



Nature's Notebook Phenophase Photo Guide

Asclepias subulata rush milkweed, desert milkweed



Why Observe?

This species is part of the project Desert Refuge: Monarchs and Milkweeds in Arizona, which is a collaboration between the USA-NPN and Desert Botanical Garden. This project seeks to better understand the winter breeding behavior of monarchs and use of milkweed across the state. Your observations of leafing and flowering of *Asclepias subulata* will help answer the question of what life cycle stages milkweeds experience during winter months and how this might affect monarchs.

This project is funded by a grant from Monarch Joint Venture and U.S. Forest Service International Programs.

Tips for Identification

This species has many leafless stems rising from a single root crown. Linear leaves may appear after rainfall. Flowers are white, cream, or yellow, occur in umbel inflorescences, and are approximately ½ in long by ¼ in wide. This species is found in desert areas on dry slopes and plains. (Source: MonarchWatch.org)

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.

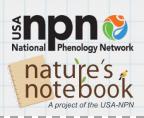


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This Phenophase Photo Guide has been vetted by the USA-NPN NCO. It is appropriate for use as a supplement to the Nature's Notebook phenophase definition sheet for this species.



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Initial growth

New growth of the plant is visible after a period of no growth (winter or drought), either from above-ground buds with green tips, or new green or white shoots breaking through the soil surface. Growth is considered "initial" on each bud or shoot until the first leaf has fully unfolded. For seedlings, "initial" growth includes the presence of the one or two small, round or elongated leaves (cotyledons) before the first true leaf has unfolded.



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Young leaves

One or more young leaves are visible on the plant. A leaf is considered "young" before it has reached full size or turned the darker green color or tougher texture of mature leaves on the plant. Do not include fully dried or dead leaves.

Leaves

One or more live, fully unfolded leaves are visible on the plant. For seedlings, consider only true leaves and do not count the one or two small, round or elongated leaves (cotyledons) that are found on the stem almost immediately after the seedling germinates. Do not include fully dried or dead leaves.

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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One or more fresh open or unopened flowers or flower buds

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.

Fruits

One or more fruits are visible on the plant. For *Asclepias subulata*, the fruit is a large and pod-like and changes from green to tan or brown and splits open to expose seeds with fluff. Do not include empty fruits that have already dropped all of their seeds.



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Matt Berger. CC BY-NC 4.0

Ripe fruits

One or more ripe fruits are visible on the plant. For *Asclepias subulata*, a fruit is considered ripe when it has turned tan or brown and has split open to expose seeds with fluff. Do not include empty fruits that have already dropped all of their seeds.

Phenophases not pictured: Recent fruit or seed drop

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