On April 25, buds were examined from the following cultivars: Early Black (EB), Howes (H), Ben Lear (BL), and Stevens (ST). These buds were collected at Rosebrook Bog in Wareham. All four cultivars have advanced to the white bud stage. Cut buds of EB and BL showed visibly pink floral initials. H and ST bud interiors were noticeably green.

At the white bud stage tolerance for EB and H is 20°F; tolerance for BL and ST is 22°F. Based on appearance, new hybrids should be assumed to have the same tolerance as BL.

ALWAYS CHECK THE TOLERANCE ON YOUR BOGS.

We were able to find minor frost damage in a bud of BL and in one from a ST that had advanced to bud scale loosening (approaching the 25°F tolerance). Photos are included in this sheet. Undamaged buds on pages 4 and 5 are shown for comparison.

If you suspect you have had conditions on your bog that would cause frost injury, you can examine buds to look for damage - but wait for at least 24 hours after the frost event.

EB white bud, 20°F, Rosebrook. Photo from 4/22.

H white bud, 20°F, Rosebrook Bog 4/25. Note that the bud does not look as white as that of the EB. Historically H and EB tolerances have been similar for a given date and see the cut bud showing internal greening.

H cut white bud, 20°F, Rosebrook Bog 4/25

ST white bud, 22°F, Rosebrook 4/25

ST cut white bud, 22°F, Rosebrook 4/25
BL white bud, 22°F, Rosebrook 4/25. Again, note that BL buds do not get the same very white appearance as do EB buds.

BL cut white bud, 22°F, Rosebrook 4/25. Note pink floral initials as well as the dark area in the upper right. A deeper cut into the bud revealed damage to that initial - see below.

The photo to the left is a deeper cut into the BL bud with the suspicious dark area (above). The bud is rotated about 180° here. Note the brown coloration on the floral initial on the left - this initial is likely damaged - it will not become a flower. The remaining initials appear undamaged.

A more advanced ST bud found at Rosebrook on 4/25.

The ST bud on the left, cut. Note the damage in the bud center. This bud will produce an upright with 'umbrella bloom' due to the damage to the central vegetative meristem.
The photos below, taken in 2012, are included here to show the internal structures of the bud more clearly.

2012 photo. 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'.

2012 photo.