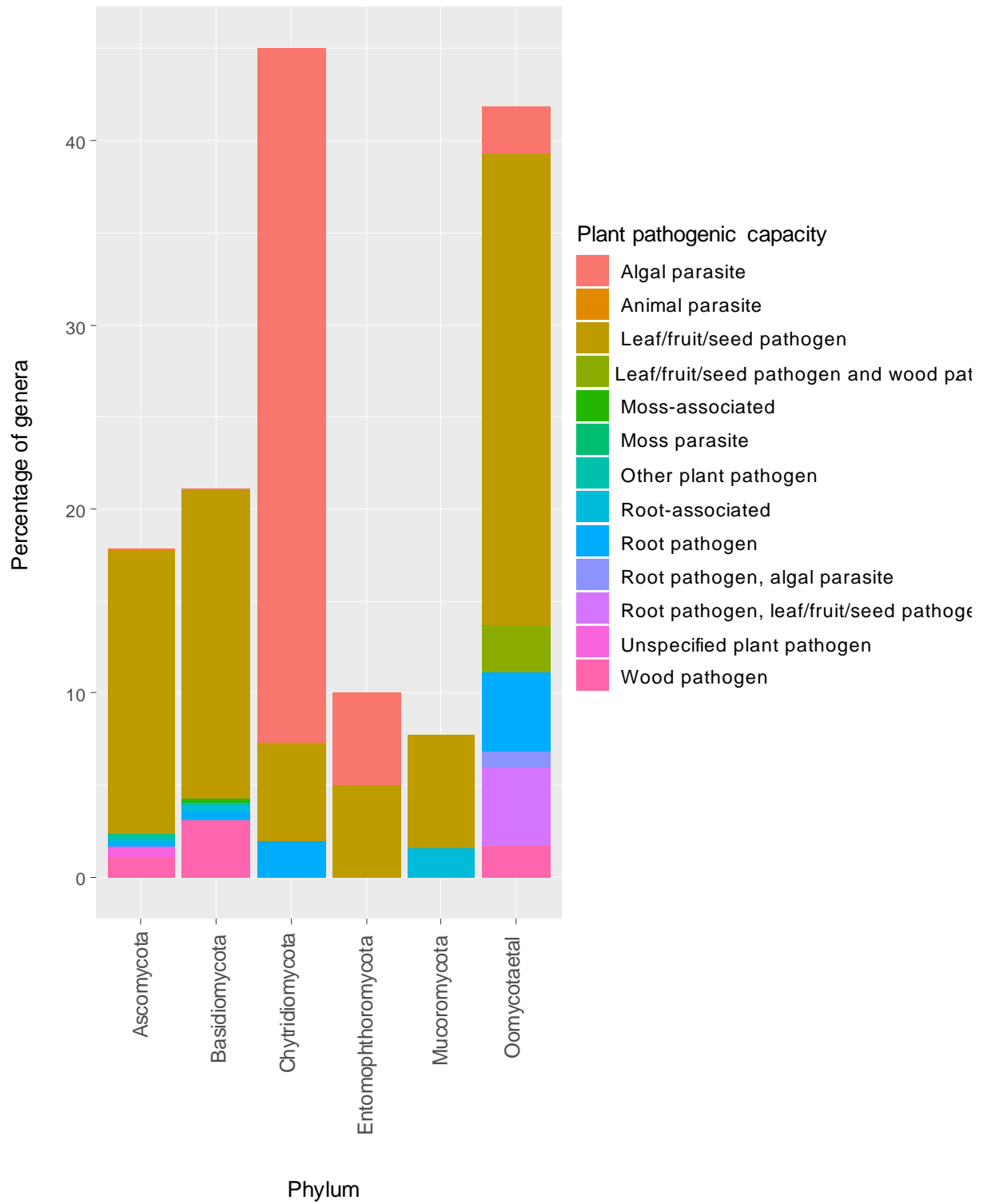
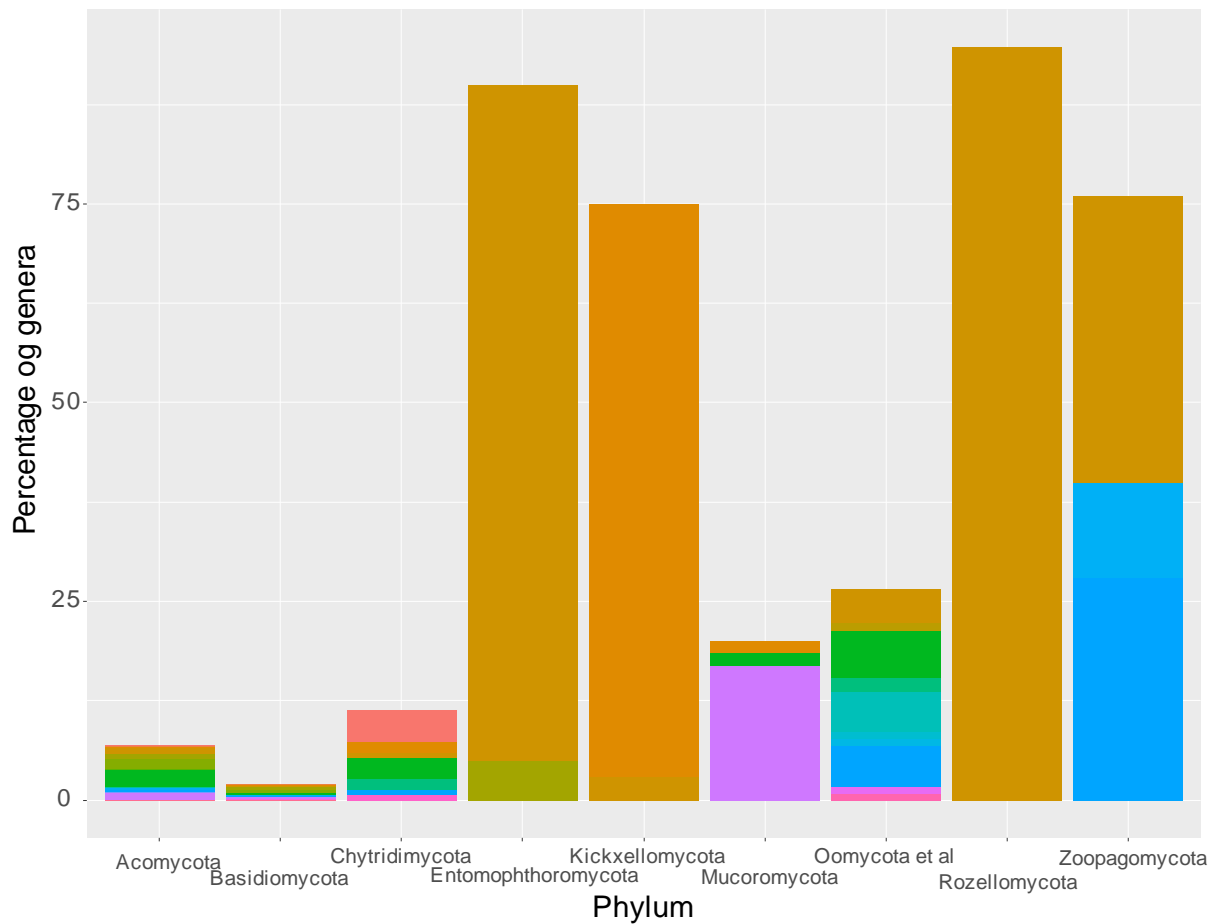


Fig. S1. Trait distributions of fungal genera in different fungal phyla.

(a)



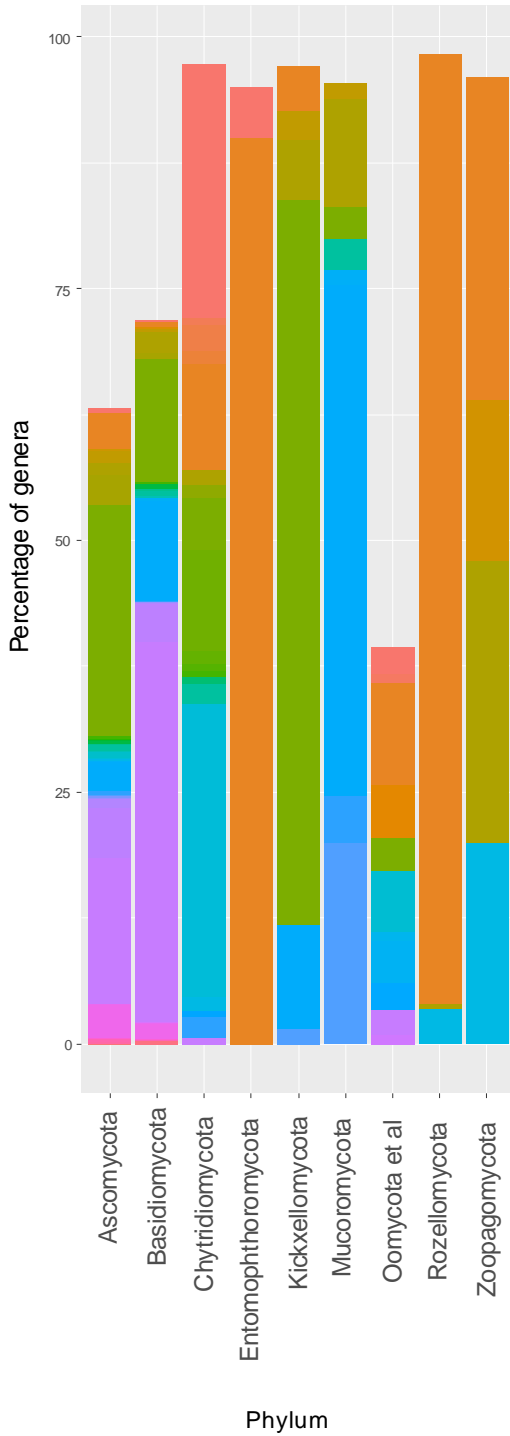
(b)



Animal.biotrophic.capacity.template

- Animal-associated
- Animal-associated/opportunistic human pathogen
- Animal endosymbiont
- Animal parasite
- Animal parasite P. paradoxa
- Animal parasite/opportunistic human pathogen
- Arthropod-associated
- Arthropod ectosymbiont
- Arthropod parasite
- Coral-associated
- Fish parasite
- Invertebrate-associated
- Invertebrate parasite
- Invertebrate parasite P. dubia
- Invertebrate parasite S. Zoophthorum
- Invertebrate pathogen
- Nematophagous
- Opportunistic animal parasite
- Opportunistic animal parasite G. destructans
- Opportunistic human pathogen
- Opportunistic human pathogen Pythium insidiosum
- Termite symbiont
- Vertebrate-associated
- Vertebrate parasite
- Vertebrate pathogen

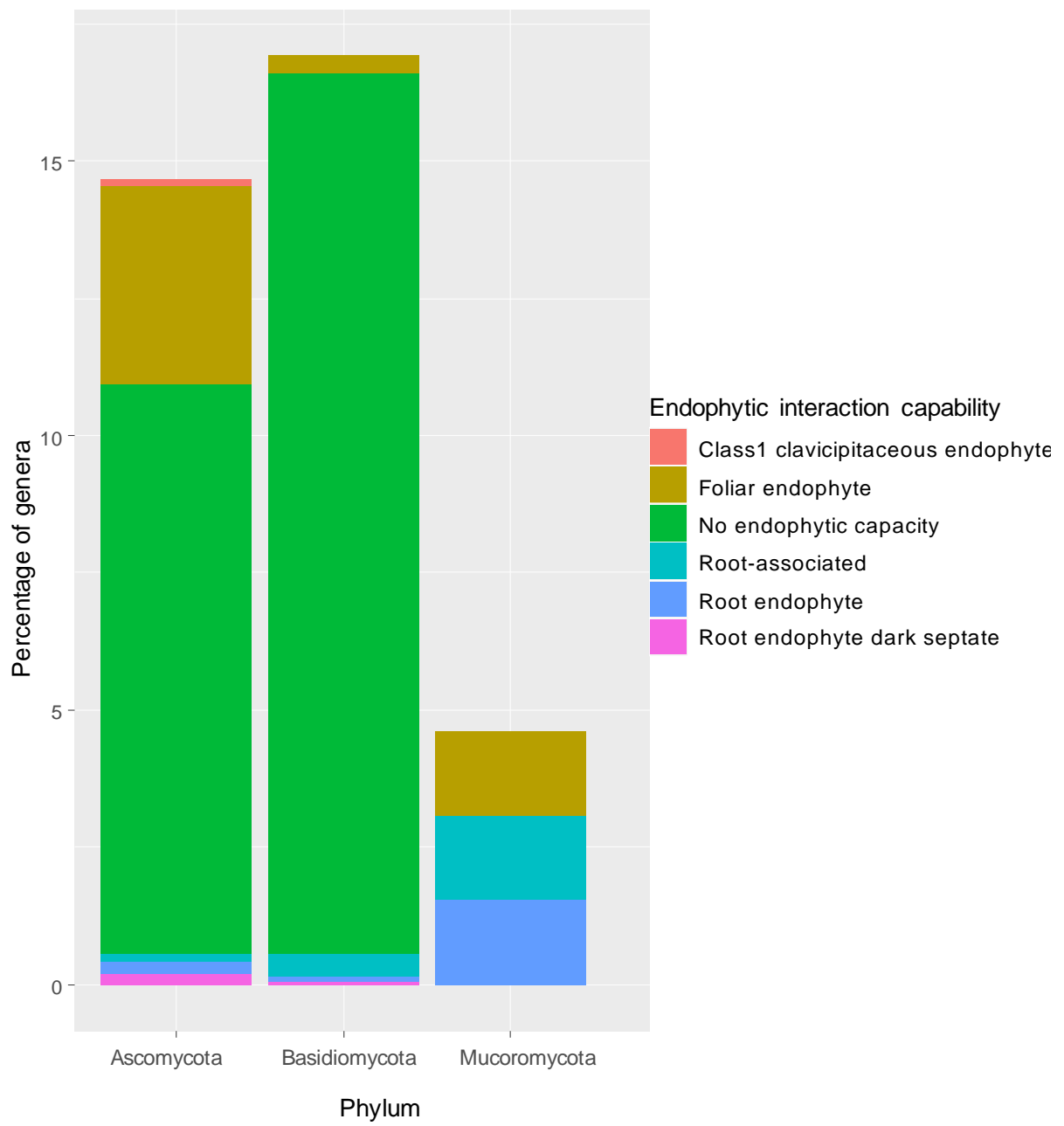
(c)



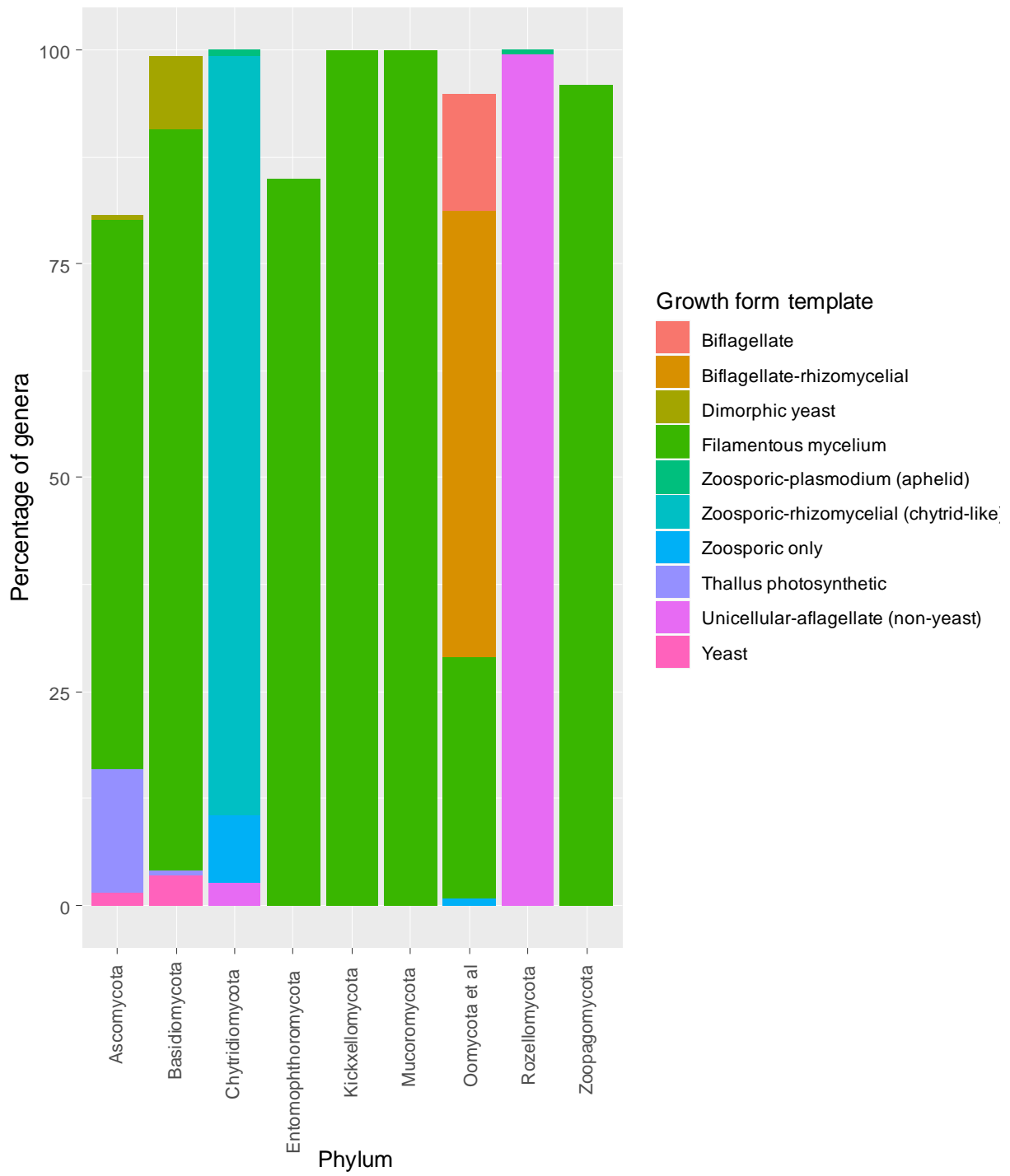
Decay substrate template

- Algal material
- Algal material, pollen
- Algal material, animal material
- Algal material, pollen
- Algal material, protist material
- Animal material
- Animal material, dung
- Animal material, dung
- Animal material, food, sugar-rich substrates
- Animal material, fungal material
- Animal material, protist material
- Animal material, sugar-rich substrates
- Burnt material
- Dung
- Dung, animal material
- Dung, sugar-rich substrates
- Fungal material
- Fungal material, algal material
- Fungal material, animal material
- Fungal material, dung
- Fungal material, protist material
- Hydrocarbon-rich substrates (fuel)
- Leaf/fruit/seed
- Leaf/fruit/seed, algal material
- Leaf/fruit/seed, algal material, fungal material, animal material
- Leaf/fruit/seed, algal material, fungal material, protist material
- Leaf/fruit/seed, animal material
- Leaf/fruit/seed, burnt material
- Leaf/fruit/seed, dung
- Leaf/fruit/seed, dung, burnt material
- Leaf/fruit/seed, fungal material
- Leaf/fruit/seed, fungal material, algal material
- Leaf/fruit/seed, protist material
- Leaf/fruit/seed, roots
- Leaf/fruit/seed, roots, algal material, fungal material, animal material
- Leaf/fruit/seed, roots, animal material, sugar-rich substrates
- Leaf/fruit/seed, roots, fungal material
- Leaf/fruit/seed, roots, soil
- Leaf/fruit/seed, roots, soil, animal material
- Leaf/fruit/seed, soil
- Leaf/fruit/seed, soil, animal material
- Leaf/fruit/seed, soil, burnt material
- Leaf/fruit/seed, soil, dung, animal material
- Leaf/fruit/seed, soil, fungal material
- Leaf/fruit/seed, soil, protist material
- Leaf/fruit/seed, sugar-rich substrates
- Litter
- Pollen
- Pollen, animal material
- Protist material
- Resins
- Roots
- Roots, soil organic material
- Roots, soil
- Soil
- Soil organic material
- Soil, algal material
- Soil, animal material
- Soil, dung
- Soil, dung, animal material
- Soil, dung, burnt material
- Soil, food
- Soil, fungal material
- Soil, sugar-rich substrates
- Sugar-rich substrates
- Unspecified
- Wood
- Wood, litter, soil organic material
- Wood, animal material
- Wood, dung
- Wood, leaf/fruit/seed, fungal material
- Wood, fungal material
- Wood, leaf/fruit/seed
- Wood, leaf/fruit/seed, animal material
- Wood, leaf/fruit/seed, dung
- Wood, leaf/fruit/seed, fungal material, animal material
- Wood, leaf/fruit/seed, roots
- Wood, leaf/fruit/seed, roots, algal material
- Wood, leaf/fruit/seed, roots, animal material
- Wood, leaf/fruit/seed, roots, soil
- Wood, leaf/fruit/seed, soil
- Wood, leaf/fruit/seed, soil, animal material
- Wood, leaf/fruit/seed, soil, dung
- Wood, leaf/fruit/seed, soil, dung, animal material
- Wood, leaf/fruit/seed, soil, fungal material
- Wood, leaf/fruit/seed, sugar-rich substrates
- Wood, roots
- Wood, sugar-rich substrates

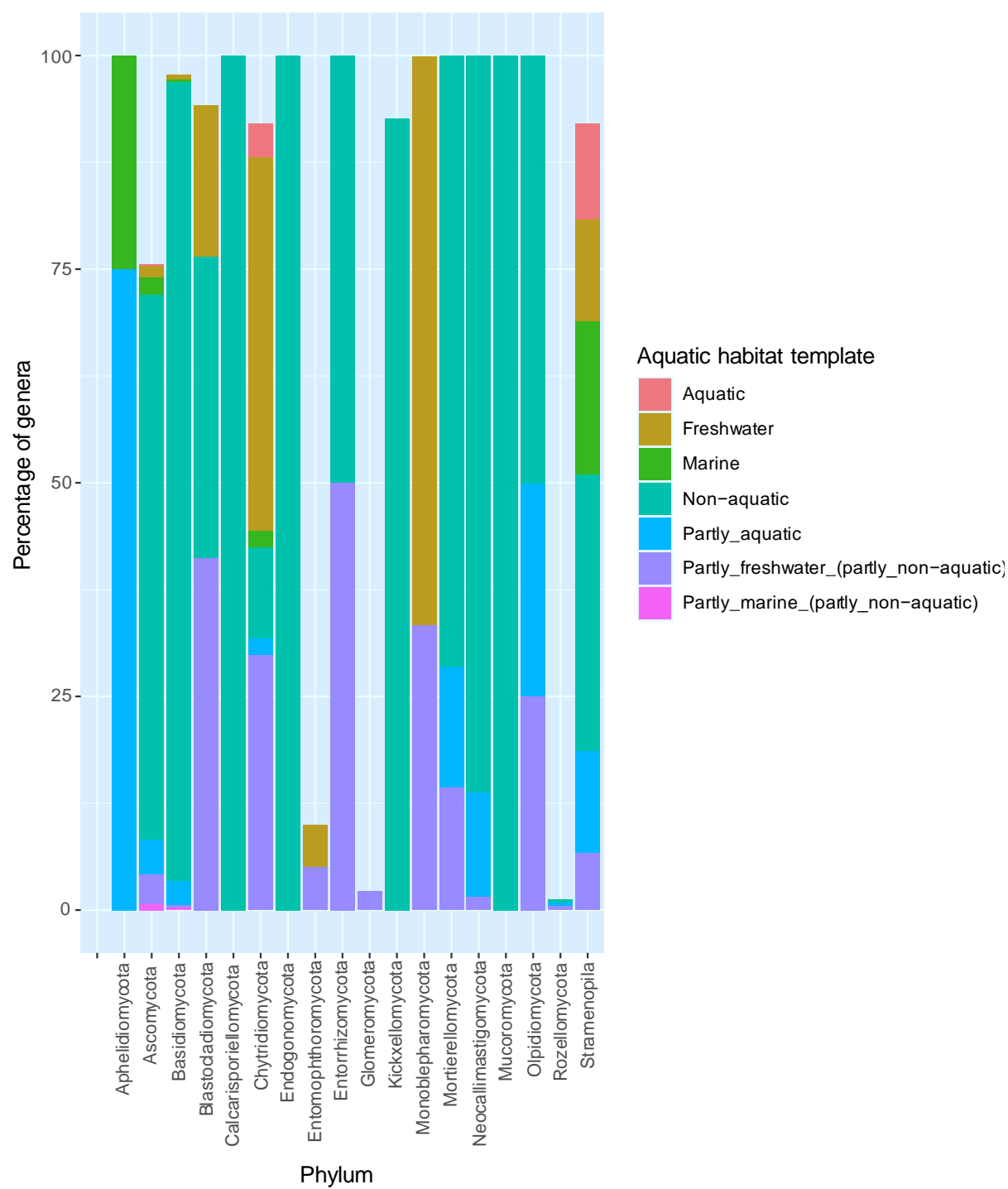
(d)



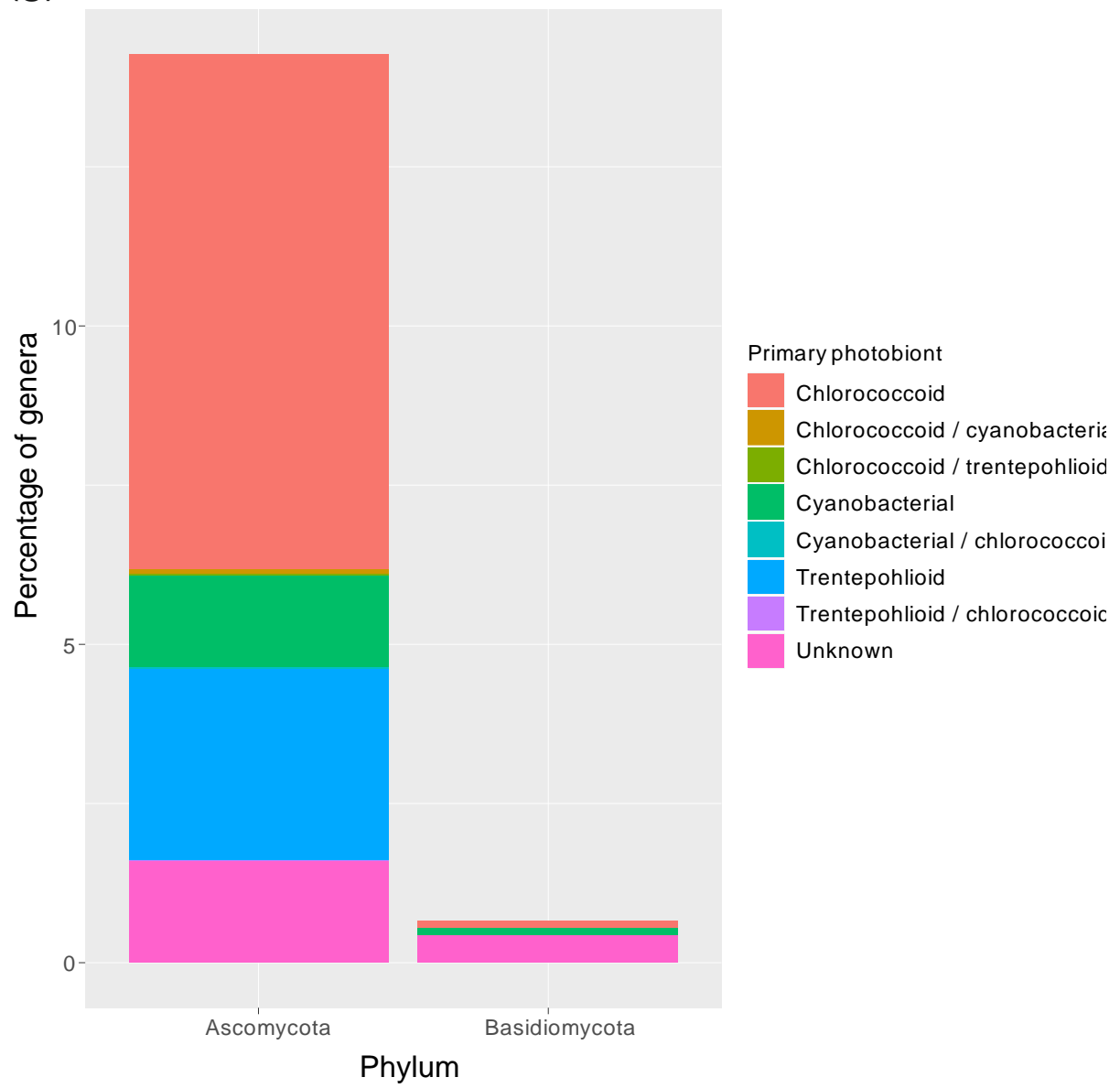
(e)



(f)



(g)







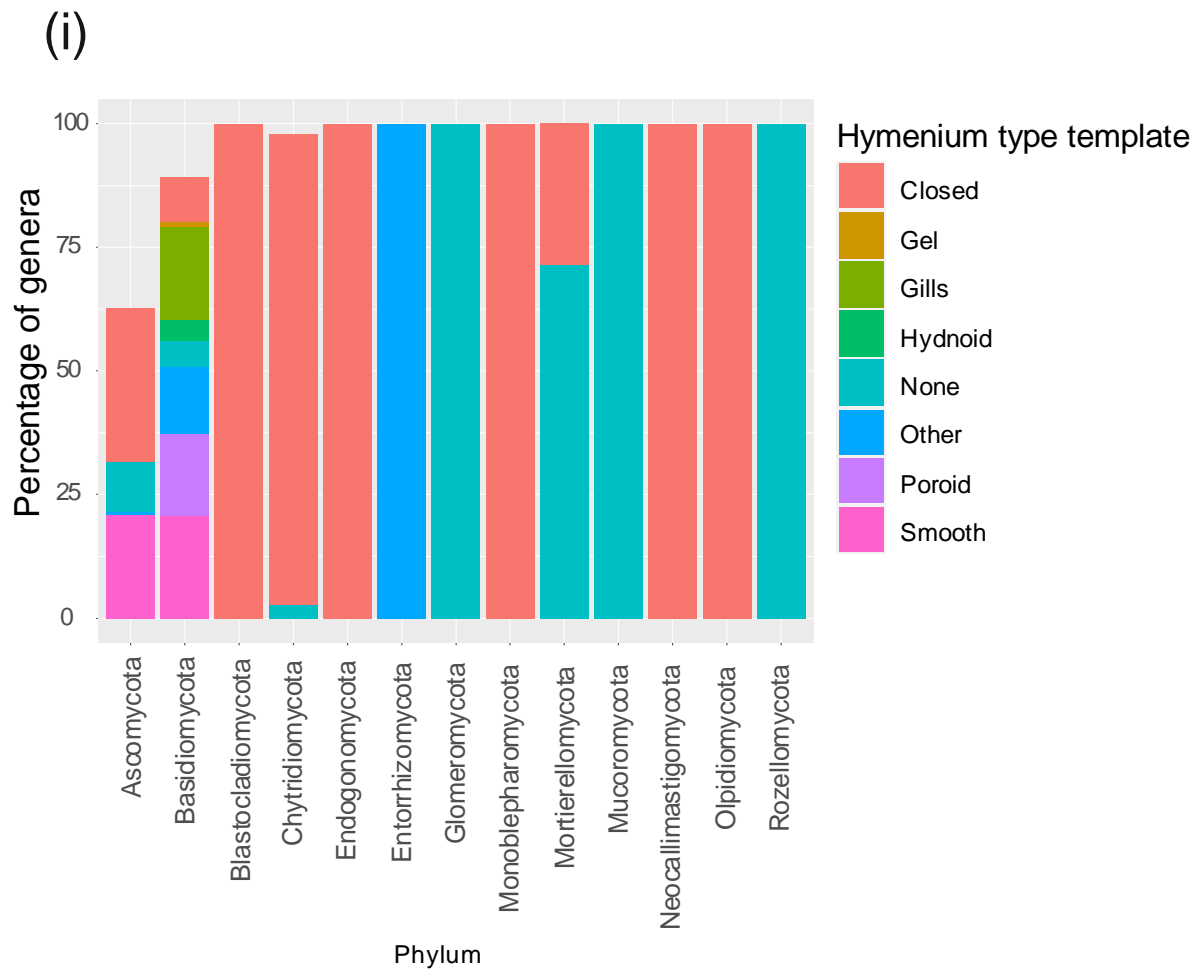


Fig S1. Percentage of fungal genera by trait levels per fungal phyla by: a) plant pathogenic capacity, b) animal biotrophic capacity, c) decay substrate, d) endophytic interaction capability, e) growth form, f) aquatic habitat, g) primary photobiont, h) fruitbody type, i) hymenium type