

## PACING EXERCISE

We need to calculate distances for a variety of reasons while monitoring plant populations:

- Drawing maps and writing directions to the population, e.g., “Plant population begins 12 meters south of the southwest corner of the long plank bridge.”
- Estimating how large the population is from one end to the other. This is done by taking one distance measurement north to south and another east to west.

Using a measuring tape to get an exact distance measurement is the preferred method; however, sometimes this option is unavailable because:

- Measuring tape is not available
- Distance to measure is so long that it would be too time-consuming or cumbersome
- Measuring distance along a windy path (impossible with a tape)

Pacing is a back-up method of calculating distances, although it's not ideal:

- Potential error mainly due to inconsistency of step size
- Different walking speeds can make one's pace greater/smaller
- We all walk differently on different days
- Terrain affects how big our steps are

Ways to minimize error:

- Set a personal, standard step size, e.g. 1 “step” = 3 footlengths. One step combines both left and right footfalls.
- Use the same pace every time - you'll get used to your own pace length
- Use the Pacing Exercise

## PACING PROTOCOLS

**How to calculate distance:**

- Take the # of steps it took to walk the known distance and back (let's say 40 meters)
- Divide # of known meters by the number of your steps to get # of meters/step (i.e. 40 meters/60 steps = 0.67 meters per step)

**How to determine an unknown distance:**

- Pace the distance
- Multiply the # of paces by the # of meters/step (i.e., it takes me 30 steps to the mark, so 30 steps x 0.67 meters/step = 20 meters)