PP849057, *U. ahtii*
KY947831, *U. ahtii*
PP849056, *U. ahtii*
PP849066, *U. ahtii*
PP849063, *U. ahtii*
PP849059, *U. ahtii*
PP849064, *U. ahtii*
PP849073, *U. ahtii*
PP849065, *U. ahtii*
PP849058, *U. ahtii*
PP849067, *U. ahtii*
PP849072, *U. ahtii*
KY947801, *U. ahtii*
99 — PP849055, *U. ahtii*
97 — PP849062, *U. ahtii*
PP849049, *U. ahtii*
100 — OK491371, *U. meizospora*
OK491372, *U. meizospora*
PP849054, *U. koidzumii*
KY947840, *U. koidzumii*
KY947811, *U. koidzumii*
KY947765, *U. koidzumii*
KY947766, *U. koidzumii*
95 — KY947778, *U. koidzumii*
KY948002, *U. koidzumii*
90 — PP849082, *U. koidzumii*
96 — HM161490, '*U. vellea*'
98 — HM161503, '*U. cinereorufescens*'
97 — HM161511, '*U. cinereorufescens*'
97 — 98 PP849061, *U. koidzumii*
79 — PP849076, *U. koidzumii*
MK812545, *U. koidzumii*
85 — PP849079, *U. koidzumii*
99 — PP849083, *U. koidzumii*
PP849081, *U. koidzumii*
PP849080, *U. koidzumii*
99 — PP849074, *U. cinereorufescens*
97 — PP849077, *U. cinereorufescens*
PP849075, *U. cinereorufescens*
MK811655, *U. cinereorufescens*
62 — KY948018, *U. grisea*
98 — KY947824, *U. spodochroa*
52 — KY947853, *U. spodochroa*
KY947834, *U. angulata*
PP849068, *U. vellea*
KY947835, *U. vellea*
MK811710, *U. vellea*
PP849070, *U. vellea*
PP849071, *U. vellea*
KY947791, *U. vellea*
KY947797, *U. vellea*
PP849069, *U. vellea*
PP849050, *U. vellea*
ON362177, *U. vellea*
PP849051, *U. vellea*
PP849060, *U. vellea*
KY947751, *U. vellea*
100 — KY947995, *U. vellea*
KY947800, *U. vellea*
99 — 100 PP849078, *U. vellea*
58 — 98 ED1856, *U. vellea*
PP849053, *U. vellea*
99 — MT649504, *U. orientalis*
MT649509, *U. orientalis*
21 — 24 — 100 KY947815, *U. freyi*
KY948015, *U. freyi*
KY947805, *U. trabeculata*
100 — KY947822, *U. hirsuta*
KY948013, *U. josiae*
50 — KY947760, *U. platyrhiza*
40 — 100 KY947823, *U. crustulosa*
KY948007, *U. crustulosa*
100 — AF297671, *U. loboperipherica*
JQ739995, *U. loboperipherica*
98 — KY947746, *U. torrefacta*
16 — KY947799, *U. torrefacta*
KY947829, *U. proboscidea*
18 — 99 KY947749, *U. rigida*
71 — KY947850, *U. leiocarpa*
KY947735, *U. pulvinaria*
55 — KY947833, *U. semitensis*
98 — EU909462, *U. pensylvanica*
EU909467, *U. pustulata*
38 — KY947997, *U. muehlenbergii*
54 — KY947998, *U. hyperborea*
MT649503, *U. americana*
KY947753, *U. deusta*
KY947740, *Xylopsora friesii*

0.04

Fig. S1. Phylogenetic relationships amongst *Umbilicaria* species, based on a maximum likelihood analysis (IQ) of ITS1-5.8S-ITS2. The reliability of each branch was tested by ML method. Numbers at tree nodes indicate bootstrap values of ML. Thicker branches indicate when the bootstrap value of ML is ≥ 70%. GenBank accession numbers are given in Table 1. Branch lengths represent the estimated number of substitutions per site assuming the respective models of substitution (Table 2).