

# Nature's Notebook Phenophase Photo Guide



Vitis vinifera
Wine grape



# Why Observe?

Understanding how seasonal climatic events such as rainfall and temperature changes affect fruit production informs fruit growers on which types of fruit are best suited to grow in their region and how successful the harvest will be in a given year. Valuable insight can also be obtained when reporting data after an abnormal weather event, like a sudden freeze or drought. Additionally, knowing the timing of flowering and fruit ripening can help fruit growers make decisions regarding the optimal times to plant trees, apply pesticides, prune trees, and harvest ripe fruit.



A deciduous, perennial woody vine with sprawling branches about 10 to 20 feet long when in cultivation and trimmed. Escaped plants can have stems reaching up to 115 feet long. Flowers have male and female parts on a single flower and are self-pollinated.

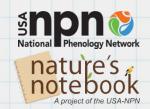
Be aware there is variation from individual to individual within a species, so your plant may not look exactly like the one pictured. If you are uncertain whether or not a phenophase is occurring, report a "?" for its status until it becomes clear what you are observing after subsequent visits.



Photo credit: National Park Service



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### Breaking leaf buds

One or more breaking leaf buds are visible on the plant. A leaf bud is considered "breaking" once a green leaf tip is visible at the end of the bud, but before the first leaf from the bud has unfolded to expose the leaf base at its point of attachment to the leaf stalk (petiole) or stem.



Photo credit: National Park Service

#### Leaves

One or more live, unfolded leaves are visible on the plant. A leaf is considered "unfolded" once its entire length has emerged from a breaking bud, stem node or growing stem tip, so that the leaf base is visible at its point of attachment to the leaf stalk (petiole) or stem. Do not include fully dried or dead leaves.



Photo credit: National Park Service

## Increasing leaf size

A majority of leaves on the plant have not yet reached their full size and are still growing larger. Do not include new leaves that continue to emerge at the ends of elongating stems throughout the growing season.



Photo credit: National Park Service

#### **Colored leaves**

One or more leaves show some of their typical late-season color, or yellow or brown due to drought or other stresses. Do not include small spots of color due to minor leaf damage, or dieback on branches that have broken. Do not include fully dried or dead leaves that remain on the plant.



Photo credit: National Park Service

#### Flowers or flower buds

One or more fresh open or unopened flowers or flower buds are visible on the plant. Include flower buds or inflorescences that are swelling or expanding, but do not include those that are tightly closed and not actively growing (dormant). Also do not include wilted or dried flowers.



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# Open flowers

One or more open, fresh flowers are visible on the plant. Flowers are considered "open" when the reproductive parts (male stamens or female pistils) are visible between or within unfolded or open flower parts (petals, floral tubes or sepals). Do not include wilted or dried flowers.



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#### **Fruits**

One or more fruits are visible on the plant. For *Vitis vinifera*, the fruit is a juicy "grape" and changes from green to its appropriate ripened varietal color (which may be golden, green, red, burgundy, blue, purple, blueblack or purple-black).



Photo credit: National Park Service

#### Ripe fruits

One or more ripe fruits are visible on the plant. For *Vitis vinifera*, a fruit is considered ripe when it has changed to its appropriate ripened varietal color (which may be golden, red, burgundy, blue, purple, blue-black or purple-black).

Phenophases not pictured: Falling leaves, Recent fruit or seed drop