo: Library of Congress via Unsplash, Public Domain

Henry David Thoreau



Credit: Benjamin D. Maxham via Wikipedia, Public Domain

Aldo Leopold



Photo: USDA via Wikipedia, Public Domain

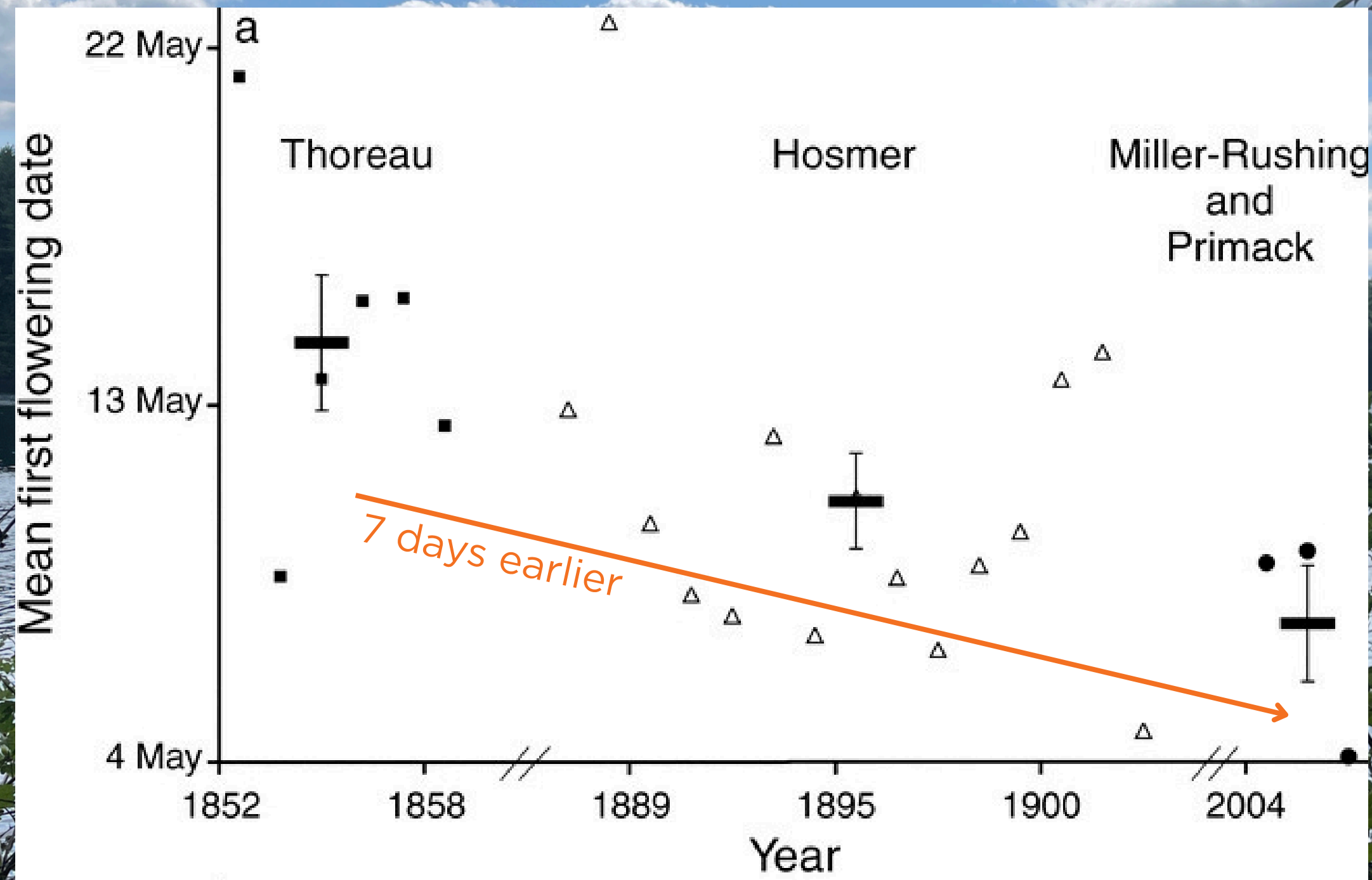
Nina Leopold Bradley

Photo: Wisconsin Conservation Hall of Fame, CC-BY-NC-ND 3.0

Lucy Templeton



Photo: KNS Archive



Credit: Primack and Miller-Rushing 2012, *BioScience*

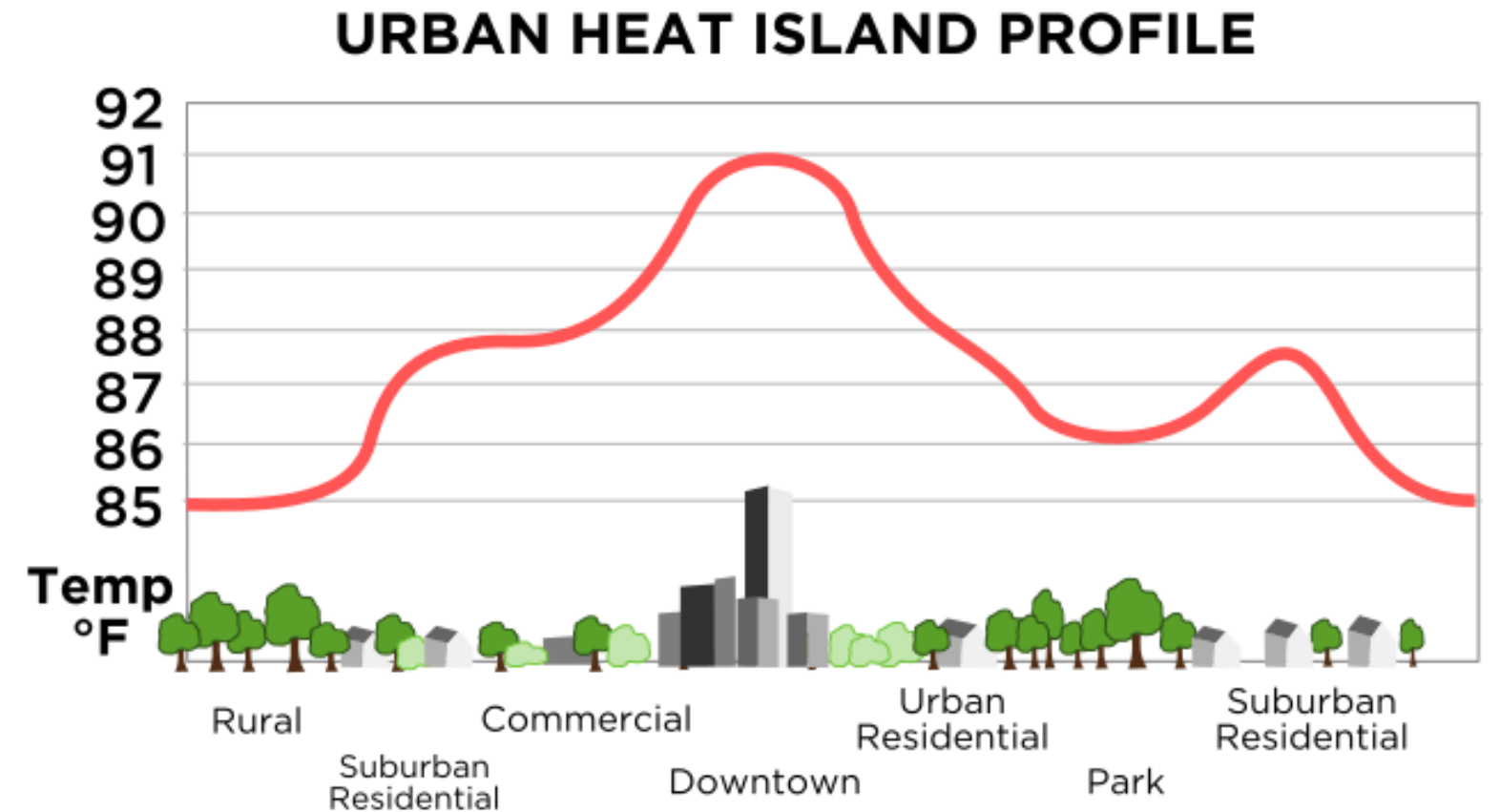
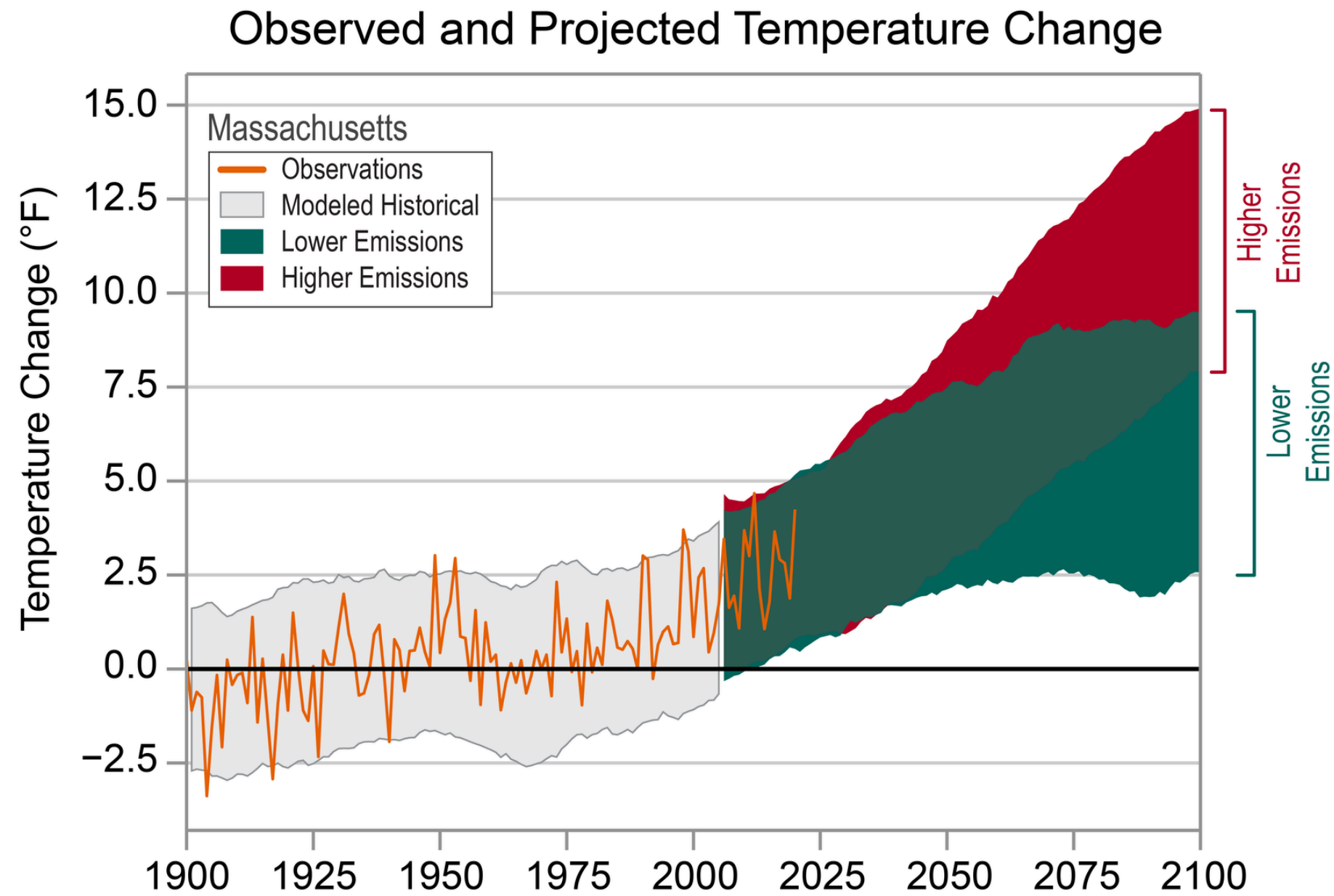
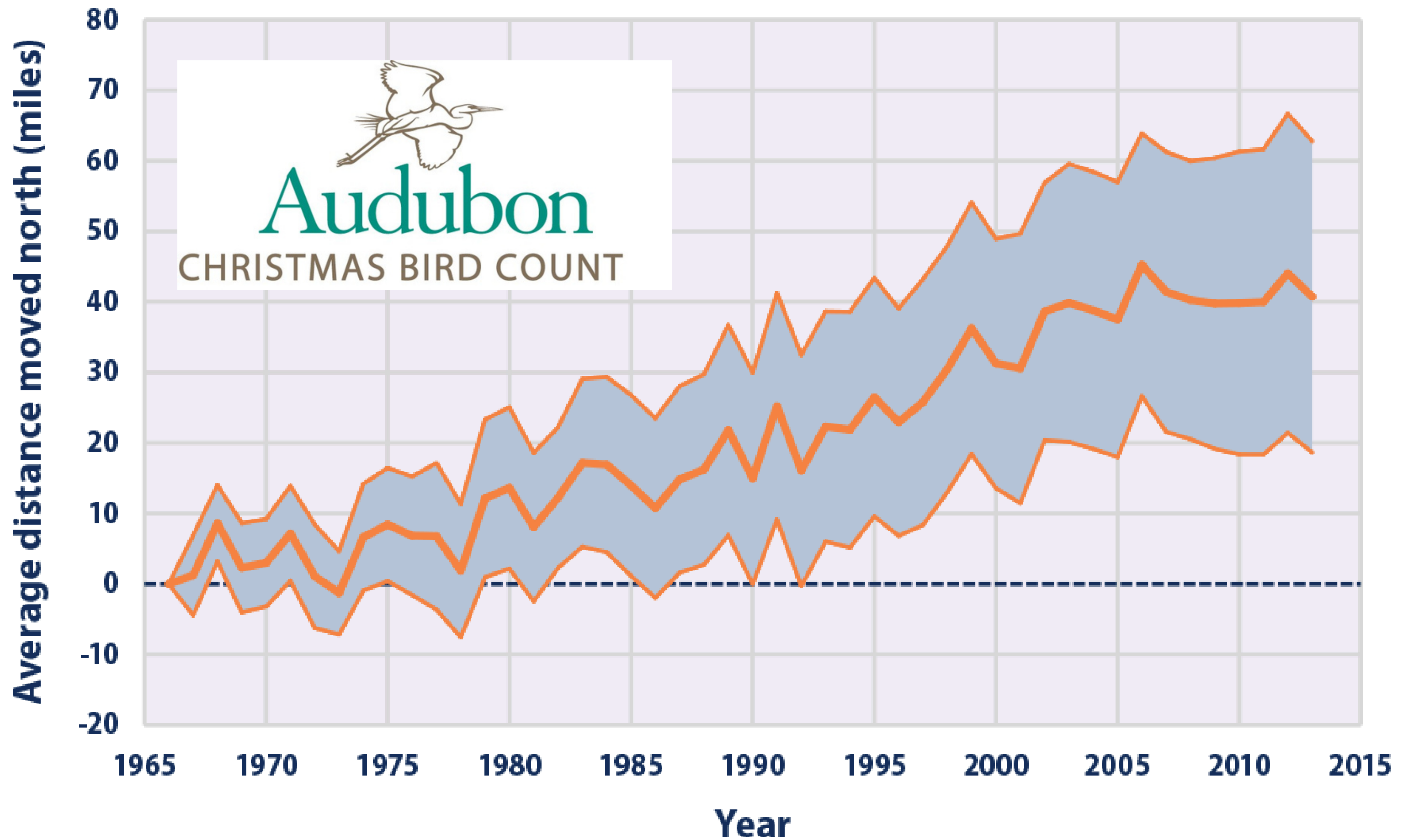


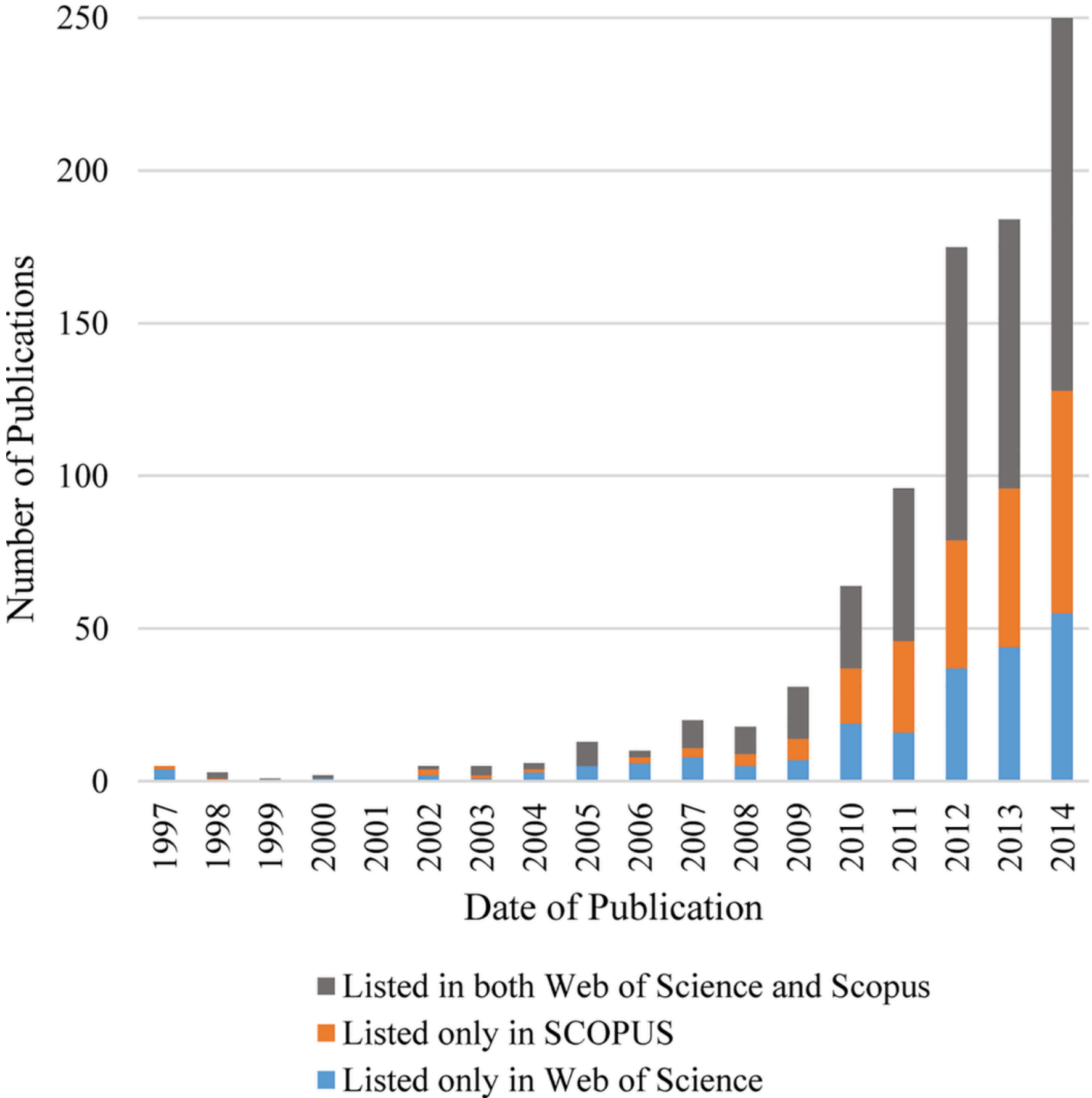


Photo: Brian F. Powell



Credit: www.epa.gov/climate-indicators/climate-change-indicators-bird-wintering-ranges

Number of publications featuring citizen science



Credit: Follet and Strezov 2015, *PLoS ONE*

A photograph of three people in a natural, brushy environment. On the left, a woman wearing a wide-brimmed straw hat and a blue and white plaid shirt is smiling and looking towards the center. In the middle, another person wearing a white bucket hat and a red and black plaid shirt is seen from the back, looking down at a plant. On the right, a man wearing a light-colored fedora and a light blue button-down shirt is smiling and looking down at the same plant. They are all gathered around a small, thin plant with dry, feathery seed heads. The background consists of various shrubs and trees under bright sunlight.

“Quality of data collected by volunteers, on a project-by-project basis, has generally been found as reliable as the data collected by professionals.”

Source: Cooper et al 2014, *PLoS ONE*; Photo: Brian F Powell

Volunteers contribute an estimated 2 and a half billion dollars each year to biodiversity research

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nature's
notebook
A project of the USA-NPN

Photo: Brian F Powell

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A project of the USA-NPN

Learn more at
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National Phenology Network


ARIZONA

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This video was created September 2025