



Reproduction patterns of Australian subtropical rainforests

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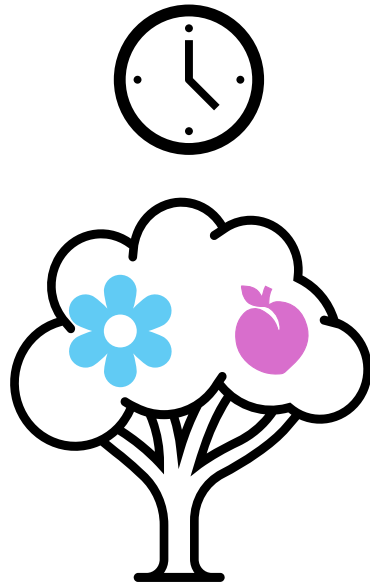
This work has taken place on
the lands of the

Gabi Gabi, Wakka Wakka,
Turrbal, Yagera, Yugambah,
and Bundjalung people



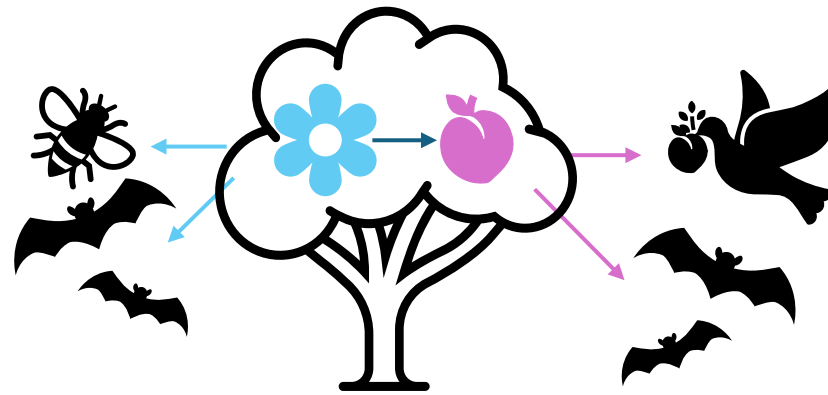


Reproductive phenology is the timing of flowering and fruiting



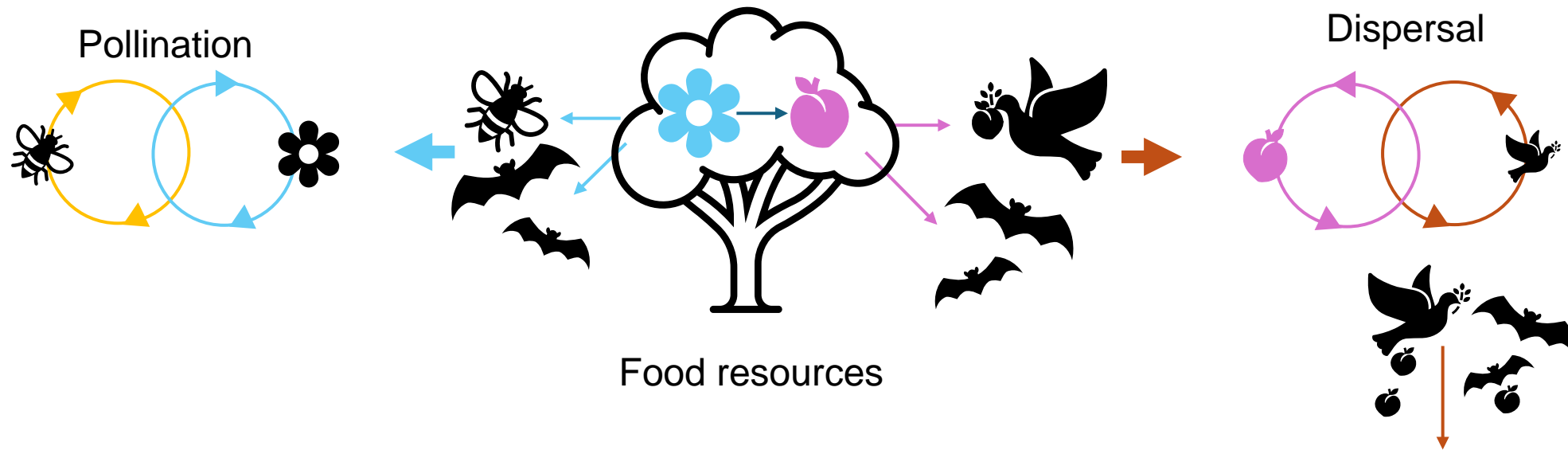
Phenology is linked to food-webs

Pollination

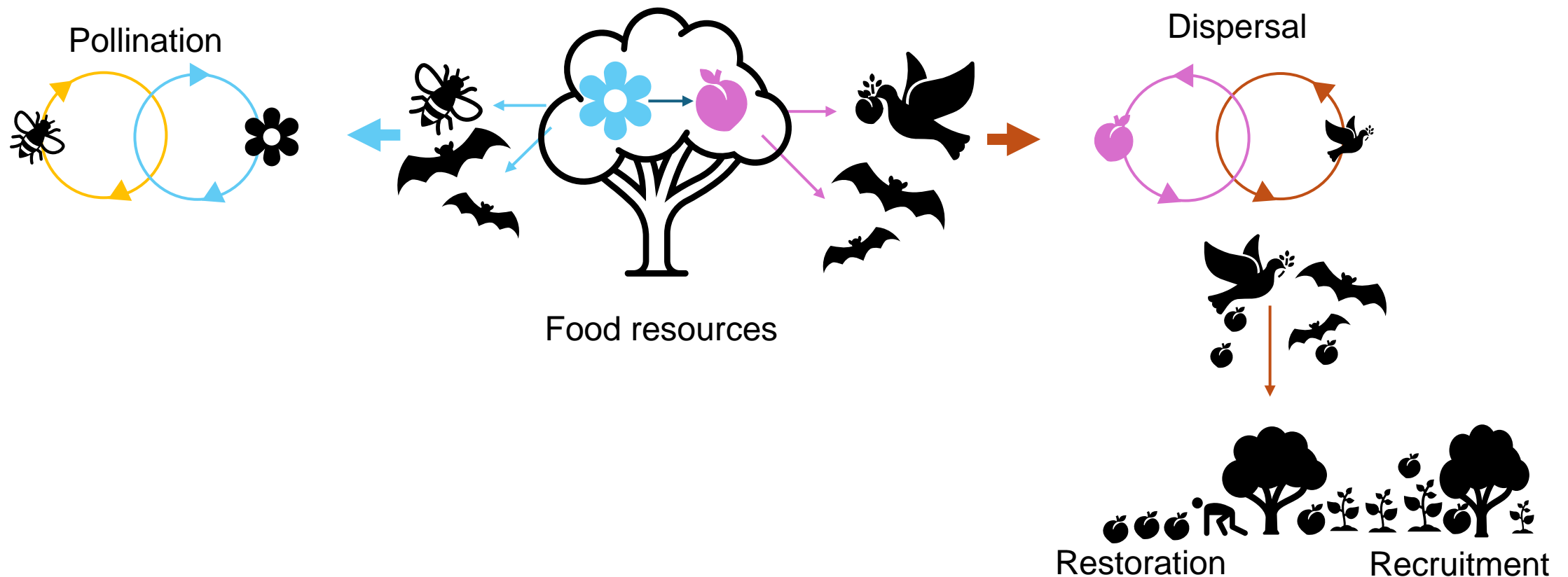


Dispersal

Phenology is linked to food-webs, ecological processes

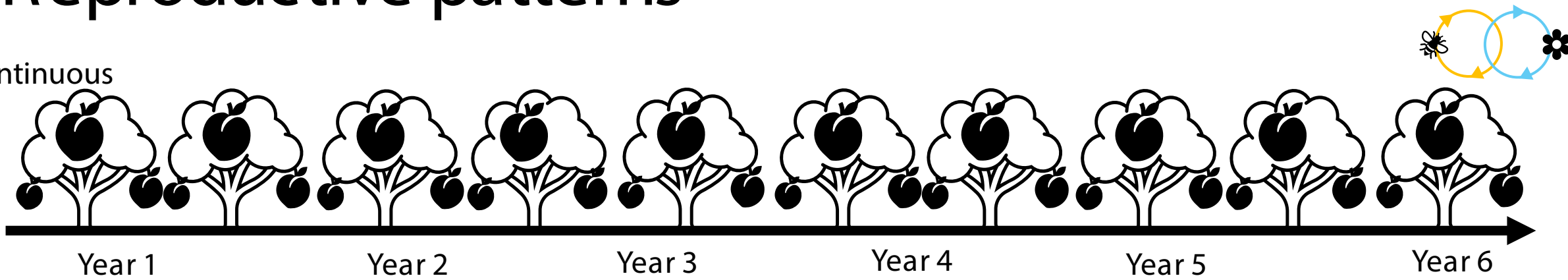


Phenology is linked to food-webs, ecological processes, and recruitment of future forests



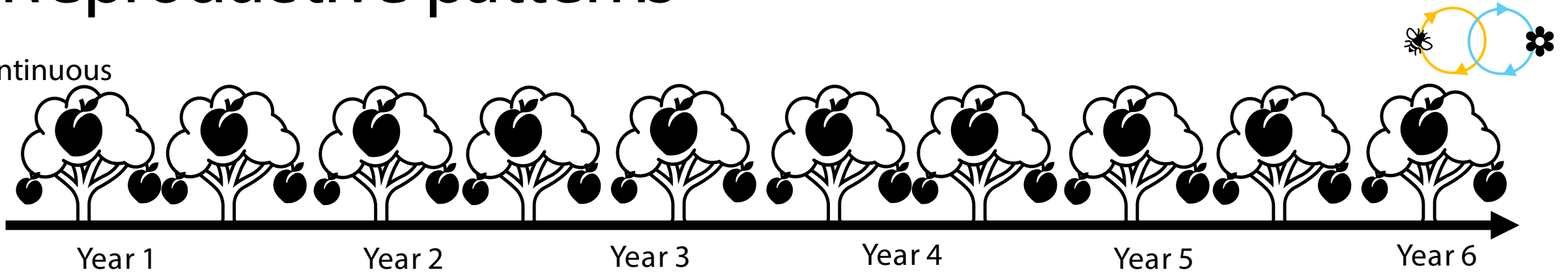
Reproductive patterns

Continuous

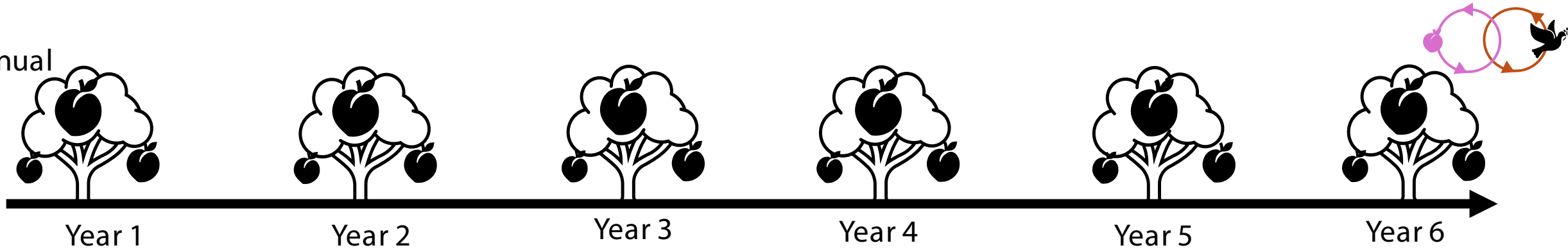


Reproductive patterns

Continuous

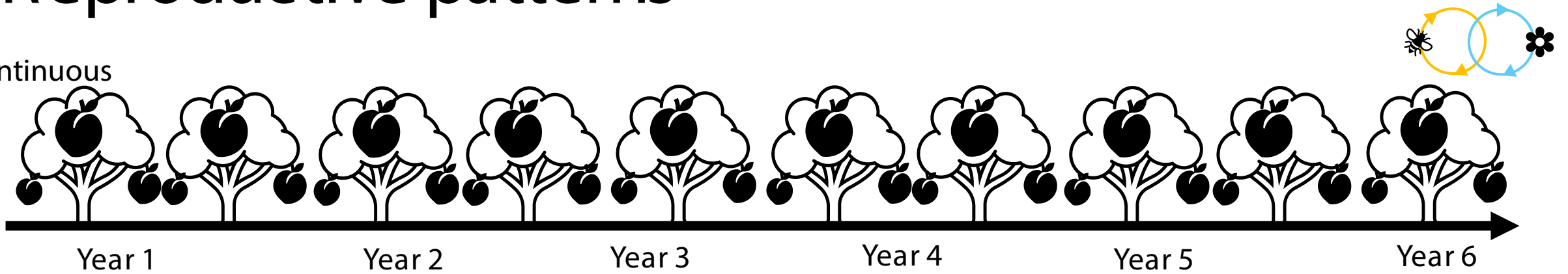


Annual

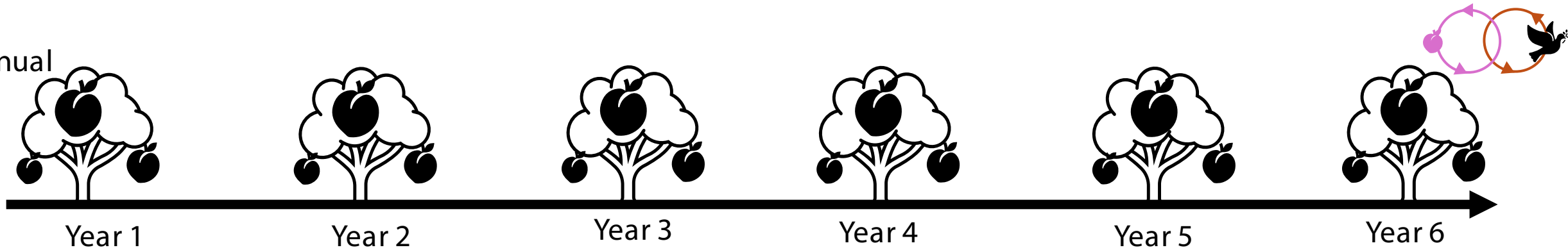


Reproductive patterns

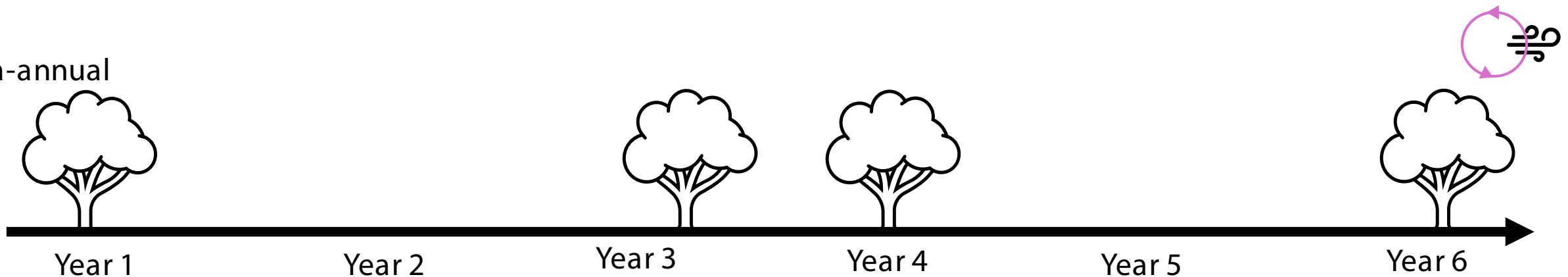
Continuous



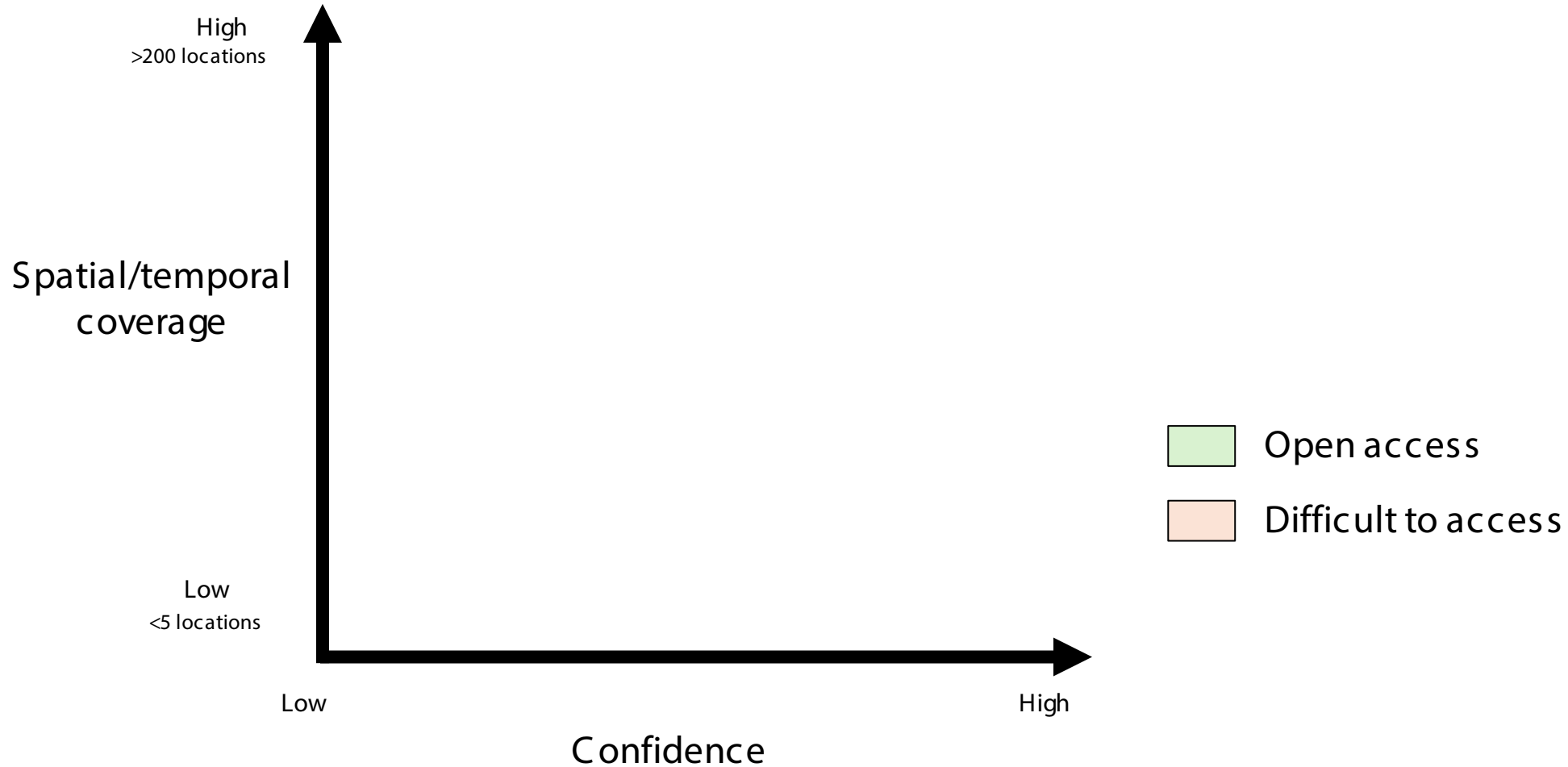
Annual



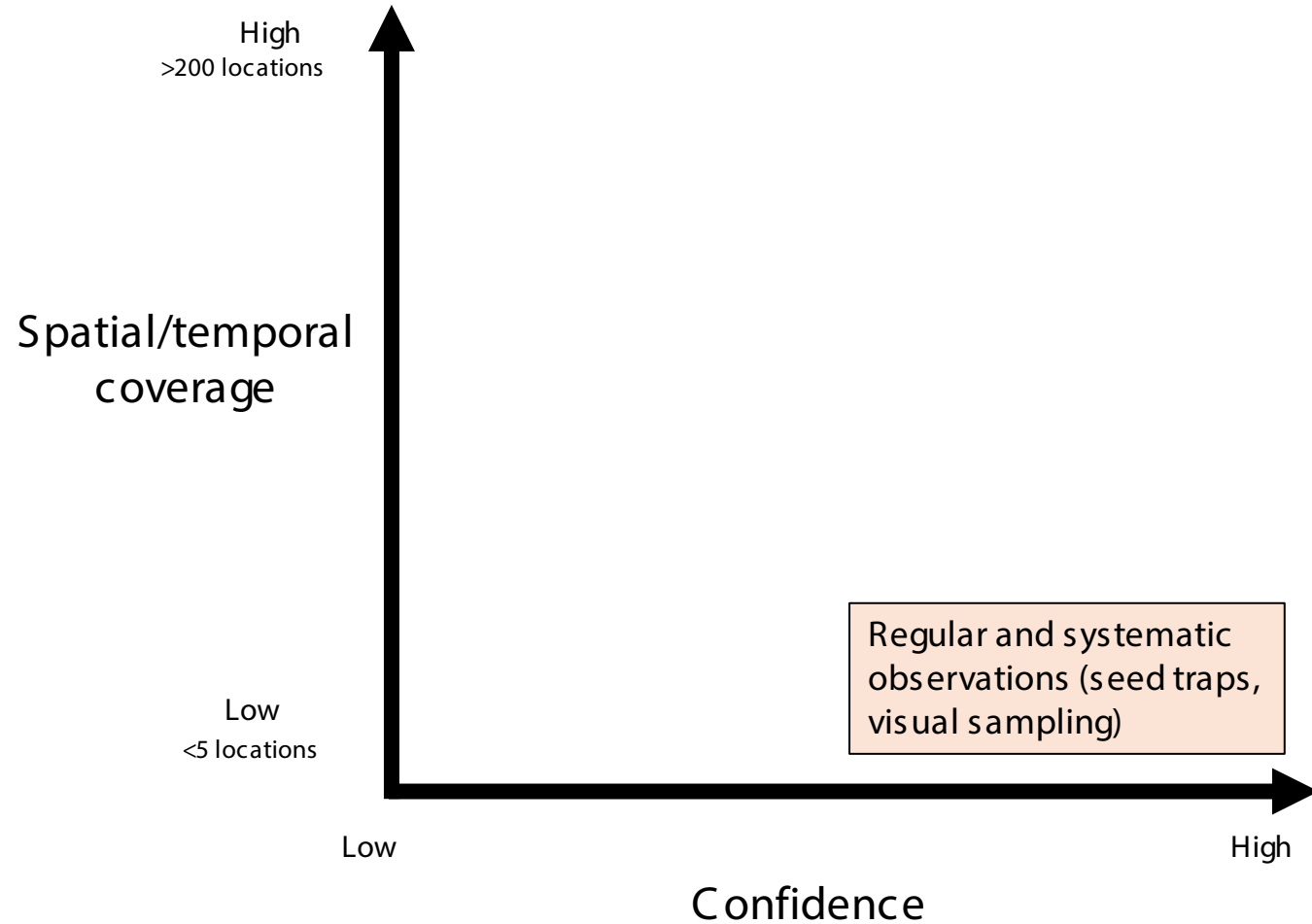
Supra-annual



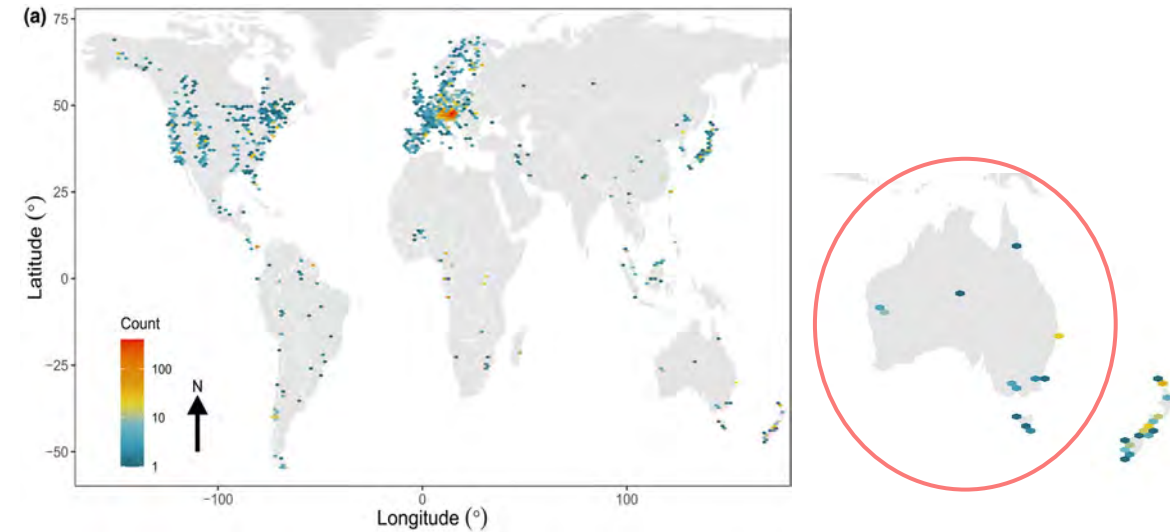
Types of phenology information



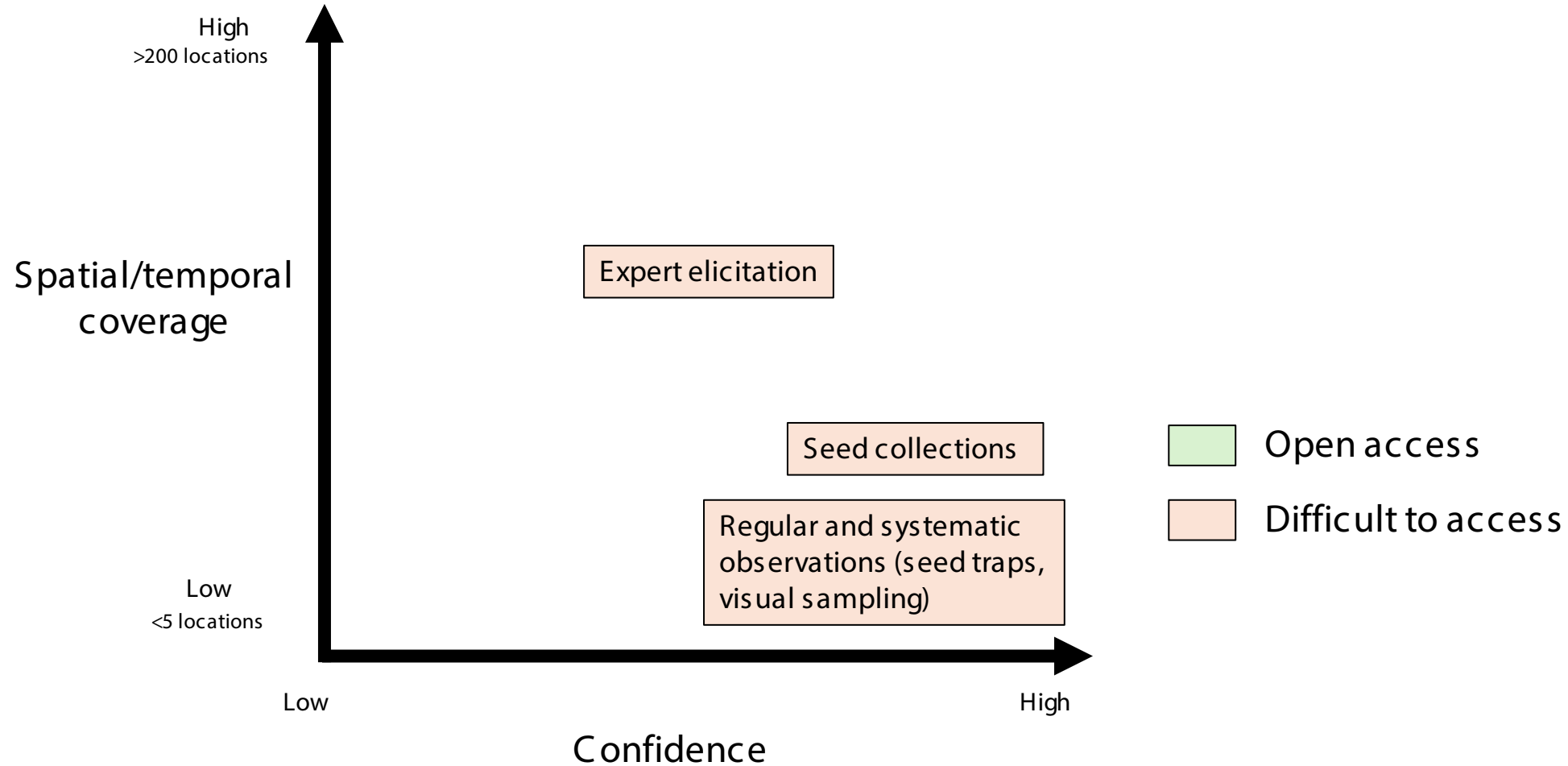
Types of phenology information



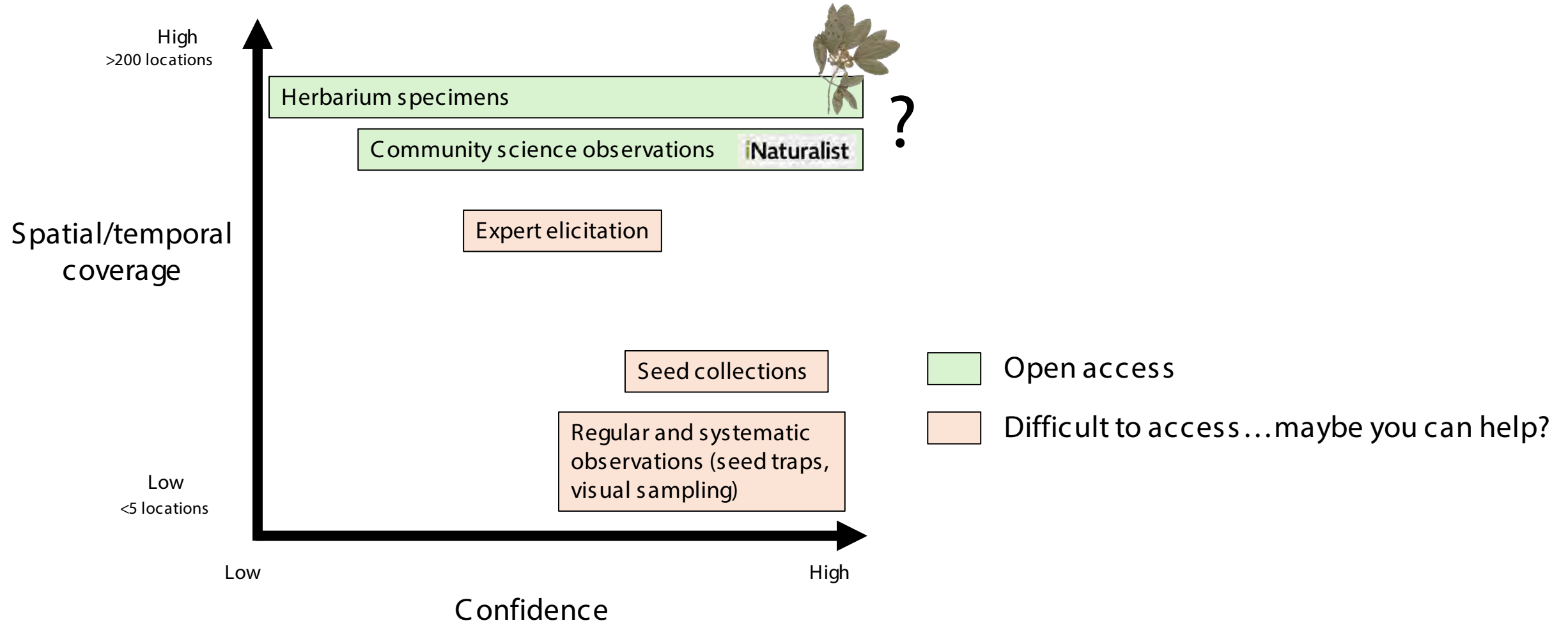
MASTREE+: Global time-series of plant reproductive effort



Types of phenology information

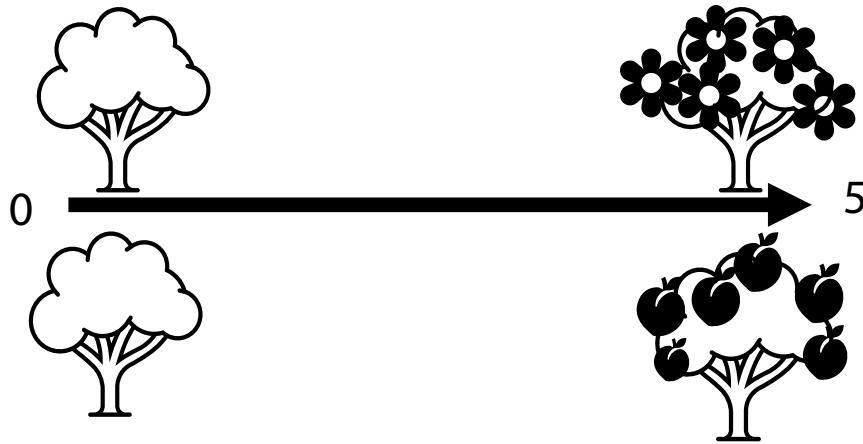


Types of phenology information



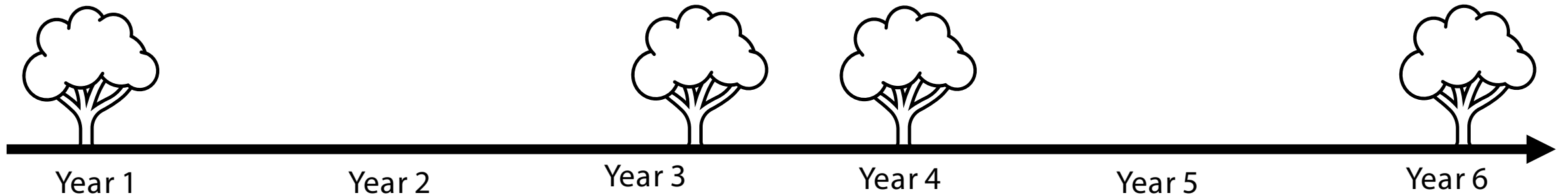
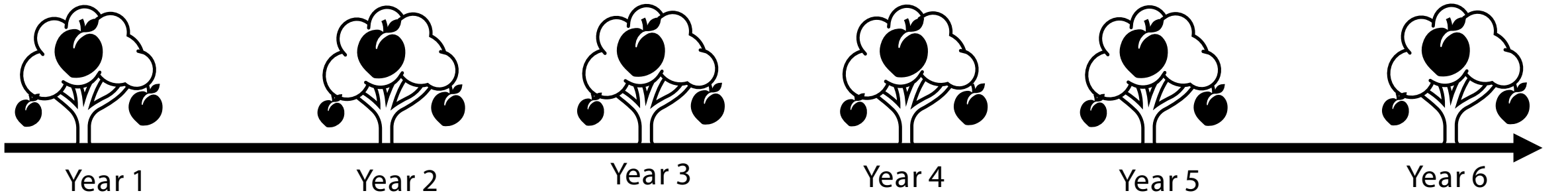
Bill McDonald's long-term phenology study at O'Reilly's Lamington NP

- 37 species, 1-9 individuals per species
- Monthly records of flowering and fruiting since 1998



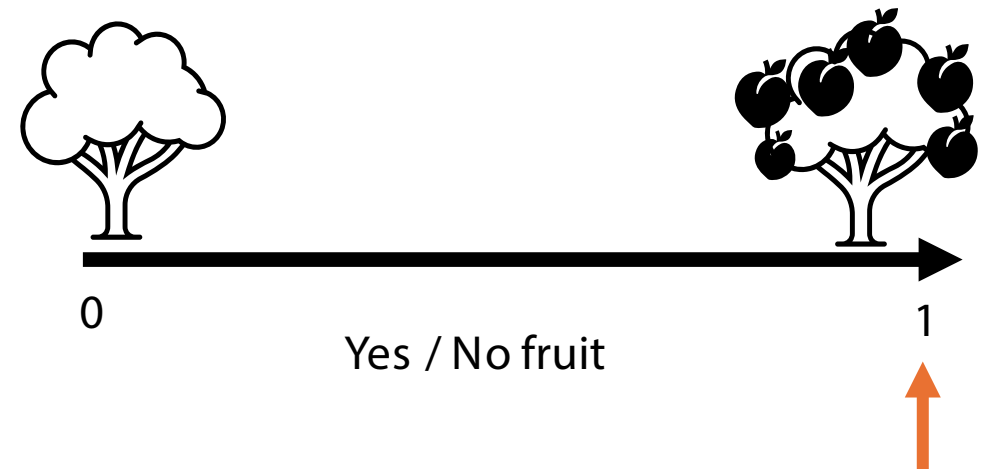
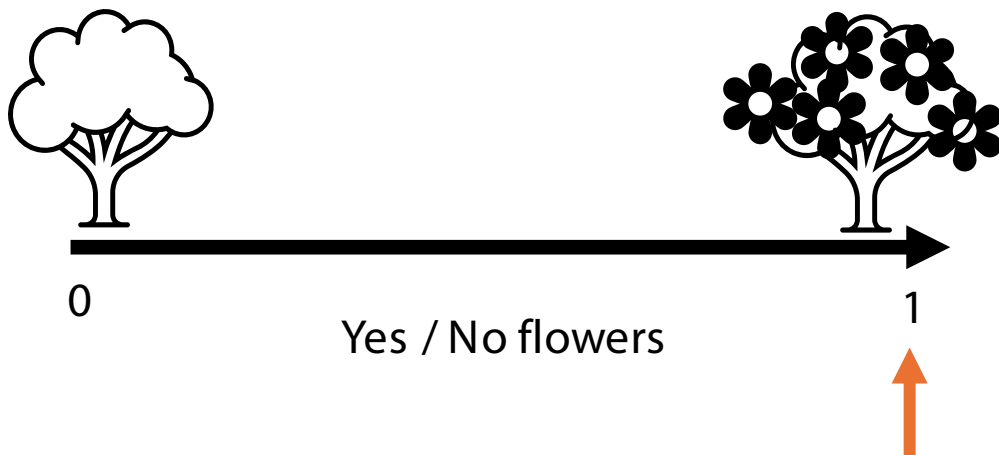
Project aim

Use herbarium records for phenology patterns?



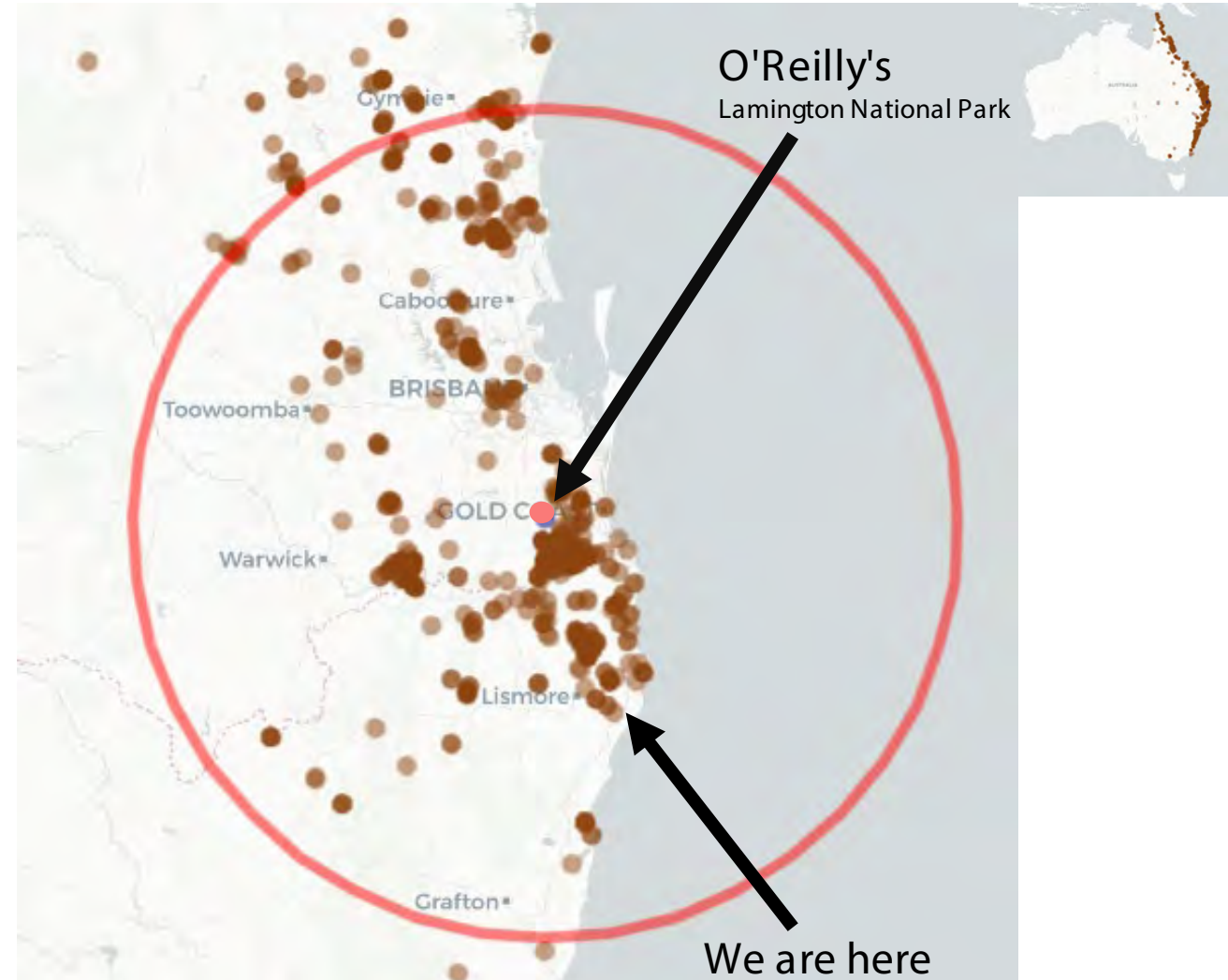
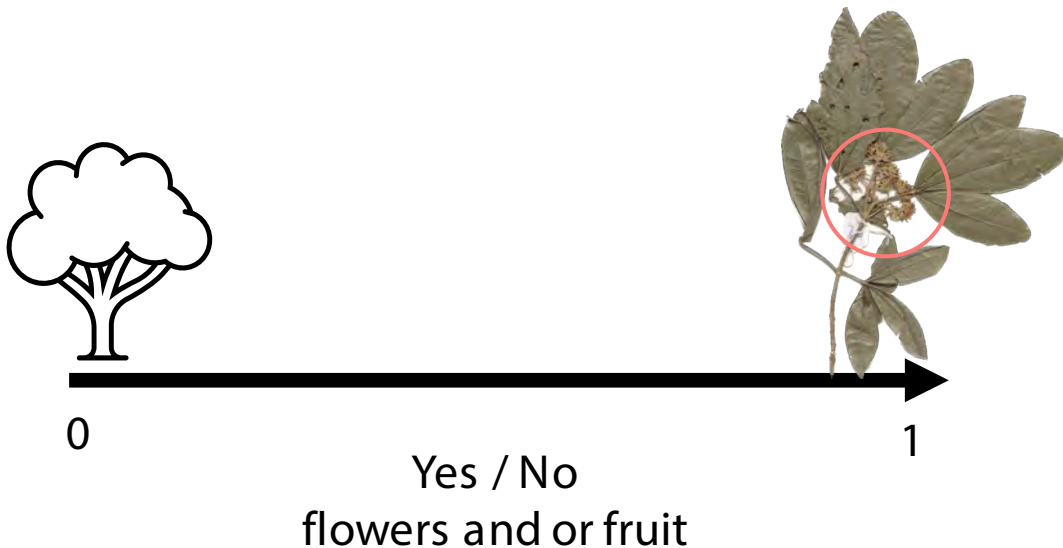
Methods: Bill's long-term phenology data

- Reproductive phenology variables
 - Binary score for intensity >2
 - Determined if species reproduced in a given year



Methods: Herbarium specimens since 1998

- 200km buffer to capture local population
- Only specimens with reproductive material

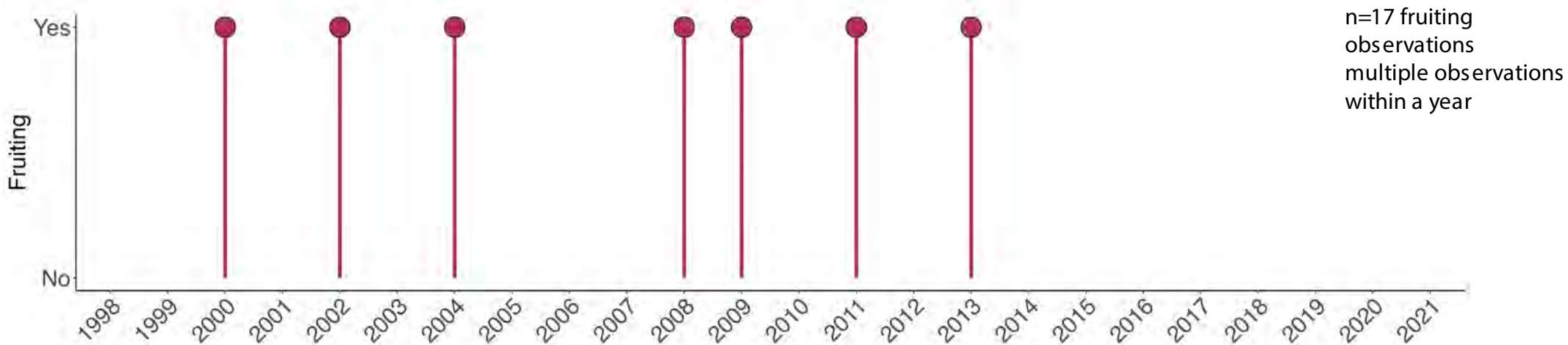
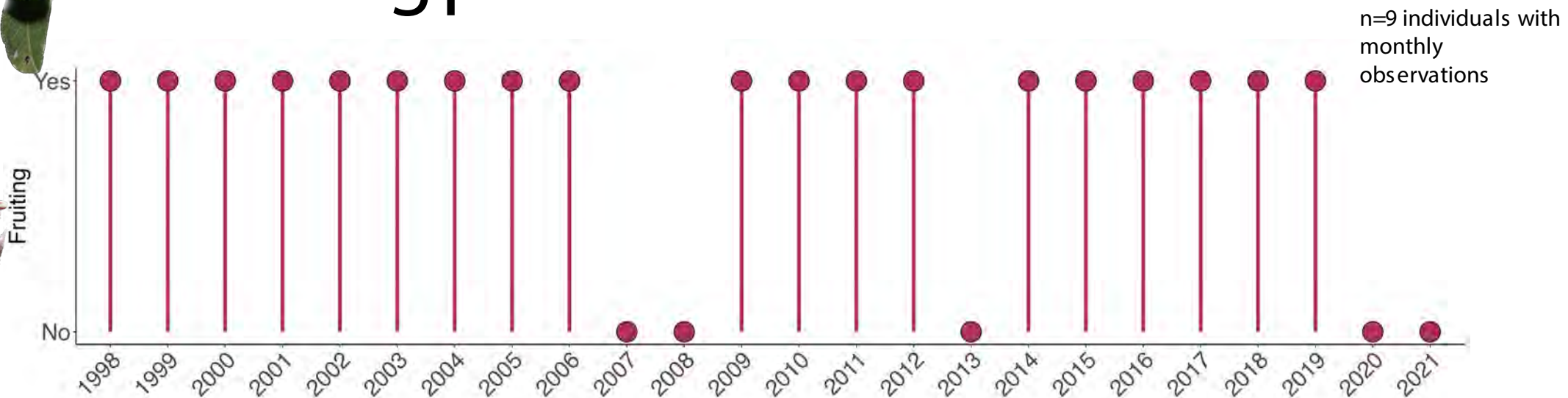


Results



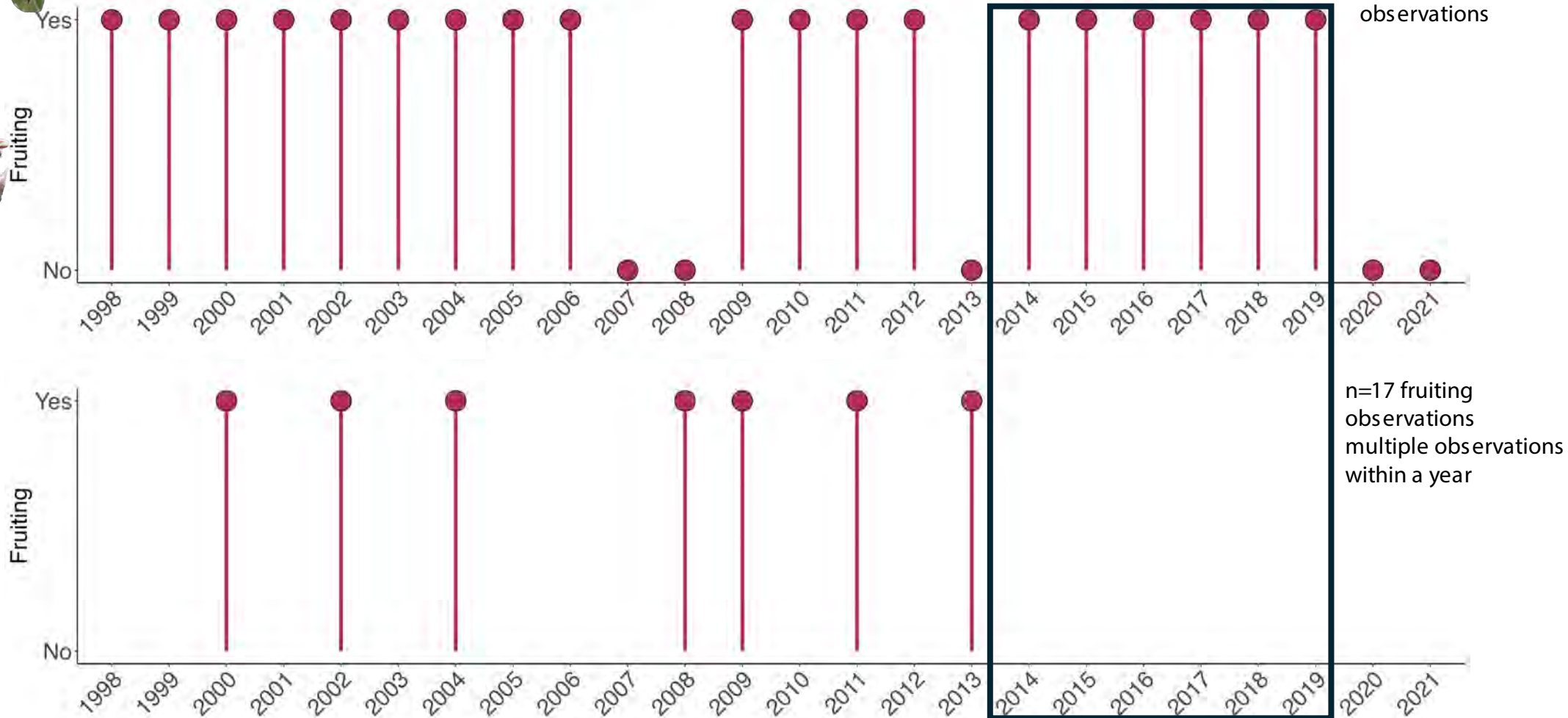


Acronychia pubescens fruiting pattern





Acronychia pubescens fruiting pattern

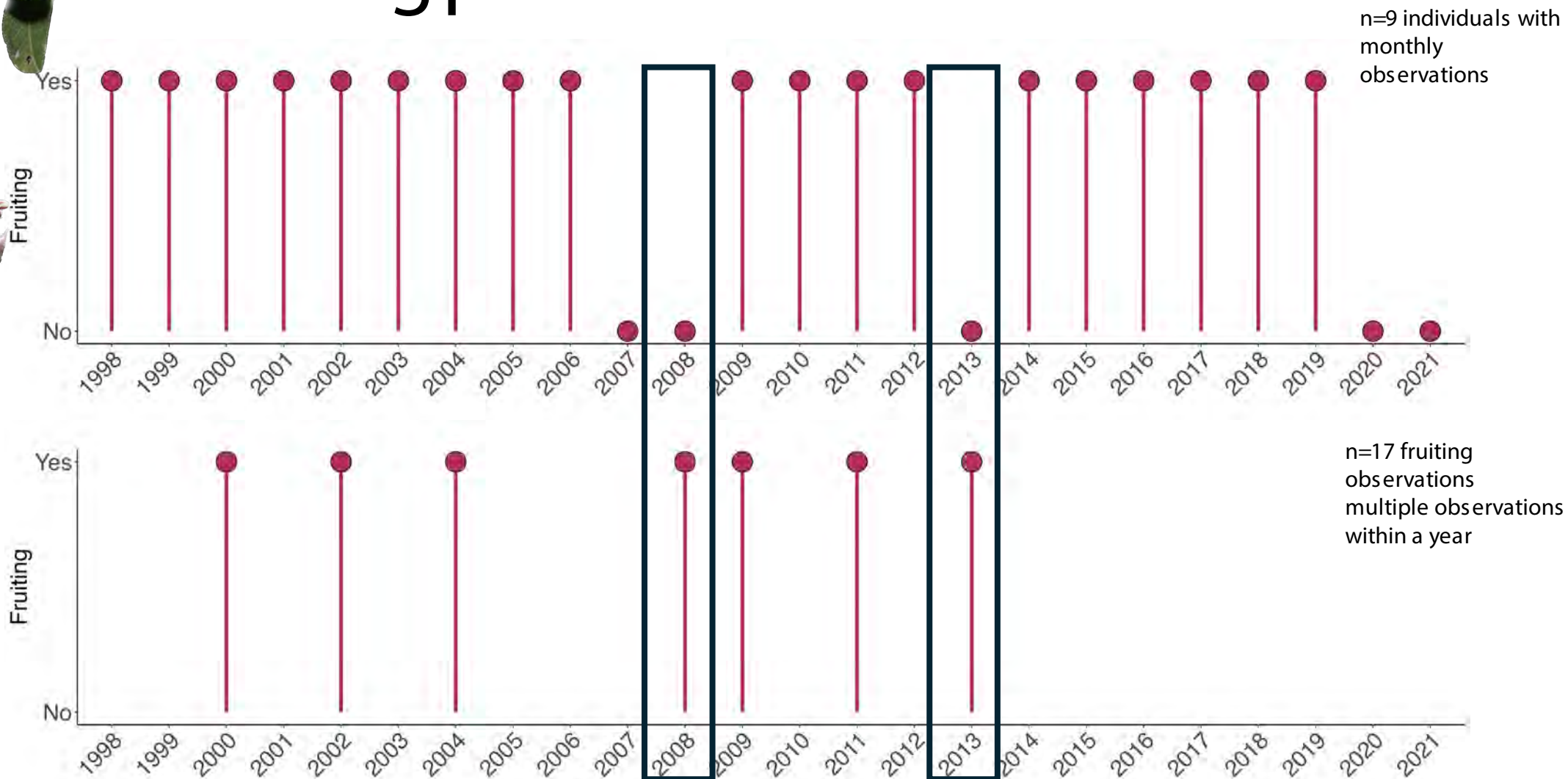


n=9 individuals with
monthly
observations

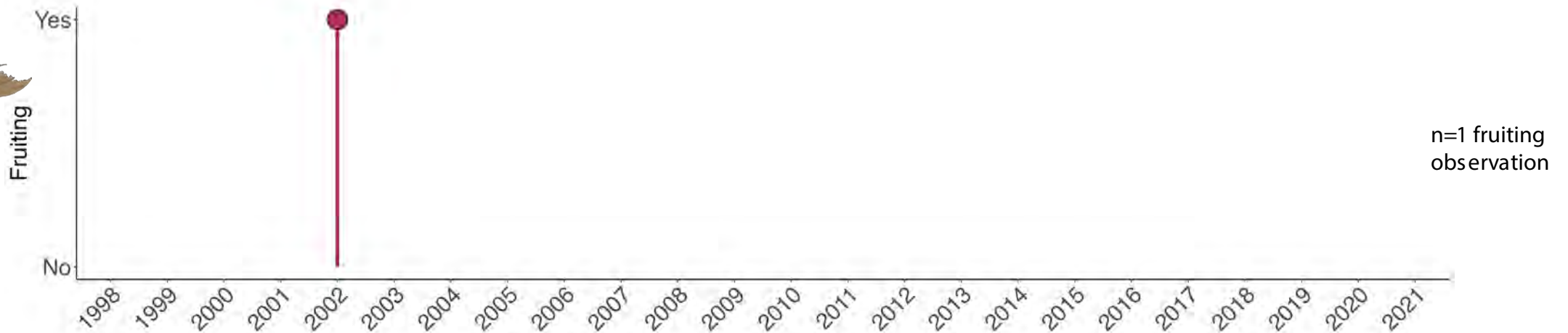
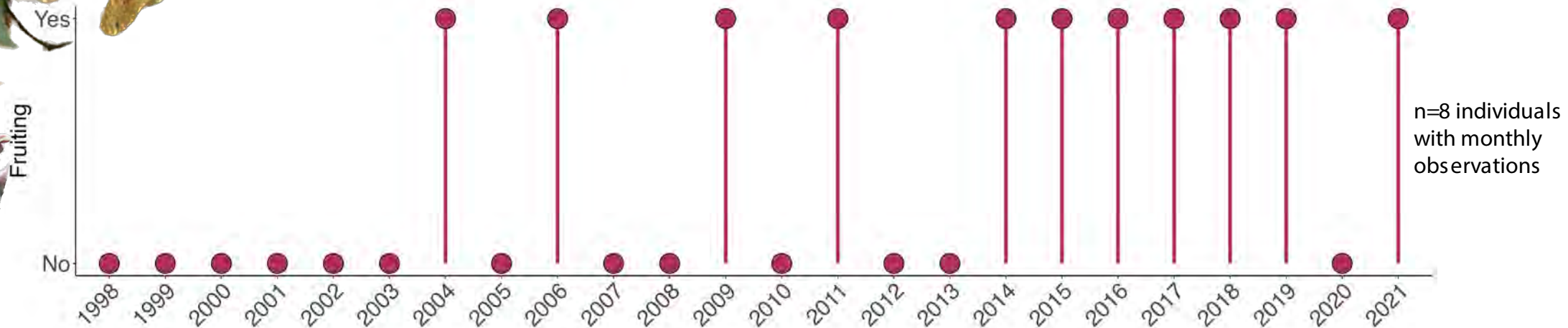
n=17 fruiting
observations
multiple observations
within a year



Acronychia pubescens fruiting pattern



Argyrodendron trifoliolatum fruiting pattern



In conclusion...I need more data!

- Herbarium data shows more sporadic reproduction than 'real life'
- Important resource for increasing the spatial and temporal coverage of phenology data
- Need more detailed field observations to verify them

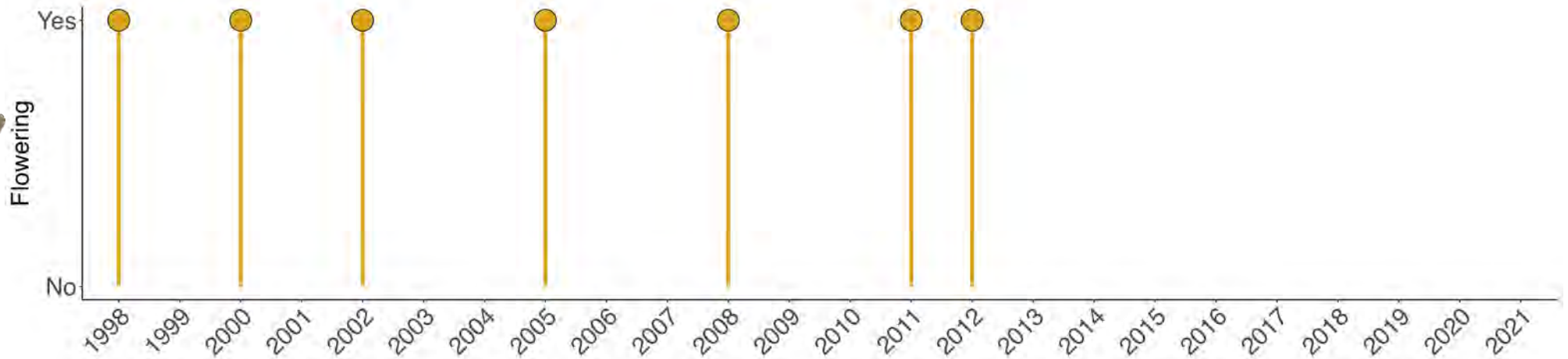
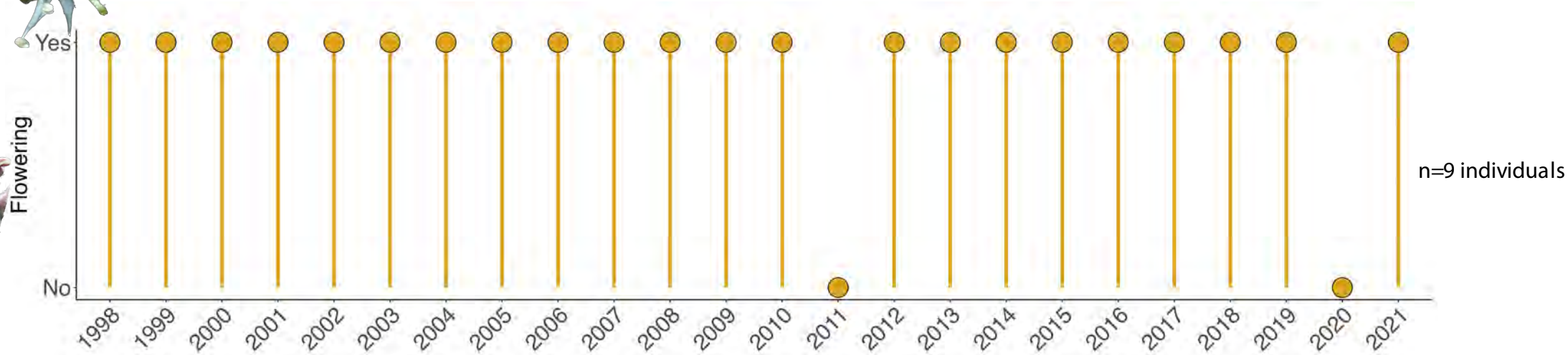


Scan here to contact
Ella about your
flower and fruit
observations





Acronychia pubescence flowering pattern





Argyrodendron trifoliolatum flowering pattern

