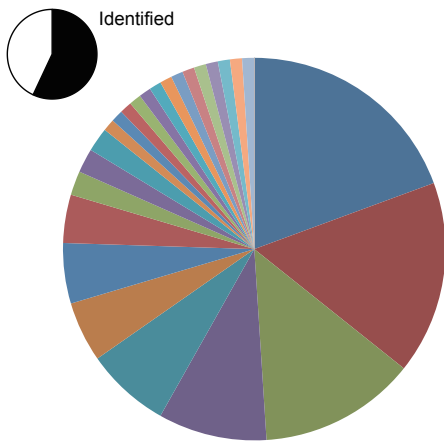
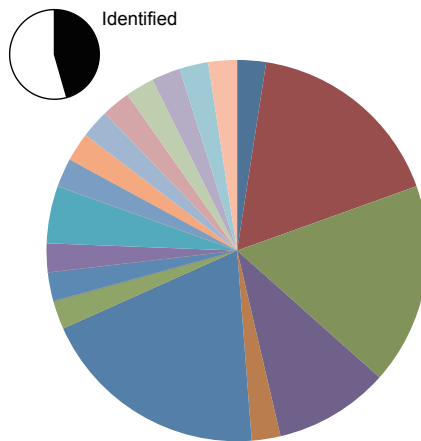


A. Root (order)

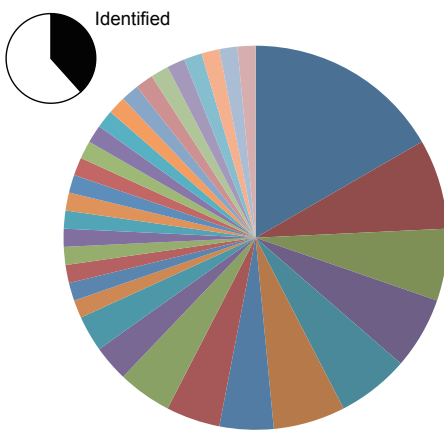


B. Soil (order)

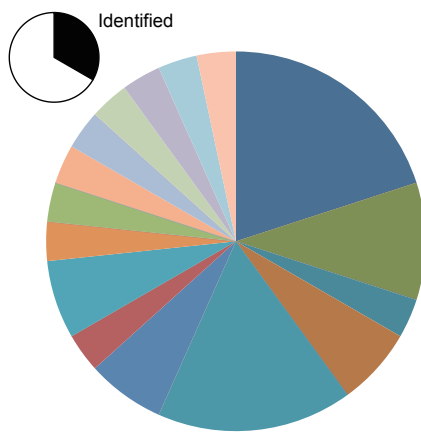


- |                 |                   |
|-----------------|-------------------|
| Helotiales      | Hypocreales       |
| Russulales      | Cenococcum*       |
| Agaricales      | Lauriomycetes*    |
| Thelephorales   | Thelebolaceae*    |
| Chaetothyriales | Ostropales        |
| Eurotiales      | Polyporales       |
| Trechisporales  | Saccharomycetales |
| Pleosporales    | Sebacinales       |
| Boletales       | Tremellales       |
| Glomerales      | Xylariales        |
| Oidiodendron*   | Chaetosphaeriales |
| Atheliales      | Chytridiales      |
| Cantharellales  | Myxotrichaceae*   |
| Capnodiales     | Pezizales         |
| Geastrales      | Phallales         |

C. Root (genus)



D. Soil (genus)



- |                         |                       |
|-------------------------|-----------------------|
| <i>Russula</i>          | <i>Cryptodiscus</i>   |
| <i>Mycena</i>           | <i>Geastrum</i>       |
| <i>Cortinarius</i>      | <i>Hypocrea</i>       |
| <i>Cryptosporiopsis</i> | <i>Lachnum</i>        |
| <i>Lactarius</i>        | <i>Lauriomycetes</i>  |
| <i>Tomentella</i>       | <i>Lophiostoma</i>    |
| <i>Capronia</i>         | <i>Mollisia</i>       |
| <i>Corynespora</i>      | <i>Pestalotiopsis</i> |
| <i>Penicillium</i>      | <i>Phialocephala</i>  |
| <i>Oidiodendron</i>     | <i>Scleropezicula</i> |
| <i>Trechispora</i>      | <i>Sebacina</i>       |
| <i>Agaricus</i>         | <i>Thelephora</i>     |
| <i>Amanita</i>          | <i>Thysanophora</i>   |
| <i>Boletus</i>          | <i>Tylophilus</i>     |
| <i>Byssocorticium</i>   | <i>Chaetosphaeria</i> |
| <i>Candida</i>          | <i>Inocybe</i>        |
| <i>Cenococcum</i>       | <i>Tricholoma</i>     |
| <i>Clavulina</i>        | <i>Trichosporon</i>   |

Fig. S4