

**Supplemental Figure 1.** **Phylogeny of Xyleborini with a focus on the *Xylosandrus* complex**, a monophyletic group which possess mesonotal mycangia and the mycangial pronotal tuft, and farm fungi in the ceratocystid genus *Ambrosiella*. Highlighted in yellow are fungus-stealing species which have secondarily lost their mycangia and mesonotal tufts.