

**Fig. S1.** Neighbour-joining tree reconstructed using the sequences of a fragment (658bp) of the cytochrome *c* oxidase subunit I gene of specimens currently identified as *Lasioglossum villosulum*, *Lasioglossum medinai* and one as *Lasioglossum berberum* in our sampling and in the public repositories (GenBank and BOLD). The tree is drawn to scale, with branch lengths representing p-distances (proportions of variable sites). AP222 *Lasioglossum bluethgeni* was used as outgroup. Labels at the end of each branch include our own ID (starting with AP) or GenBank accession number or BOLD process ID and originating country. **A.** *Lasioglossum medinai*. **B–D.** Three supported clusters (a fourth cluster could be defined in C by partitioning in C 1-2) within *Lasioglossum villosulum*. Labels highlighted in red correspond to possible morphological misidentifications (see Discussion). Label highlighted in blue corresponds to *L. berberum*. Values at node correspond to bootstrap values (%).

