

Frost tolerances #3 - Spring 2016
April 13 and 19, 2016

On April 13, buds were examined from the following cultivars at Rosebrook Bog in Wareham and State Bog: Early Black (EB), Howes (H), and Stevens (ST). On April 19, buds were examined for those same cultivars and Ben Lear (BL) at both bogs. In addition, uprights from Mullica Queen (MQ), Crimson Queen (CQ), Demoranville (DE), and Grygleski #1 (GH) were observed at State Bog on April 19th. Based on internal and external appearance, buds of all cultivars have moved to at least the **white bud** stage. Some buds had begun to swell slightly and were judged to be at early **bud swell** stage.

At the **white bud** stage, tolerance for EB and H is 20°F; tolerance for BL and ST is 22°F. 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.

Please note that the white bud stage was named based on the appearance of EB and H buds that have lost their dormant red color: When looking down into the plants, the buds stand out as noticeably light/white. Other cultivars retain some degree of red coloration at this stage. In those, the change is recognized by observing the buds over time - as they leave the dormant stage, the buds become a bit less red with lightening on the edges of the bud scales and in some cases noticeably green.

Until April 13th, State Bog irrigation was run when temperatures reached 21°F. Since that date our action temperature has been 23°F. Examination of cut buds on April 19 showed no damage in any of the 8 cultivars examined. All buds had lost internal red coloration with the exception of Howes (some red areas remained).

ALWAYS CHECK THE TOLERANCE ON YOUR BOGS.



EB early bud swell, 22°F, State Bog
4/19 Note - very little change from
4/8 photo on right



EB - Rosebrook, 20°F, **4/8**



H white bud stage, 20°F, State Bog
4/19 Note - minimal change since
4/8 photo on right



H barely at white bud stage, 20°F,
Rosebrook **4/8**



BL white bud stage, 22°F, State Bog
4/19. Note - minimal change since
4/8 photo on right



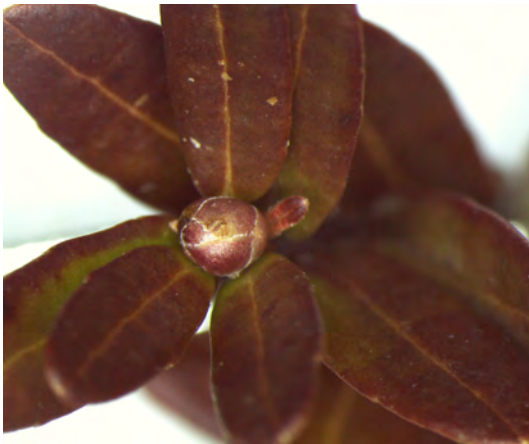
BL barely at white bud stage, 22°F,
Rosebrook **4/8**



ST white bud, 22°F, State Bog **4/19**



ST white bud, 22°F, Rosebrook **4/19**



CQ , white bud, 22°F, State Bog 4/19



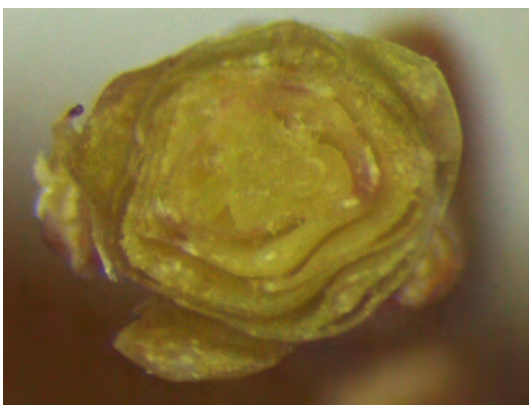
MQ , white bud, 22°F, State Bog 4/19
Note - may be slightly more advanced than CQ on left and nearing bud swell.



DE , white bud, 22°F, State Bog 4/19



GH , white bud (but nearing bud swell), 22°F, State Bog 4/19



DE cut bud, 4/19 Note internal structures have lost dormant red.



GH cut bud, 4/19 Note internal structures have lost dormant red.



These images were taken at the two bogs on 4/13. Early Blacks at State Bog appear slightly more advanced and moving towards the bud swell stage (22°F), Rosebrook Early Blacks are at white bud (20°F). Howes are barely at white bud (20°F) and Stevens appear to be fully at the White Bud stage (22°F).



These images were taken on 4/19 at Rosebrook Bog. Note that the Howes shown appear to be at white bud (20°F tolerance), while Early Blacks are fully white bud and moving into bud swell (22°F tolerance). The Ben Lear and Stevens are at white bud stage (22°F tolerance).