On April 6, buds were examined from the following cultivars: Early Black (EB), Howes (H), Ben Lear (BL), Stevens (ST), and Crimson Queen (CQ). These buds were collected at State Bog in East Wareham. All cultivars had buds that had reached the bud swell stage (bud scales loosening, slight bud expansion/rounding).

At the **bud swell stage** tolerance for EB and H is 22°F; tolerance for BL and ST is 25°F. Based on appearance, new hybrids should be assumed to have the same tolerance as BL.

**ALWAYS CHECK THE TOLERANCE ON YOUR BOGS.**

If you suspect you have had conditions on your bog that would caused frost injury, you can examine buds to look for damage - but wait for at least 24 hours after the frost event. The pictures of cut buds show what an **undamaged** bud looks like when you cut a cross-section. Take an upright and carefully remove the upper leaves to expose the bud. Then lay the upright on a flat surface and use a razor blade to cut down through the bud - cut about half way between the tip and the base of the bud. Now pick up the upright, and using a hand magnifier, look down into the bud. Compare to the healthy bud photos. Damage would appear as brown or black areas.

**EB bud swell, 22°F, State Bog 4/6**

**H bud swell, 22°F, State Bog 4/6**
BL bud swell, 25°F, State Bog 4/6

ST bud swell, 25°F, State Bog 4/6

CQ bud swell, 25°F, State Bog 4/6
Cut bud, round structures around the center are floral initials (3 can be seen here) - they will become flowers. Solid center will become the leaves above the flowers (vegetative meristem). Outer 'ring-like' structures are the bud scales - they are protecting the center structures.
In this photo, the cut is closer to the tip and you can see the floral initials look more 'bead-like'. In some Ben Lear buds examined, the floral initials were turning pink (more advanced).