



Non-native Phragmites

(common reed)

TARJA TUCKER

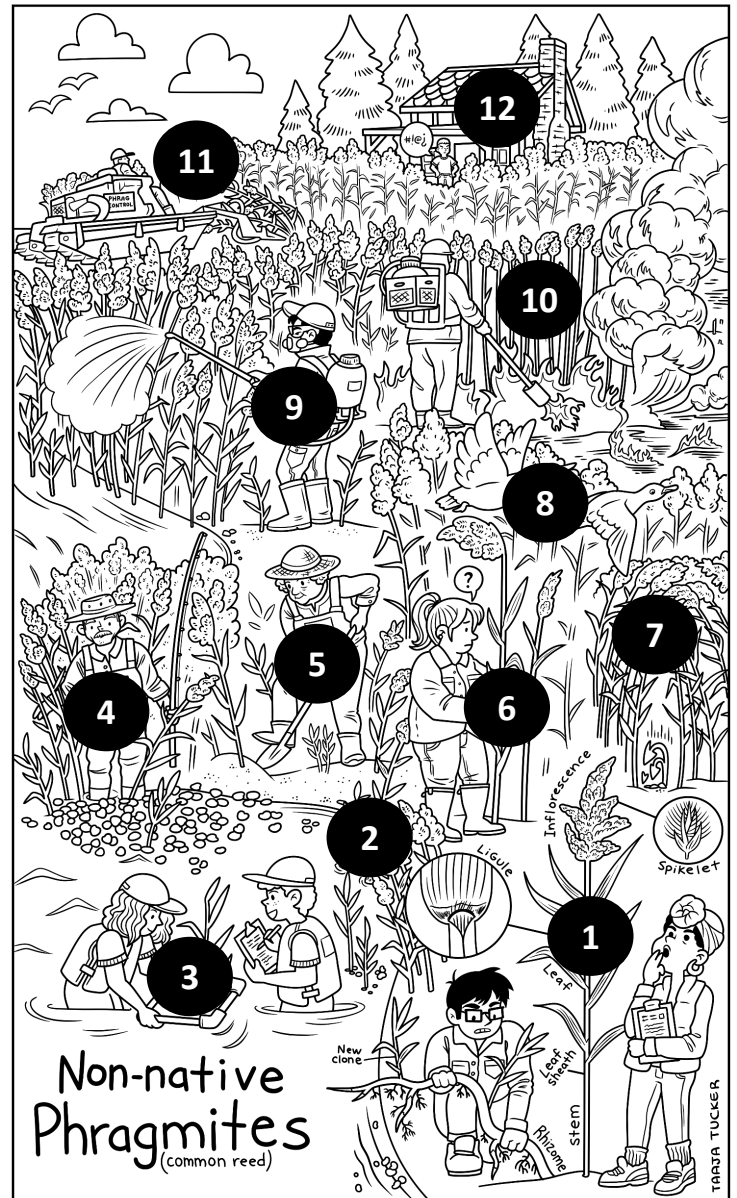
Non-native *Phragmites*

Pronounced
"Frag-my-teez"

Phragmites australis subsp. *australis* is an invasive form of the common reed in North America. It arrived at the east coast of North America from Eurasia in the 1800s and has spread across much of the United States and lower Canada. It forms large, dense patches that can take away food and shelter from native plants and animals. The native form, *Phragmites australis* subsp. *americanus*, is less aggressive in its growth, and is now rare in some places. Lots of time, money, and effort goes into removing non-native *Phragmites* from the landscape and preventing its spread to new places.

- 1. Anatomy.** Non-native *Phragmites* is a tall plant, growing up to 16 feet high! It also forms large underground roots called **rhizomes** where it stores its energy in the winter. It can also produce clones, or more above-ground plants, from its rhizomes. The **leaves** alternate along the **stem** and are smooth with pointed tips. *Phragmites* is a proud plant and holds its leaves pointed up to the sky. Each leaf forms a **sheath** around the stem, and the **ligule** is the part where the leaf joins the sheath at the base of the stem. *Phragmites* also makes hairy-looking seeds inside 'flowers' called **spikelets** and florets, which all together form the puffy **inflorescence or seed head** on top of the plant.
- 2. Wildlife impacts.** *Phragmites* can form such dense stands that turtles and other animals can't navigate through or are prevented from finding food. *Phragmites* can survive in water up to 6 feet deep but can also grow on dry land.
- 3. Sampling tools.** Scientists use tools like square quadrats to estimate the number of plants in an area without having to count them all.
- 4. Limiting access.** *Phragmites* can grow so dense that it is difficult for people who fish or hunt to access their favorite spots by foot or by boat. Other invasive species, such as European frog-bit, can grow in the areas with non-native *Phragmites*.
- 5. Spading.** One way to remove *Phragmites* without heavy machinery or chemicals is to 'spade', which involves cutting the stem under the soil at a 45-degree angle with a shovel. This is useful for removing small patches before they grow larger, or when many volunteers are available to help remove *Phragmites* from an area.
- 6. Native vs. non-native forms.** It can be difficult to tell these forms apart from their looks alone. But usually, non-native *Phragmites* is taller (up to 16 feet), has darker, bluish-green leaves, has larger fuller seed heads, grows many stems in one area, and has a tan inflexible stem. Native *Phragmites* tends to be shorter (up to 6 feet), has yellow-green leaves, forms smaller seed heads, has more spread out stems, and has a more flexible reddish stem at the base. The dark band on the ligule is narrower on non-native *Phragmites*. Sometimes these characteristics alone are not enough to identify non-native vs. native *Phragmites* and genetic tests are needed.

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- 7. Competition.** Other plants have difficulty growing under the shade of tall *Phragmites* patches. *Phragmites* also creates mats of dead stems and leaves on the ground that are taller than some people and can be difficult for plants to grow through. *Phragmites* can even change the amount of water or nutrients in the soil and prevent other plants from getting the resources they need.
- 8. Bird impacts.** Compared to other wetland habitats, thick *Phragmites* patches can have fewer birds present. Some small birds, such as Red-winged Blackbirds, like to nest or feed in *Phragmites*. Some larger birds common in marshes tend to avoid *Phragmites*, such as dabbling and diving ducks, herons, bitterns, and cranes.
- 9. Herbicides.** One of the most common ways to manage *Phragmites* is to spray herbicides on the surface of the plant. Herbicides are usually applied in the fall and can be very effective at killing the plants. However, herbicides typically must be applied over multiple years by a trained professional to be effective.
- 10. Controlled fires.** Burning *Phragmites* after applying herbicides is an effective way to remove the dead plant litter left behind and to promote growth of native plants.
- 11. Large machinery.** In areas where *Phragmites* grows in the water, it can be removed with amphibious tank-like vehicles that drive (or float!) on both land and water.
- 12. Eyesores.** *Phragmites* can grow so high that it blocks the view of homes near water and can even reduce home values in the area.