



**Figure S6.** Maximum likelihood tree inferred from *LSU-rpb2-tef1* combined data set sequences of specimens of *Cystolepiota* and related genera. Bootstrap values of  $ML \geq 50\%$  are indicated above the branches. Type collections are marked with an asterisk. *C.* = *Cystolepiota*; *Co.* = *Coprinus*; *E.* = *Echinoderma*; *L.* = *Lepiota*; *M.* = *Melanophyllum* *P.* = *Pulverolepiota*; *S.* = *Smithiomyces*. *Co. comatus* and *Co. sterquilinus* are used as outgroup.