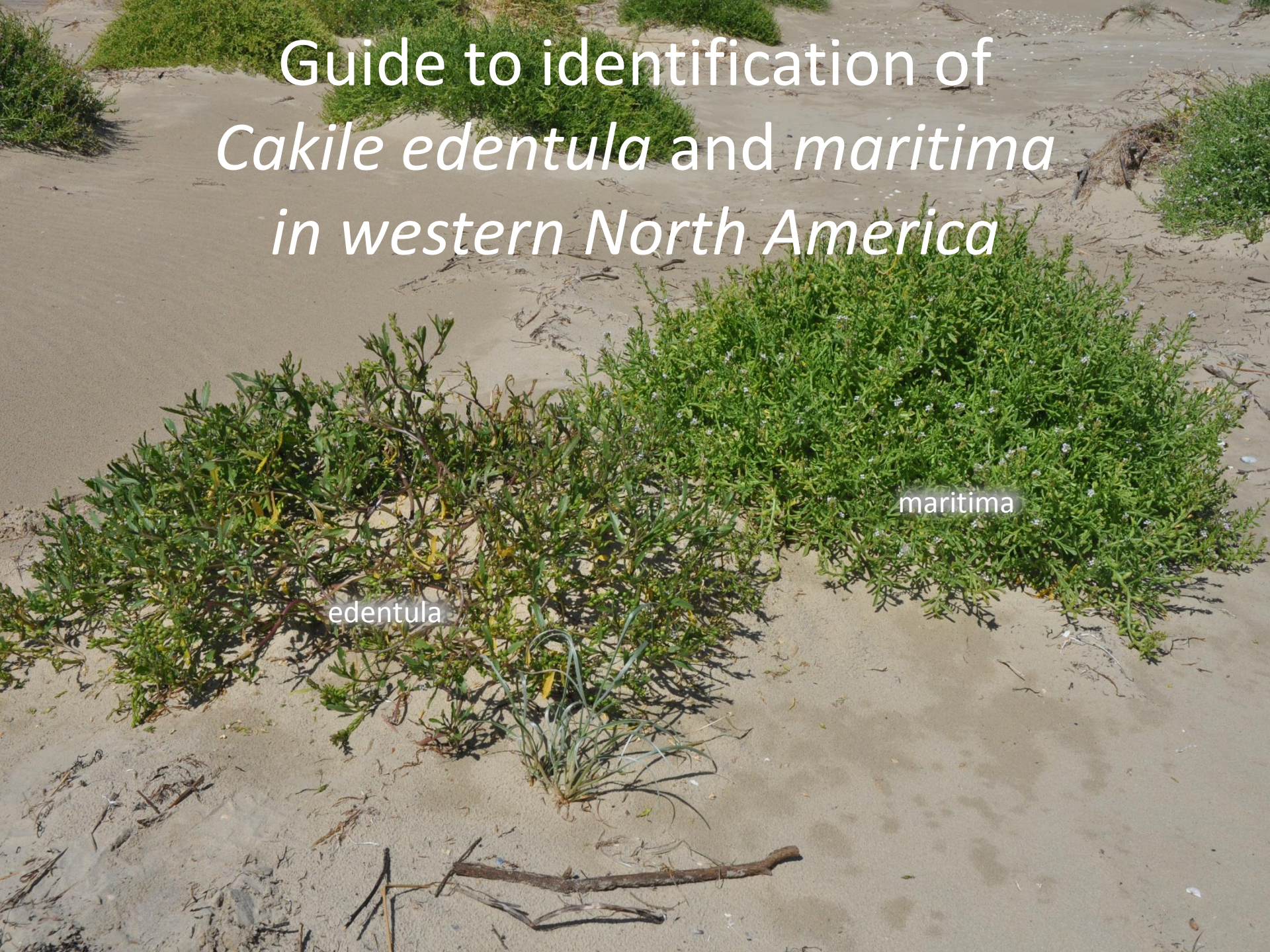
Guide to identification of *Cakile edentula* and *maritima* in western North America



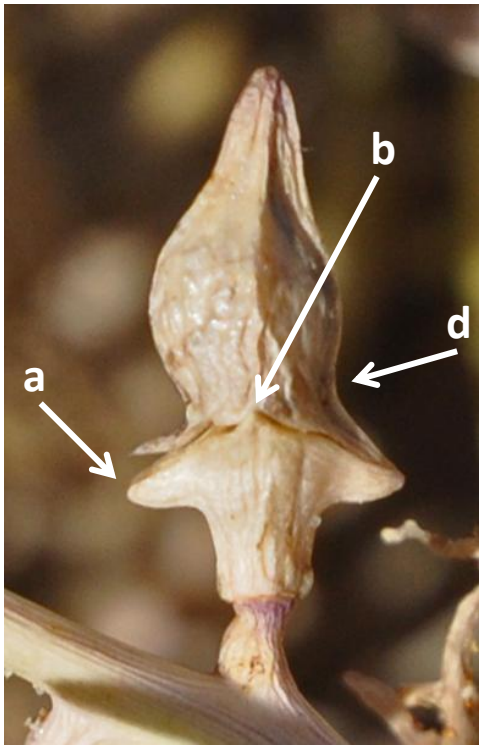
Fruit shape is one of the most important diagnostics in the genus. There are two sections to each fruit. However, it is common for the basal section not to be fertilized and to remain under-developed. In this case, the full potential shape of the fruit is not seen. So, for identification purposes, choose fruits in which both sections are clearly developed.

Choose one like this

Not like this

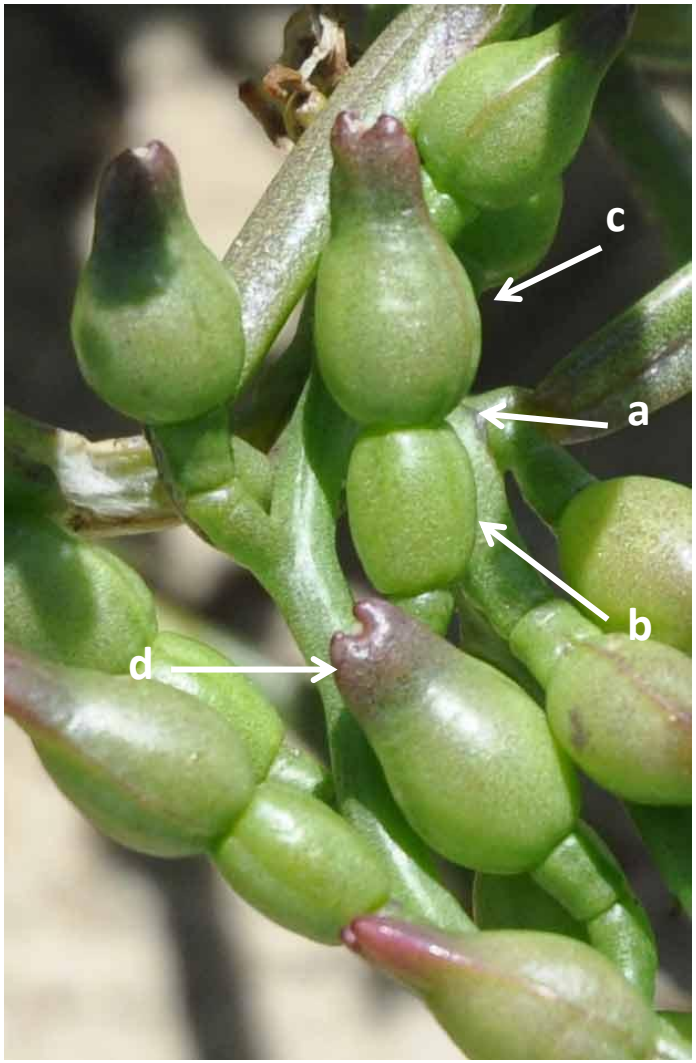
Also notice the “seams” of the fruit (yellow arrow): view fruits with these at the sides

Fruits - *maritima*



The picture on the left shows a “classical” *maritima* fruit, as usually depicted in floras. The lower segment broadens sharply to form projections called “spurs” or “horns” (a); it then continues upwards into a point (b), so that the segment as a whole resembles an arrowhead. When the top segment is removed gently or falls off, the resulting abscission scar is like a saddle when viewed from the side (c). The top segment is “mitre” shaped, narrowing to a waist (d) when viewed from the front (but not when viewed from the side). These characteristics can all become more pronounced when the fruit dries. However, the horns **may be very reduced in some plants and perhaps even missing** and the waist may be poorly developed. Even then, the abscission scar is still saddle-shaped, making this a more reliable character than the presence of horns.

Fruits - *edentula*



For a fruit to be recognised as *edentula*, it does not just have to lack “horns” or “spurs”.

- It will have a distinct waistline between the two fruit segments, where the fruit is constricted (a)
- The basal section will be either barrel-shaped or cylindrical (b)
- The apical section (c) will - for most of its length - be circular in cross-section (rather than flattened); the “beak” at the top (d) is usually flattened and may often have a cleft at the tip
- When the apical section falls off at maturity (or is removed with only slight force), the resulting abscission scar at (a) will be nearly flat (with perhaps a couple of small, spiky projections) but not as saddle-shaped as in *maritima*

Leaves



•***edentula*** leaves are typically serrated or with short lobes , with the lobes tending to point forwards. But the leaves may sometimes have smooth margins

•**<u>They are never pinnate</u>**




•***maritima*** leaves range from pinnate (commonly so in N. America) to serrated or smooth margins.

•Shape also varies with stage of plant development, with fewer lobes on very young leaves or higher on the stems of older plants

•Lobes tend to have rounded tips and are not as clearly forward-pointing as in *edentula*

Flowers

edentula

maritima

Flower dimensions can overlap, so it is not just a matter of measuring petal length or width. However, *maritima* petals (right) tend to be broader and hence more showy. Flower colour is variable in both species.