

**Extended Data Fig. 5. Haplotype phasing of autotetraploid** *H. bulbosum* **genomes.** (a) Distribution of sequence coverage of contigs in the unphased assembly. Contigs that are shared between two haplotypes have double coverage (right-hand peak). (b) PCA clustering of the matrix of Hi-C links connecting the ends of contigs, i.e. those mapped to within 2 Mb of either contig end. Chromosome 1H of the tetraploid clone FB19-028-3 is shown. Colors correspond to coverage brackets. The contigs with double coverage (shown in blue) correspond to IBD regions shared between two haplotypes. (c) PCA separation and contig-level coverage on chromosome 1H of FB19-028-3 after pseudomolecule construction and manual curation. Pairwise differences between the four haplotypes are shown.