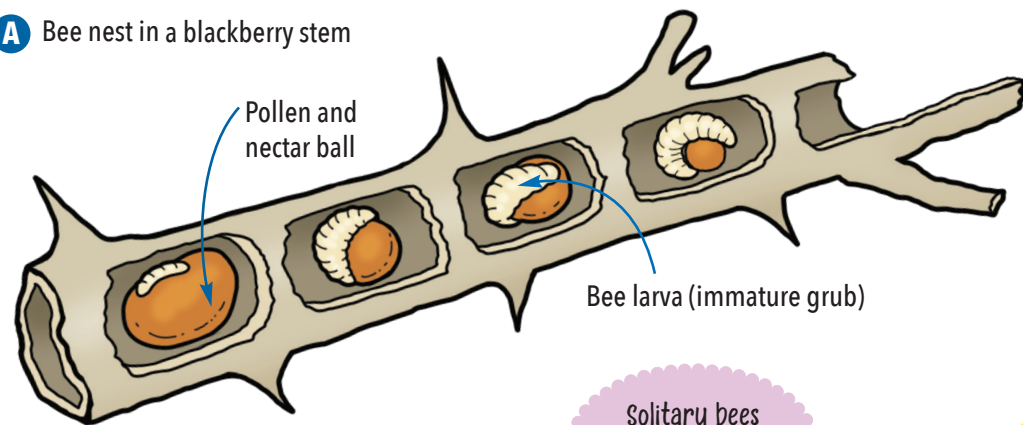


# Solitary Bees

**Solitary bees are bees that live alone—not in a hive or with other bees. Most bees found in Oregon are solitary bees.**

Mason, leafcutter, long-horned and alkali bees are some examples of solitary bees. After mating, a solitary female bee, all on her own, will build her nest, forage for pollen and nectar, and lay her eggs. The solitary female bees below are making their nests in three different places: (A) a plant stem, (B) a tunnel in the ground, (C) an old tree stump.

**A** Bee nest in a blackberry stem



Solitary bees don't make honey or wax.



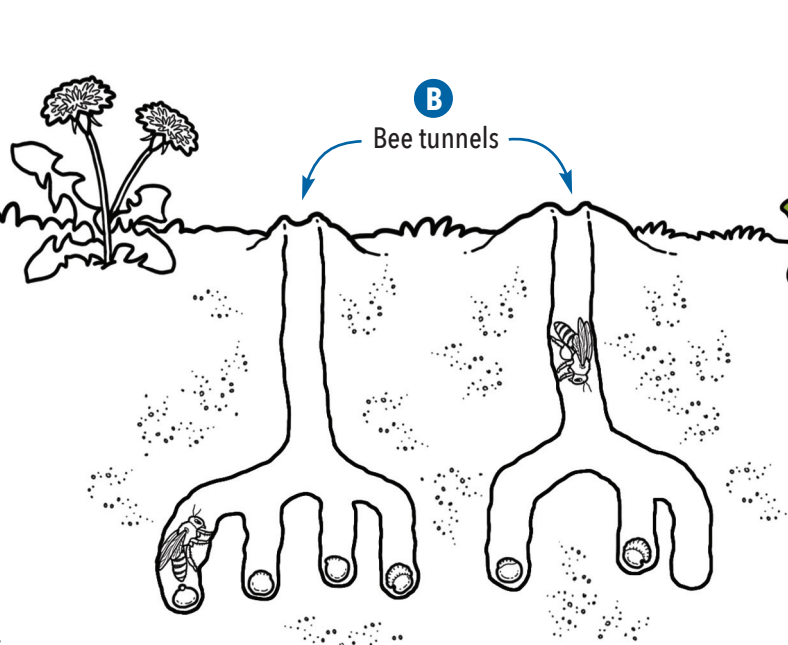
Mason bee emerging from a cocoon



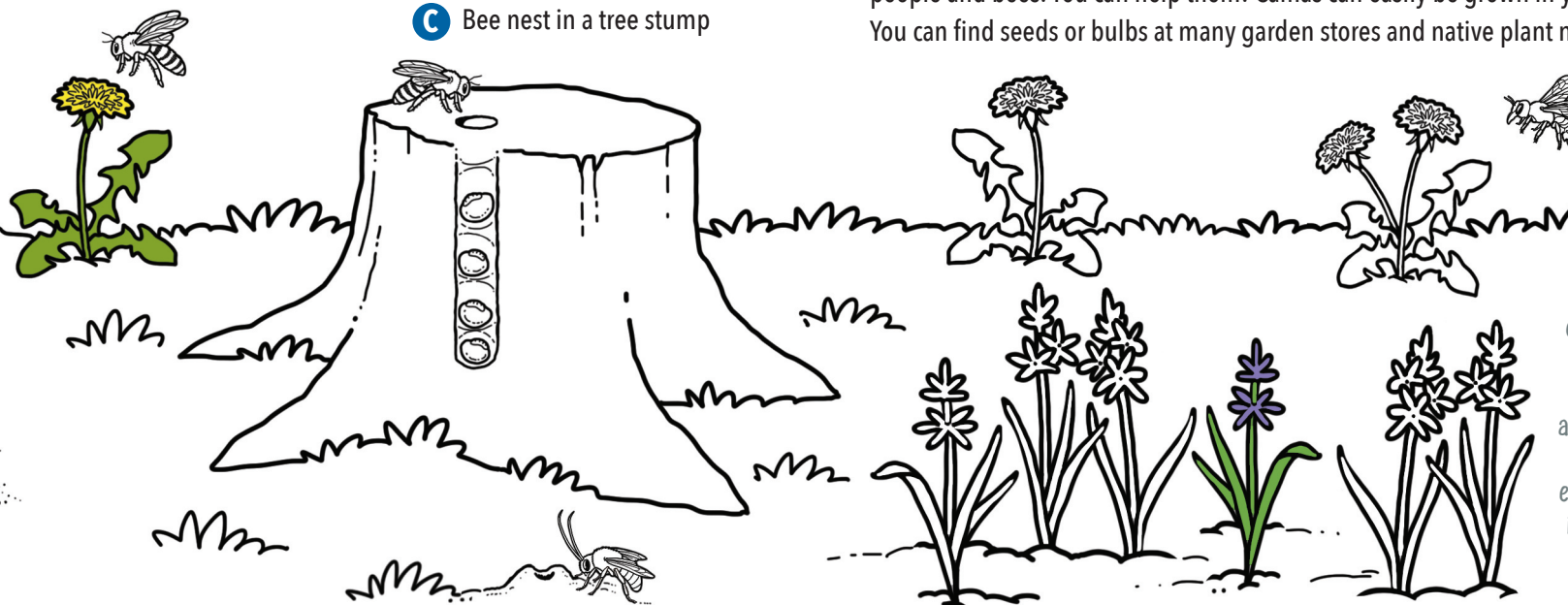
**Common dandelions (*Taraxacum officinale*)** Unlike the horned dandelion, the common dandelion is not **indigenous** to North America. In the 1600s, colonists brought common dandelion seeds with them from Europe, as they believed the plant could cure many illnesses. In time, some people came to view the common dandelion as a weed that crowds out native plant species. Other people, including Indigenous Peoples, saw it as a great source of food and medicine. Did you know that you can eat dandelions from flower to root? They are an excellent source of vitamins A and C. One cup of dandelion greens contains almost twice as much iron as spinach! You can buy dandelion greens and teas at local grocery stores. In the kitchen, you can use the greens in salads, soups, bread, pesto, smoothies and desserts. Dandelions can also be used to make oils, teas, jellies, salves and traditional medicines. And of course, bumble bees and honey bees that pollinate dandelions make honey!

**B**

Bee tunnels



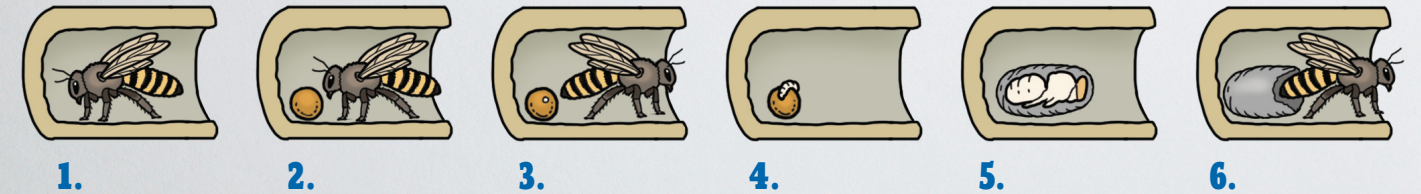
**C** Bee nest in a tree stump



## Solitary Bee Life Cycle

**No matter where a solitary female bee nests, these steps happen:**

1. The female bee creates a chamber or cell where she can safely lay an egg.
2. In any chamber she creates, she mixes a ball of pollen and nectar to feed her offspring.
3. She lays an egg on each ball, seals up the nest, and then leaves.
4. When an egg hatches, out comes a tiny larva (the first growth stage of a bee). The larvae all feed on their pollen balls and grow bigger.
5. When the larvae have grown big enough, they undergo **metamorphosis**, (a change in shape). The bee larvae slowly change from immature grubs to adult bees. Just like caterpillars, some bee larvae spin silk cocoons before they go through this process.
6. When the adult bees come out of their cells, males and females will mate with bees from other nests. Mated females start new nests of their own.



**Camas (*Camassia quamash*)** Camas, a type of native lily flower, have been an important part of ecosystems for thousands of years. Camas have been an important traditional food for many Tribal people. Camas usually grow on prairies. Mason bees, bumble bees, hoverflies and European honey bees all pollinate camas flowers. Indigenous Peoples have long used traditional practices to protect Camas prairies. These include removing invasive plant species, turning the soil to allow air in, and traditional burning methods to promote new plant growth. These practices work: camas fields were once so abundant they were described from a distance as "seas of blue." Colonization removed Indigenous Peoples from their homelands and people began developing the prairies for agricultural use. Now less than 1% of native prairies in Oregon remain. Today, Indigenous Peoples and others are working to restore camas' habitats for future generations of people and bees. You can help them! Camas can easily be grown in your yard or a community or school garden. You can find seeds or bulbs at many garden stores and native plant nurseries.



A habitat is a home to living things where they spend most of their time and find the shelter, water and foods they need. An ecosystem is a larger area, like a forest, that contains many different habitats. Living things like plants and animals and non-living things like water and soil interact in ecosystems. Bees are a "keystone" species in that without them some ecosystems would not survive. Draw more native camas flowers in the habitat above. The flowers will provide more pollen and nectar for the bee species that pollinate camas!