Two files are included here containing the data used for analysis of *Manilkara zapota* populations, published in Thompson et al. 2015. The first file is an Excel spreadsheet used for analysis in GenAlEx (Peakall & Smouse 2006, 2012). The first row indicates the number of microsatellite loci (9), total number of individuals (824), number of populations (5) and the size of each population (names of each population listed below the sizes). Columns in this file include sample ID and the collection location for each individual, as described in Thompson et al. (2015), and the allele information for each locus. The second file includes the geographic coordinates for each *M. zapota* individual, identified by the same sample ID that was used in the GenAlEx dataset.