



**S7 Figure. Phylogenetic trees that failed the subgenomes mutual monophyly test in 1K sliding windows for the alternatively phased datasets.** The trees were reconstructed with the neighbor-joining algorithm and absolute genetic distance for non-overlapping 1K windows with minimum 100 complete sites. Trees were tested for mutual monophyly of both the *Cbp<sub>Cg</sub>* and *Cbp<sub>Co</sub>* subgenomes. There were 132 trees that failed this test. HomeoRoq phased samples have \_A and \_B in their names to indicate *Cbp<sub>Cg</sub>* and *Cbp<sub>Co</sub>* subgenomes, respectively, whereas samples phased with HapCUT are marked with \_Cg and \_Co for the corresponding subgenomes. ASI, EUR ME indicate Asian, European and Middle Eastern populations of *C. bursa-pastoris*, respectively.