

Fritillary Life Cycle

1. Seed germinates Jan-May after exposure to frost, forming a seedling with a tubular primary leaf and a root.

2. Juvenile plant forms 1 leaf for 3-4 years, and the sizes of leaves and bulbs increase each year.

3. Non-flowering sub-adult develops between 3-8 years. Number of leaves increases gradually from 3 to 6 arranged along the stem.

4. At 5-6 years old the plant will flower if the size of the bulb reaches 1.2 cm diameter. There may be 1 - 3 year gaps between consequent flowering.

5. Seed dispersal by wind, water or hay making. The stem dries off after seed dispersal.

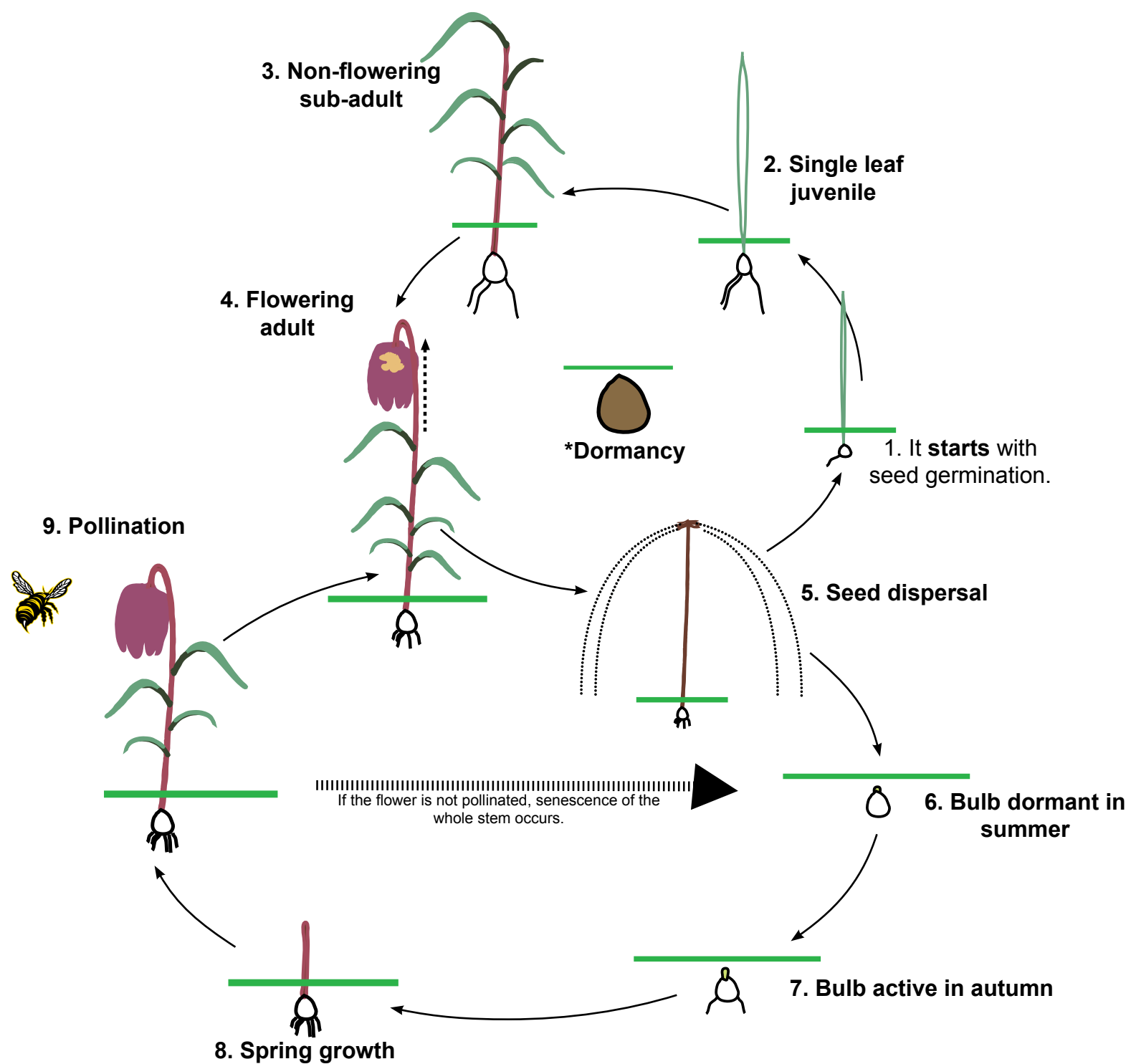
6. The bulb is inactive in the summer.

7. In the Autumn, bulb becomes active and develops roots and buds. Flower is fully formed inside the bud by January.

8. Shoots appear above the ground in late March - early April and grow very fast along with extensive root growth.

9. Flower opens in April and is fertile for about five days. Bumblebees are main pollinators. After pollination the stem extends upwards to maximise seed dispersal. Seeds ripen in six weeks.

*Dormancy is a key element of snakeshead fritillary life history and can last 1-3 years, possibly longer. Plants at any life stage and age can enter dormancy.



Fritillary Facts

Snakeshead fritillaries (*Fritillaria meleagris*) are nationally rare, but can be very abundant locally. Only a few sites in the UK are considered to hold wild populations, although many other sites have had plants introduced.

Bare patches of earth left by floods create areas where fritillary seedlings can germinate. They rely on the traditional meadow system of an annual hay cut in June/July, as they cannot tolerate grazing during the growing season.

Snakeshead fritillary flowers arrive early in the year (April) and are mainly pollinated by early flying species such as queen bumblebees.

Other names recorded include:

Chequered Lily, Dead Man's Bell, Leper's Bells and Oaksey Lily. Fritillary and '*Fritillaria*' come from a Latin origin '*fritillus*' which means 'dice-box' as the markings are similar to a chequer board. '*Meleagris*' means 'speckled' and is the Greek name for a guinea hen.

An old country belief about snakeshead fritillary was that it followed the path of the Romans, springing up wherever their footsteps had fallen.

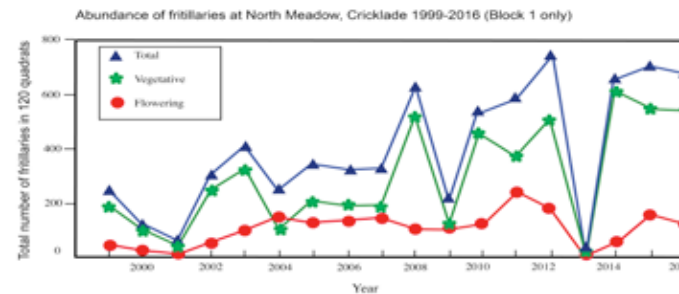
Floodplain Meadows Partnership Research

Research is being carried out on snakeshead fritillary populations at North Meadow (Wiltshire), which makes up 80% of the total UK population, Clattinger Farm (also Wiltshire), and Lugg Meadows (Herefordshire).

At these sites, plants are counted annually at fixed positions by the Floodplain Meadows Partnership and volunteers, who record the numbers of plants and flowers (including the colour) and measure the plant height. Monthly bumblebee surveys are also carried out at these sites to understand the relationship between snakeshead fritillaries and their main pollinators.

The graph below indicates that the population on North Meadow is generally increasing. The decreases seen in 2004, 2009 and 2013 were probably caused by excessive flooding, resulting in dormancy for many plants. The increase in the number of seedlings happens after summer flooding, which often removes the grass canopy, allowing fritillary seedlings sufficient light to survive.

Snakeshead fritillary (*Fritillaria meleagris*)



 Floodplain
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All photos: Mike Dodd

