



Hybrid Beachgrass Field Trip Guide

BEACHGRASS PROJECT

This guide is for educators, and intended to be paired with the [Hybrid Beachgrass Student Workbook: Field Trip Edition](#).

Recommended field trip destinations where the hybrid is present:

- [Pacific City, off of Pacific Ave](#)
 - Hybrid present with both parents on front of dune
 - Parking is \$10, but free parking at Bob Straub State Park just to the south
- [Sunset Beach State Recreation Site](#)
 - Beach driving is permitted year round

Materials needed for activity:

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|--------------------------------|--|---------------------------------------|
| ● Printed workbook | ● Clipboards (preferably with storage) | ● Marking flags in 3 different colors |
| ● Pencils | ● Measuring tape | ● Ruler |
| ● 0.25 m ² quadrats | ● 100 m transect tape | |

Potential data collection steps dune field trip:

1. Observe differences in beachgrass taxa through qualitative methods and learn how to identify them.
 - a. Teachers or chaperones can flag patches of different dune grasses, each with only a single taxon for easy identification. This can include or not include the native dune grass, *Leymus mollis*, in addition to the three *Ammophila* beachgrasses, depending on time and other constraints.
 - b. Students can observe differences among beachgrass taxa and feel more comfortable identifying them.
2. Measure quantitative differences in beachgrass taxa using quadrats.
 - a. Demo quadrat tossing and stem counts.
 - b. Have students haphazardly toss a quadrat on the dune (or alternatively, have them place a quadrat at each of the flagged patches with different species).

- c. *Stem density*: Where it lands, they can count the number of stems of each beachgrass species within the quadrat, and also note any other species.
 - d. *Stem height*: For each species present within the quadrat, students should select three random stems and measure the tallest leaf on each stem. Measurements (in cm) should be taken from the base of the sand to the leaf tip, after the leaf is stretched taut.
 - e. There should be several quadrats thrown for either or both of these measurements, for replication.
3. Measure species richness, species percent cover, and dune grass stem counts at different areas along the dune profile using quadrats and a transect tape.
- a. Once we introduce the transect tape, 2 volunteers can start laying it across the dune along with a scientist/teacher
 - b. Demo quadrat placement, stem counting
 - c. Goal: Each group will get a meter mark along the tape to survey. Fill out the top part of your datasheet. Then place your quadrat at your meter mark and figure out how many different types of plants are in your quadrat, then count how many of each different plant species there are inside. Once we're all done we'll compare.
 - i. Hypotheses: Where along the transect will we measure the highest plant diversity? Where along the transect will we measure the highest plant density?
 - ii. Go count some grasses!