



**Figure S1.** Common loci and allele similarities of the complete collection (*Illex* accessions are mentioned with their codes and depicted in the same order as the phylogenetic tree, Figure 1). The diagonal (column and row of the same accession) shows the total number of loci for a particular accession. Below the diagonal, the matrix depicts the number of common loci for every pair of samples (row and column) and above the diagonal, the matrix shows the allele similarity for every pair of samples (row and column). The false colour scale represents the relatedness with red for the low values of allele similarity (9%), to yellow (60%) to green for high values (100%). For common loci, the false colour scale goes from red (lowest number is 2880 for IL122 and IL103), to yellow (around 8000), to green (highest number is 15,195 for IL051 and its technical replicate IL051\_2).