National Park Service
U.S. Department of the Interior

Natural Resource Stewardship and Science

# Opportunistic Inventory of Fungi in Eastern Rivers and Mountains Network Parks

Natural Resource Report NPS/ERMN/NRR—2019/2021



**ON THE COVER**

Diversity of fungi from New River Gorge National River. Can you spot the one species that is NOT a fungus in the photo?
Image credit: Sarah Daugherty

# Opportunistic Inventory of Fungi in Eastern Rivers and Mountains Network Parks

Natural Resource Report NPS/ERMN/NRR—2019/2021

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# Contents

Page

Figures and Tables ..... v

Appendices ..... v

Abstract ..... vii

Introduction ..... 1

Methods ..... 3

Results ..... 5

Conclusions ..... 9

Literature Cited ..... 11

# Figures and Tables

Page

**Figure 1.** Locations of parks in the Eastern Rivers and Mountains Network. ..... 3

**Table 1.** List of fungi taxa observed in Eastern Rivers and Mountains Network parks ..... 5

**Appendix A Table 1.** List of fungi taxa observed, noting the park in which the taxa was observed, the year of observation, and whether a photo voucher was collected in Eastern Rivers and Mountains Network parks ..... 13

# Appendices

Page

Appendix A. List of fungi taxa observed ..... 13

Appendix B. Photographic vouchers of fungi taxa observed ..... 19

# Abstract

Though often overlooked, fungi are important components of park biodiversity, serving many vital functions in forest ecosystems. However, the National Park Service has little to no documentation of fungi existing within the national parks in the Eastern Rivers and Mountains Inventory and Monitoring Network. This report details the opportunistic inventory that was conducted by Sarah Daugherty in eight national parks during the summers of 2017 and 2018. Sarah worked on the field crew of the ERMN Vegetation Monitoring Crew, hiking to randomly-selected, spatially-balanced permanent plots in the national parks. While conducting this work, Sarah identified, photographed, and recorded notable fungal fruiting bodies that she observed in each park. A total of 144 fungi taxa were observed within the eight parks, and photographic vouchers for many of these species are presented in an appendix to this report. This inventory is not an accurate representation of the entire fungal diversity in these parks, but provides important baseline biodiversity information.

# Introduction

The National Park Service (NPS) Inventory and Monitoring Program (I&M) was established in 1992 to develop a scientific understanding of the physical, chemical, and biological elements and processes of park ecosystems that shape the overall "health" or condition of park resources occurring in more than 270 national parks (Monahan and Gallo 2014). The primary purpose of the program is to deliver to parks the science needed to manage their natural resources. Conducting biological inventories is the first step in understanding the biodiversity of park resources, and subsequently preserving the resources for future generations.

Though often overlooked, fungi are important components of park biodiversity. These organisms serve many vital functions in forest ecosystems including decomposition, symbiotic relationships with other plants, nutrient cycling, and the causal agents of diseases in plants and animals. The expansive, below-ground vegetative fungal tissue helps stabilize and aerate soils, and they can serve as a significant reduction in atmospheric carbon dioxide and play a role in forest carbon retention (Corradi et al. 2012). Fungi help create habitat in standing and downed trees for many species of birds and mammals, while mushrooms, which are the fruiting body of fungi, provide food for wildlife (Ostry et al. 2011).

Over 1,700 different fungi species are known from West Virginia and Pennsylvania (Roody 2003, Russell, 2006). However, in those states, the NPS has little to no documentation of fungi existing within the national parks (NPSpecies 2018). The notable exception is the Delaware Water Gap National Recreation Area where the New Jersey Mycological Association has documented over 550 species of fungi during forays held annually in the park for over 30 years. Given the lack of basic inventory data on fungi in most other mid-Atlantic national parks, this opportunistic inventory provides important baseline biodiversity information.

# Methods

The Eastern Rivers and Mountain Network (ERMN) of the NPS I&M Program includes nine parks in New York, New Jersey, Pennsylvania, and West Virginia (Figure 1), which together encompass nearly 91,000 ha (225,000 ac) of land area and over 965 km (600 mi) of streams and rivers within the parks' authorized boundaries. The network includes four smaller parks in central and southwestern Pennsylvania that have a primarily cultural or historical focus. The cultural parks are Allegheny Portage Railroad National Historic Site (ALPO), Johnstown Flood National Memorial (JOFL), Fort Necessity National Battlefield (FONE), and Friendship Hill National Historic Site (FRHI). The five larger parks preserve segments of large rivers and generally extend to the ridge tops surrounding the river section. The river parks are Upper Delaware Scenic and Recreational River (UPDE), Delaware Water Gap National Recreation Area (DEWA), New River Gorge National River (NERI), Gauley River National Recreation Area (GARI), and Bluestone National Scenic River (BLUE). This inventory covers all of ERMN parks except UPDE, which contains insufficient publically owned land to be included.

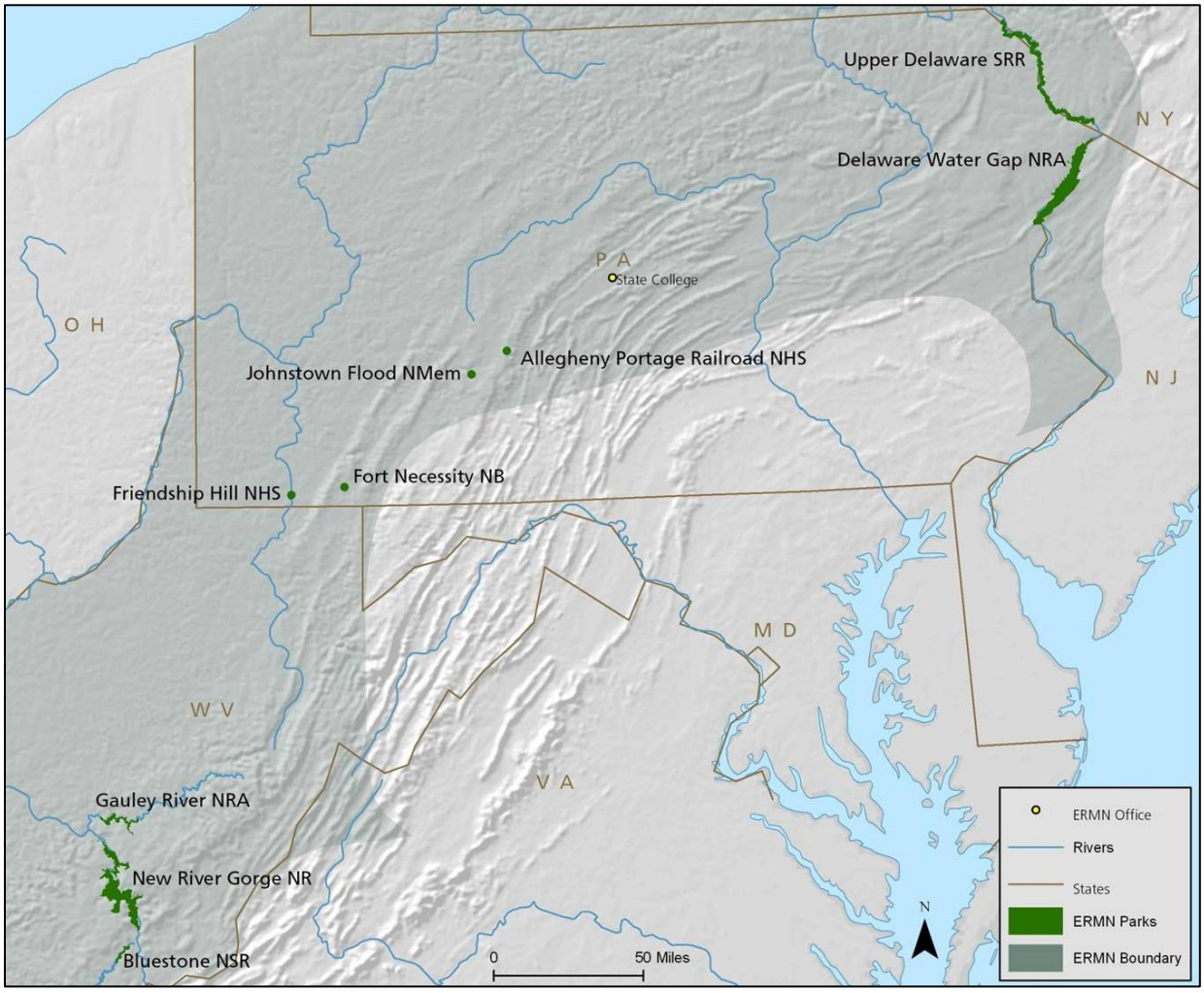



**Figure 1.** Locations of parks in the Eastern Rivers and Mountains Network.

This opportunistic inventory was conducted by Sarah Daugherty during the summers of 2017 and 2018. Sarah worked on the field crew of the ERMN Vegetation Monitoring Crew, hiking to randomly-selected, spatially-balanced permanent plots in the national parks (see Perles et al. 2014 for details). While conducting this work, Sarah identified, photographed, and recorded notable fungal fruiting bodies that she observed in each park.

Species were observed in NERI during the last few weeks of May and then again during late July-August. Fungi in DEWA were observed during the month of June and early July. Species in JOFL, ALPO, FRHI, and FONE were observed during the month of July.

Any species that could be easily identified in the field without the aid of a dichotomous key were recorded in a journal with the associated date and park. Species that could not be identified in the field were photographed and described in detail in a journal to be identified later with a dichotomous key. Some species were collected to obtain spore prints for identification, as needed.

In addition, all photos of fungi held by ERMN that had been taken in ERMN parks during the Vegetation Monitoring project from 2007 – 2018 were assembled. Any photographs that could be definitively identified were included in this inventory.

Taxonomic status was verified using the MyCoPortal taxonomic thesaurus, Mycobank, as well as Basette et al. (1997, 2016), Binion et al. (2008), Kuo and Methven (2014) and Roody (2003). Photographs were taken of some species to act as vouchers. A master list of identified species was recorded in an Excel spreadsheet with the current taxonomic name, year found, park, and indication of available voucher photos.

# Results

A total of 144 fungi taxa were observed within the eight parks (Table 1, Appendix A). Photographic vouchers of many taxa are shown in Appendix B. The most taxa were observed in NERI (n=61), however, this park is the largest in the network and the Forest Monitoring crews spend the most time living and working in NERI each summer. Numerous taxa (n=44) were also observed in GARI, which is notable since the Forest Monitoring crew spends only 1 week each year in the park in late July – early August when fungi are abundant in years with sufficient rainfall.

**Table 1.** List of fungi taxa observed in Eastern Rivers and Mountains Network parks. An "X" indicates that the species was observed in a park.

| Fungi Taxa | ALPO | BLUE | DEWA | FONE | FRHI | GARI | JOFL | NERI | Total Number of Parks |
|---|---|---|---|---|---|---|---|---|---|
| *Amanita cokeri* | – | – | – | – | – | – | – | X | 1 |
| *Amanita flavoconia* | – | – | – | – | – | – | – | X | 1 |
| *Amanita jacksonii* | X | – | – | – | – | – | – | – | 1 |
| *Amanita parcivolvata* | – | – | – | – | – | – | – | X | 1 |
| *Amanita virosa* | – | – | – | X | – | – | – | – | 1 |
| *Artomyces pyxidata* | – | – | – | – | – | – | – | X | 1 |
| *Auricularia* sp. | – | – | – | – | – | – | – | X | 1 |
| *Boletus longicurvipes* | – | – | – | – | – | X | – | – | 1 |
| *Boletus ornatipes* | – | – | – | – | – | X | – | – | 1 |
| *Calostoma cinnabarinum* | – | – | – | – | – | X | – | X | 2 |
| *Cantharellus* sp. | – | X | – | – | X | X | – | X | 4 |
| *Cantharellus cinnibarius* | – | – | – | – | – | X | – | – | 1 |
| *Cantharellus ignicolor* | – | – | – | – | – | – | – | X | 1 |
| *Cantharellus lateritius* | – | X | – | X | X | X | – | X | 5 |
| *Cantharellus minor* | – | – | – | – | – | X | – | – | 1 |
| *Chlorociboria aeruginascens* | – | – | – | – | – | X | – | – | 1 |
| *Clavaria* sp. | – | – | – | – | – | X | – | – | 1 |
| *Clavaria zollingeri* | X | – | – | – | – | – | – | – | 1 |
| *Clavariadelphus pistillaris* | – | – | – | – | – | – | – | X | 1 |
| *Clavariadelphus truncatus* | – | – | – | – | – | – | – | X | 1 |
| *Clavulina* sp. | – | – | – | – | – | X | – | – | 1 |
| *Clavulinopsis fusiformis* | X | – | – | – | – | – | – | – | 1 |

**Table 1 (continued).** List of fungi taxa observed in Eastern Rivers and Mountains Network parks. An "X" indicates that the species was observed in a park.

| Fungi Taxa | ALPO | BLUE | DEWA | FONE | FRHI | GARI | JOFL | NERI | Total Number of Parks |
|---|---|---|---|---|---|---|---|---|---|
| *Clavulinopsis aurantio-cinnabarina* | – | – | – | X | – | – | – | X | 2 |
| *Climacodon septentrionale* | – | – | – | X | – | – | – | – | 1 |
| *Clitocybe nuda* | – | – | – | – | – | – | – | X | 1 |
| *Coltricia perennis* | X | – | – | – | – | – | – | – | 1 |
| *Coprinus* sp. | – | – | – | – | – | – | – | X | 1 |
| *Cordyceps militaris* | – | – | – | – | – | X | – | X | 2 |
| *Cortinarius alboviolaceus* | – | – | – | – | – | – | – | X | 1 |
| *Cortinarius bolaris* | – | – | – | – | – | – | – | X | 1 |
| *Cortinarius corrugatus* | – | – | – | – | – | X | – | | 1 |
| *Cortinarius iodes* | – | – | – | – | – | – | – | X | 1 |
| *Cortinarius semisanguineus* | – | – | – | – | – | – | – | X | 1 |
| *Craterellus fallax* | – | – | – | X | – | X | – | X | 3 |
| *Cyathus* sp. | – | – | X | – | – | X | – | – | 2 |
| *Entoloma murrayi* | – | – | – | – | – | X | – | X | 2 |
| *Exidia alba* | – | – | – | – | – | – | – | X | 1 |
| *Fistulina hepatica* | – | – | – | – | – | X | – | – | 1 |
| *Galiella rufa* | – | – | X | – | – | – | – | X | 2 |
| *Ganoderma tsugae* | – | – | X | – | – | X | – | X | 3 |
| *Geastrum* sp. | X | – | – | – | – | – | – | X | 2 |
| *Gliophorus irrigatus* | – | – | – | – | – | X | – | – | 1 |
| *Gliophorus psittacinus* | – | – | – | – | – | X | – | – | 1 |
| *Gomphus floccocsus* | – | – | X | – | – | X | – | – | 2 |
| *Grifola umbellata* | – | – | – | – | – | – | – | X | 1 |
| *Gymnopus dryophilus* | – | – | – | – | – | X | – | – | 1 |
| *Harrya chromapes* | – | – | X | – | – | – | – | – | 1 |
| *Heimioporus betula* | – | – | – | – | – | X | – | – | 1 |
| *Hericium coralloides* | – | – | – | – | – | X | – | – | 1 |
| *Hydnellum scrobiculatum* | – | – | – | – | – | X | – | X | 2 |
| *Hydnum subolympicum* | – | – | – | – | – | – | – | X | 1 |

**Table 1 (continued).** List of fungi taxa observed in Eastern Rivers and Mountains Network parks. An “X” indicates that the species was observed in a park.

| Fungi Taxa | ALPO | BLUE | DEWA | FONE | FRHI | GARI | JOFL | NERI | Total Number of Parks |
|---|---|---|---|---|---|---|---|---|---|
| *Hygrocybe cantharellus* | – | – | X | – | – | X | – | – | 2 |
| *Hydrocybe unquinosa* | – | – | – | – | – | X | – | – | 1 |
| *Hypomyces lactifluorum* | – | X | – | – | – | – | – | – | 1 |
| *Inonotus obliquus* | – | – | – | – | – | X | – | X | 2 |
| *Laccaria ochropurpurea* | – | – | – | – | – | X | – | X | 2 |
| *Lactarius atroviridis* | – | – | – | – | – | X | – | – | 1 |
| *Lactarius corrugis* | – | – | – | – | – | – | – | X | 1 |
| *Lactarius indigo* | – | X | – | – | – | X | – | – | 2 |
| *Laetiporus cincinnatus* | – | – | X | X | – | – | – | X | 3 |
| *Laetiporus sulphurus* | X | X | – | X | – | X | – | X | 5 |
| *Leccinum aurantiacum* | – | – | – | – | – | – | – | X | 1 |
| *Leotia lubrica* | – | – | – | – | – | X | X | X | 3 |
| *Leotia viscosa* | – | – | – | – | – | X | – | X | 2 |
| *Leucopholiota decorosa* | – | – | – | – | – | X | – | – | 1 |
| *Marasmius pyrrhocephalus* | – | – | – | – | – | X | – | – | 1 |
| *Marasmius rotula* | – | – | – | – | – | – | – | X | 1 |
| *Microstoma floccosum* | – | – | X | – | – | – | – | – | 1 |
| *Mycena haematopus* | – | – | – | – | – | – | – | X | 1 |
| *Mycena leaiana* | – | – | – | – | – | – | – | X | 1 |
| *Ompholotus illudens* | – | – | – | – | – | – | – | X | 1 |
| *Peziza* sp. | – | – | – | – | – | X | – | – | 1 |
| *Phaeolus schweinitzii* | – | – | – | – | – | X | – | – | 1 |
| *Phallus impudicus* var. *togatus.* | – | – | – | – | – | – | – | X | 1 |
| *Phlebia incarnata* | – | – | – | – | – | X | – | – | 1 |
| *Phylloporus rhodoxanthus* | – | – | – | – | – | X | – | – | 1 |
| *Pleurotus pulmonarius* | – | – | X | – | – | – | – | – | 1 |
| *Polyporus badius* | – | – | – | – | – | – | – | X | 1 |
| *Pseudoboletus parasiticus* | – | – | – | – | – | – | – | X | 1 |
| *Pseudohydnum gelatinosum* | – | – | – | – | – | X | – | – | 1 |
| *Ramariopsis kunzei* | – | – | – | – | – | – | – | X | 1 |

**Table 1 (continued).** List of fungi taxa observed in Eastern Rivers and Mountains Network parks. An “X” indicates that the species was observed in a park.

| Fungi Taxa | ALPO | BLUE | DEWA | FONE | FRHI | GARI | JOFL | NERI | Total Number of Parks |
|---|---|---|---|---|---|---|---|---|---|
| *Rhodotus palmatus* | – | – | – | – | – | – | – | X | 1 |
| *Russula earlei* | – | – | – | – | – | – | – | X | 1 |
| *Sarcodon scabrosus* | – | – | – | – | – | – | – | X | 1 |
| *Sarcosypha austriaca* | – | – | – | – | – | – | – | X | 1 |
| *Sarcosypha occidentalis* | – | – | – | – | – | – | – | X | 1 |
| *Scuttellinia scutellata* | – | – | X | – | – | – | – | X | 2 |
| *Spathulariopsis velutipes* | – | – | X | – | – | – | – | – | 1 |
| *Stereum ostrea* | – | – | – | – | – | – | – | X | 1 |
| *Strobilomyces strobilaceus* | – | – | X | – | X | – | – | – | 2 |
| *Suillus spraguei* | – | – | – | – | – | – | – | X | 1 |
| *Thelephora palmata* | – | – | – | – | – | – | – | X | 1 |
| *Trametes versicolor* | X | X | X | X | X | X | X | X | 8 |
| *Trichaptum biforme* | – | – | X | – | – | X | – | X | 3 |
| *Trichoglossum* sp. | – | – | – | – | – | X | – | – | 1 |
| *Tylopilus alboater* | – | – | – | – | – | – | – | X | 1 |
| *Tylopilus violatinctus* | – | – | – | – | – | X | – | – | 1 |
| *Urnula craterium* | – | – | X | – | – | – | – | X | 2 |
| *Wynnea americana* | – | – | – | X | – | – | – | – | 1 |
| *Xerocomus hortonii* | – | – | – | – | – | – | – | X | 1 |
| *Xeromphalina campanella* | – | – | – | – | – | – | – | X | 1 |
| *Xylaria magnoliae* | – | – | – | – | – | – | – | X | 1 |
| *Xylaria* sp. | – | – | – | – | – | – | – | X | 1 |
| **Total Number of Taxa in Park** | **7** | **6** | **15** | **9** | **4** | **44** | **2** | **61** | **144** |

## Conclusions

This inventory serves as a baseline, and it is not an accurate representation of the entire fungal diversity in the ERMN parks. Parks were visited during specific time periods, and for just a few days in the case of the smaller parks. Searching for fungi during other portions of the growing season would yield additional species. Additionally, only species with an observable fruiting body were recorded, and species that were not fruiting or were only visible microscopically were not included. Furthermore, the parks likely house other interesting habitats for fungi, which were not included in this inventory due to the random location of the Vegetation Monitoring plots. Despite those limitations, this inventory provides important baseline biodiversity information for park natural resource managers.

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# Appendix A. List of fungi taxa observed

**Appendix A Table 1.** List of fungi taxa observed, noting the park in which the taxa was observed, the year of observation, and whether a photo voucher was collected in Eastern Rivers and Mountains Network parks.

| Taxa | Year Identified | Park | Photo? |
|---|---|---|---|
| *Amanita cokeri* | 2017, 2018 | NERI | yes |
| *Amanita flavoconia* | 2015 | NERI | yes |
| *Amanita jacksonii* | 7/9/2018 | ALPO | yes |
| *Amanita parcivolvata* | 2017, 2018 | NERI | yes |
| *Amanita virosa* | 2018 | FONE | no |
| *Artomyces pyxidata* | 2018 | NERI | yes |
| *Auricularia* sp. | 2017 | NERI | yes |
| *Boletus longicurvipes* | 2017 | GARI | yes |
| *Boletus ornatipes* | 2017 | GARI | no |
| *Calostoma cinnabarinum* | 2017, 2018 | NERI | yes |
| *Calostoma cinnabarinum* | 2018 | GARI | yes |
| *Cantharellus* sp. | 2017, 2018 | NERI | no |
| *Cantharellus* sp. | 2017, 2018 | GARI | yes |
| *Cantharellus* sp. | 2017, 2018 | FRHI | no |
| *Cantharellus* sp. | 2017, 2018 | BLUE | no |
| *Cantharellus cinnibarius* | 2018 | GARI | yes |
| *Cantharellus ignicolor* | 2017 | NERI | yes |
| *Cantharellus lateritius* | 2017, 2018 | NERI | no |
| *Cantharellus lateritius* | 2017, 2018 | GARI | no |
| *Cantharellus lateritius* | 2017, 2018 | FRHI | no |
| *Cantharellus lateritius* | 2017, 2018 | FONE | no |
| *Cantharellus lateritius* | 2017, 2018 | BLUE | no |
| *Cantharellus minor* | 2018 | GARI | yes |
| *Chlorociboria aeruginascens* | 2017 | GARI | yes |
| *Clavaria* sp. | 2018 | GARI | no |
| *Clavaria zollingeri* | 2017 | ALPO | yes |
| *Clavariadelphus pistillaris* | 2017 | NERI | yes |
| *Clavariadelphus truncatus* | 2018 | NERI | no |
| *Clavulina* sp. | 2018 | GARI | no |
| *Clavulinopsis aurantiocinnabarina* | 2017 | FONE | no |
| *Clavulinopsis aurantiocinnabarina* | 2018 | NERI | yes |
| *Clavulinopsis fusiformis* | 2017 | ALPO | yes |
| *Climacodon septentrionale* | 2018 | FONE | no |

| Taxa | Year Identified | Park | Photo? |
|---|---|---|---|
| *Clitocybe nuda* | 2018 | NERI | no |
| *Coltricia perennis* | 2017 | ALPO | yes |
| *Coprinus* sp. | 2018 | NERI | yes |
| *Cordyceps militaris* | 2018 | NERI | yes |
| *Cordyceps militaris* | 2017 | GARI | no |
| *Cortinarius alboviolaceus* | 2017 | NERI | no |
| *Cortinarius bolaris* | 2018 | NERI | yes |
| *Cortinarius corrugatus* | 2017, 2018 | GARI | no |
| *Cortinarius iodes* | 2018 | NERI | yes |
| *Cortinarius semisanguineus* | 2017 | NERI | yes |
| *Cotylidia diaphana* | 2018 | NERI | yes |
| *Craterellus fallax* | 2017, 2018 | NERI | yes |
| *Craterellus fallax* | 2017, 2018 | GARI | no |
| *Craterellus fallax* | 2017 | FONE | no |
| *Cyathus* sp. | 2017 | GARI | no |
| *Cyathus* sp. | 2017 | DEWA | no |
| *Entoloma murrayi* | 2018 | NERI | yes |
| *Entoloma murrayi* | 2018 | GARI | yes |
| *Exidia alba* | 2018 | NERI | yes |
| *Fistulina hepatica* | 2017 | GARI | yes |
| *Galiella rufa* | 2017 | NERI | yes |
| *Galiella rufa* | 2017 | DEWA | no |
| *Ganoderma tsugae* | 2016 | DEWA | yes |
| *Ganoderma tsugae* | 2017 | NERI | yes |
| *Ganoderma tsugae* | 2018 | GARI | yes |
| *Geastrum* sp. | 2017 | NERI | no |
| *Geastrum* sp. | 2017 | ALPO | yes |
| *Gliophorus irrigatus* | 2018 | GARI | yes |
| *Gliophorus psittacinus* | 2018 | GARI | no |
| *Gomphus floccosus* | 2007 | GARI | yes |
| *Gomphus floccosus* | 2017 | DEWA | yes |
| *Grifola umbellata* | 2018 | NERI | yes |
| *Gymnopus dryophilus* | 2017 | GARI | no |
| *Harrya chromapes* | 2017 | DEWA | no |
| *Heimioporus betula* | 2017 | GARI | no |
| *Hericium coralloides* | 2018 | GARI | yes |
| *Hydnellum scrobiculatum* | 2018 | NERI | yes |
| *Hydnellum scrobiculatum* | 2018 | GARI | no |

| Taxa | Year Identified | Park | Photo? |
|---|---|---|---|
| *Hydnum subolympicum* | 2017 | NERI | yes |
| *Hygrocybe cantharellus* | 2007 | GARI | yes |
| *Hygrocybe cantharellus* | 2009 | DEWA | yes |
| *Hygrocybe unquinosa* | 2018 | GARI | yes |
| *Hypomyces lactifluorum* | 2017 | BLUE | no |
| *Inonotus obliquus* | 2017 | NERI | yes |
| *Inonotus obliquus* | 2017 | GARI | no |
| *Laccaria ochropurpurea* | 2018 | NERI | yes |
| *Laccaria ochropurpurea* | 2018 | GARI | no |
| *Lactarius atroviridis* | 2018 | GARI | yes |
| *Lactarius corrugis* | 2018 | NERI | yes |
| *Lactarius indigo* | 2017 | GARI | yes |
| *Lactarius indigo* | 2017 | BLUE | no |
| *Laetiporus cincinnatus* | 2017 | NERI | yes |
| *Laetiporus cincinnatus* | 2017 | DEWA | yes |
| *Laetiporus cincinnatus* | 2018 | FONE | no |
| *Laetiporus sulphurus* | 2017, 2018 | NERI | yes |
| *Laetiporus sulphurus* | 2017, 2018 | GARI | no |
| *Laetiporus sulphurus* | 2017, 2018 | FONE | no |
| *Laetiporus sulphurus* | 2018 | BLUE | no |
| *Laetiporus sulphurus* | 2018 | ALPO | no |
| *Leccinum aurantiacum* | 2018 | NERI | no |
| *Leotia lubrica* | 2018 | NERI | yes |
| *Leotia lubrica* | 2018 | JOFL | no |
| *Leotia lubrica* | 2017 | GARI | no |
| *Leotia viscosa* | 2018 | NERI | yes |
| *Leotia viscosa* | 2018 | GARI | no |
| *Leucopholiota decorosa* | 2018 | GARI | yes |
| *Marasmius pyrrhocephalus* | 2017 | GARI | no |
| *Marasmius rotula* | 2017 | NERI | no |
| *Marasmius rotula* | 2018 | NERI | yes |
| *Microstoma floccosum* | 2017 | DEWA | no |
| *Mycena haematopus* | 2018 | NERI | yes |
| *Mycena leaiana* | 2018 | NERI | yes |
| *Ompholotus illudens* | 2017, 2018 | NERI | yes |
| *Peziza* sp. | 2018 | GARI | no |
| *Phaeolus schweinitzii* | 2017 | GARI | no |
| *Phallus impudicus* var. *togatus* | 2018 | NERI | yes |

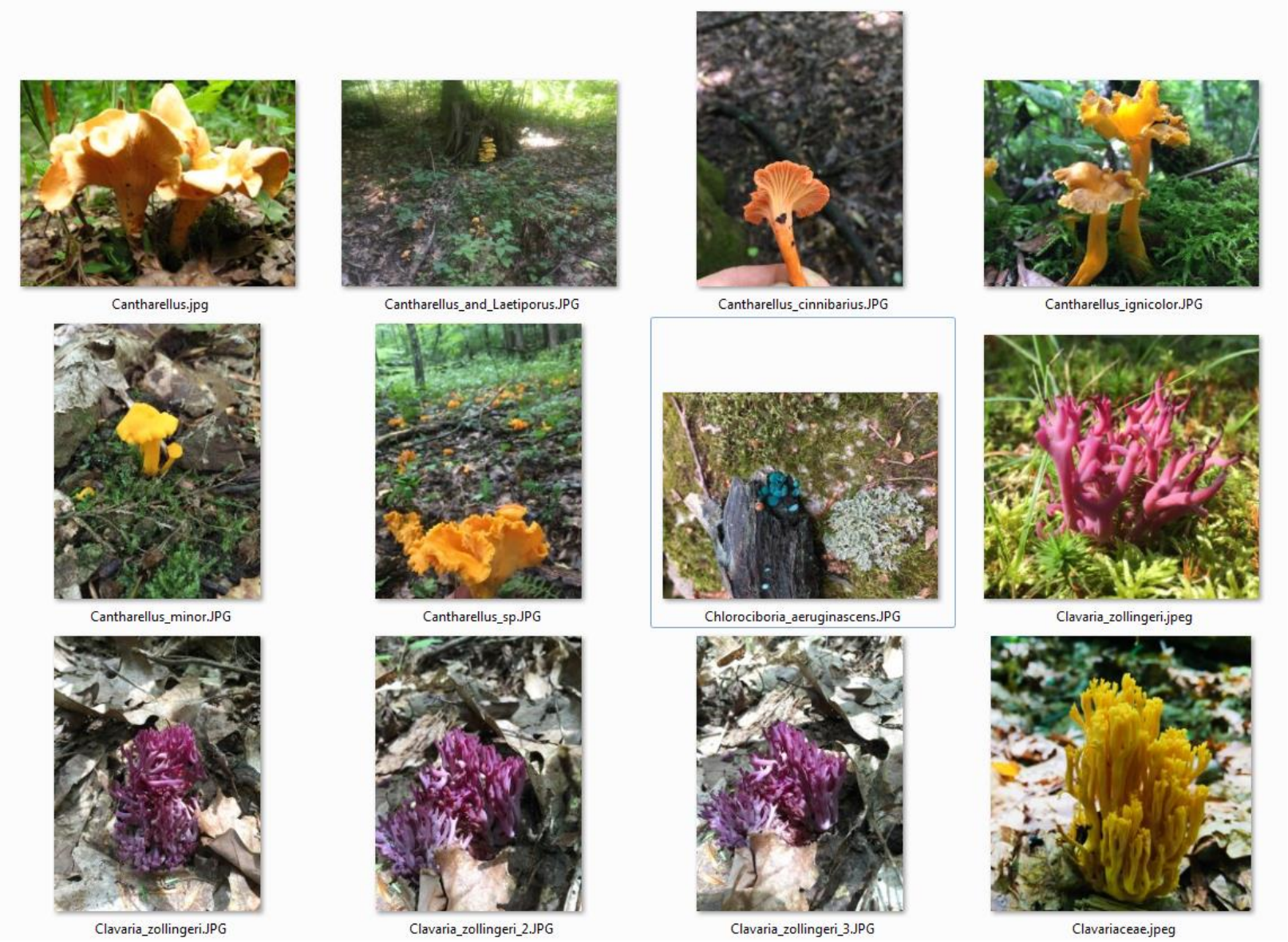
| Taxa | Year Identified | Park | Photo? |
|---|---|---|---|
| Phlebia incarnata | 2018 | GARI | yes |
| *Phylloporus rhodoxanthus* | 2018 | GARI | yes |
| *Pleurotus pulmonarius* | 2017 | DEWA | no |
| *Polyporus badius* | 2017 | NERI | yes |
| *Pseudoboletus parasiticus* | 2017 | NERI | no |
| *Pseudohydnum gelatinosum* | 2017, 2018 | GARI | yes |
| *Ramariopsis kunzei* | 2017 | NERI | yes |
| *Rhodotus palmatus* | 2018 | NERi | yes |
| *Russula earlei* | 2018 | NERI | no |
| *Sarcodon scabrosus* | 2017, 2018 | NERI | yes |
| *Sarcosypha austriaca* | 2018 | NERI | no |
| *Sarcosypha occidentalis* | 2018 | NERI | yes |
| *Scuttellinia scutellata* | 2018 | NERI | no |
| *Scuttellinia scutellata* | 2018 | DEWA | no |
| *Spathulariopsis velutipes* | 2018 | DEWA | yes |
| *Stereum ostrea* | 2017, 2018 | NERI | yes |
| *Strobilomyces strobilaceus* | 2017 | DEWA | no |
| *Strobilomyces strobilaceus* | 2017 | FRHI | yes |
| *Suillus spraguei* | 2017, 2018 | NERI | yes |
| *Thelephora palmata* | 2017 | NERI | yes |
| *Trametes versicolor* | 2017, 2018 | NERI | yes |
| *Trametes versicolor* | 2017, 2018 | JOFL | no |
| *Trametes versicolor* | 2017, 2018 | GARI | yes |
| *Trametes versicolor* | 2017, 2018 | FRHI | no |
| *Trametes versicolor* | 2017, 2018 | FONE | no |
| *Trametes versicolor* | 2017, 2018 | DEWA | yes |
| *Trametes versicolor* | 2017, 2018 | BLUE | no |
| *Trametes versicolor* | 2017, 2018 | ALPO | no |
| *Trichaptum biforme* | 2018 | GARI | no |
| *Trichaptum biforme* | 2018 | NERI | no |
| *Trichaptum biforme* | 2018 | DEWA | no |
| *Trichoglossum* sp. | 2009 | DEWA | yes |
| *Trichoglossum* sp. | 2018 | GARI | yes |
| *Tylopilus alboater* | 2017 | NERI | yes |
| *Tylopilus violatinctus* | 2017 | GARI | no |
| *Urnula craterium* | 2017, 2018 | NERI | no |
| *Urnula craterium* | 2017, 2018 | DEWA | yes |
| *Wynnea americana* | 2018 | FONE | yes |

| Taxa | Year Identified | Park | Photo? |
|---|---|---|---|
| *Xerocomus hortonii* | 2018 | NERI | yes |
| *Xeromphalina campanella* | 2011 | NERI | yes |
| *Xylaria magnoliae* | 2018 | NERI | no |
| *Xylaria* sp. | 2018 | NERI | yes |

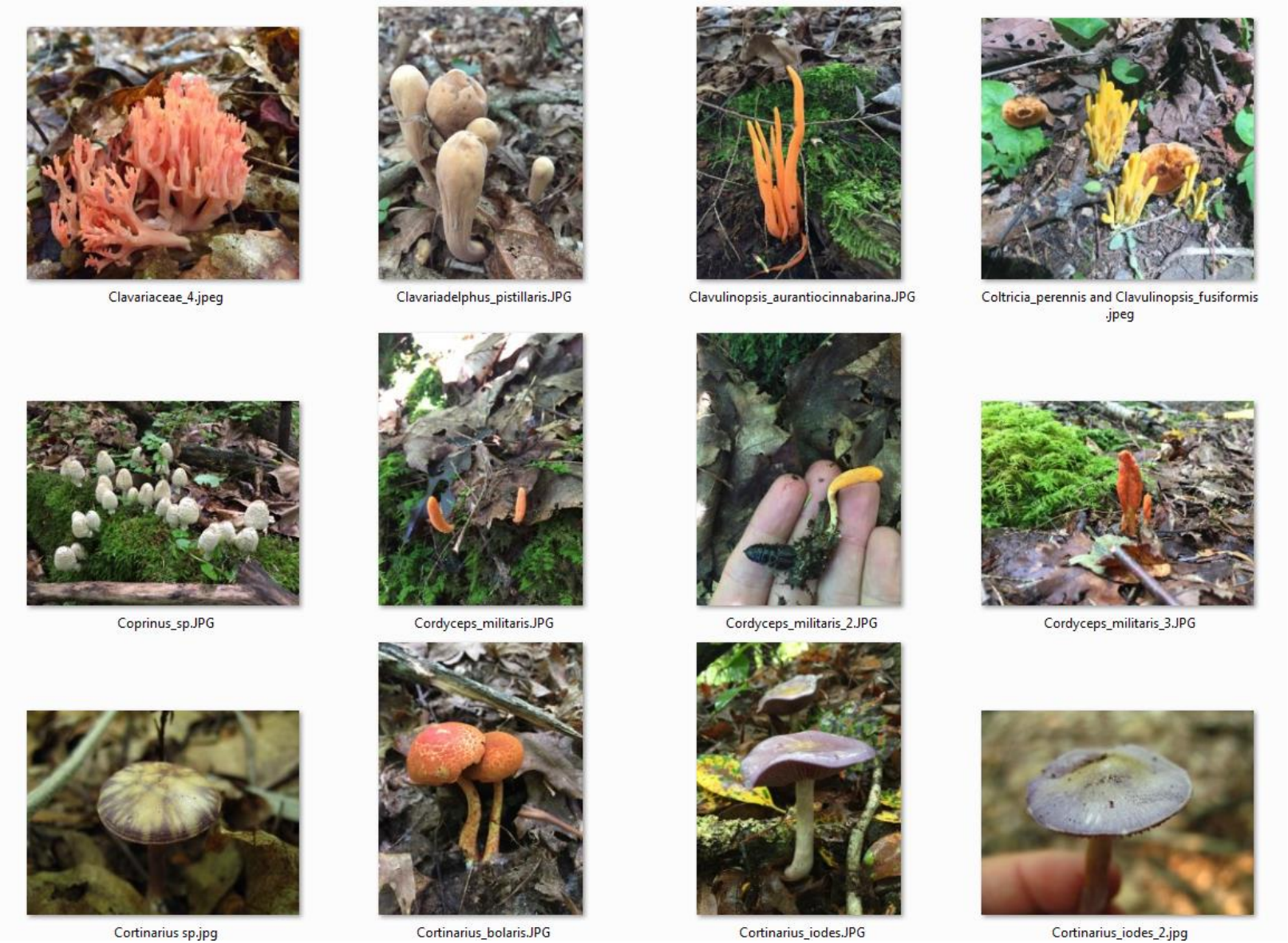
# Appendix B. Photographic vouchers of fungi taxa observed



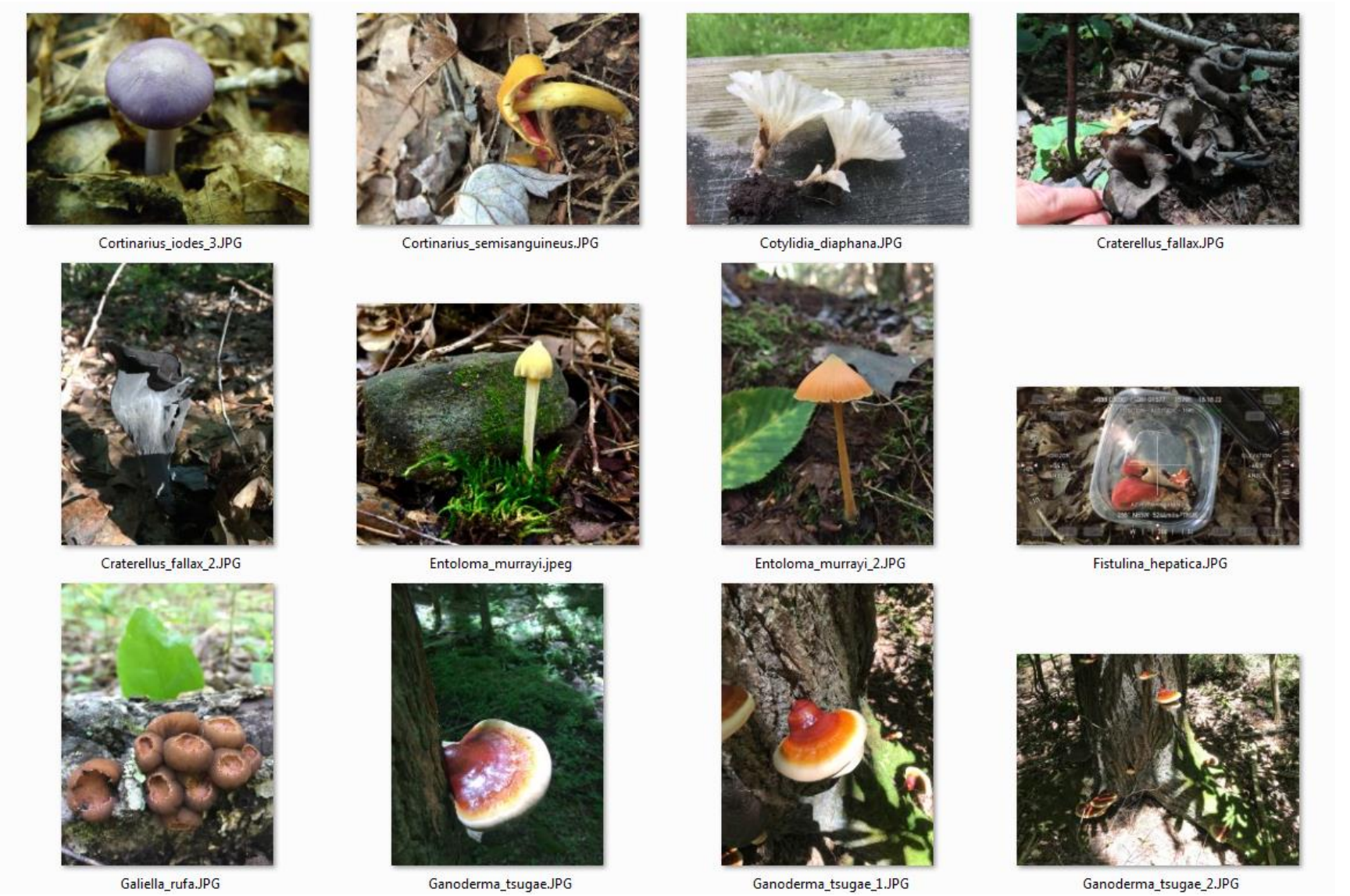

**Appendix B Figure 1.** Photographic vouchers of known fungi taxa observed Eastern Rivers and Mountains Network parks.



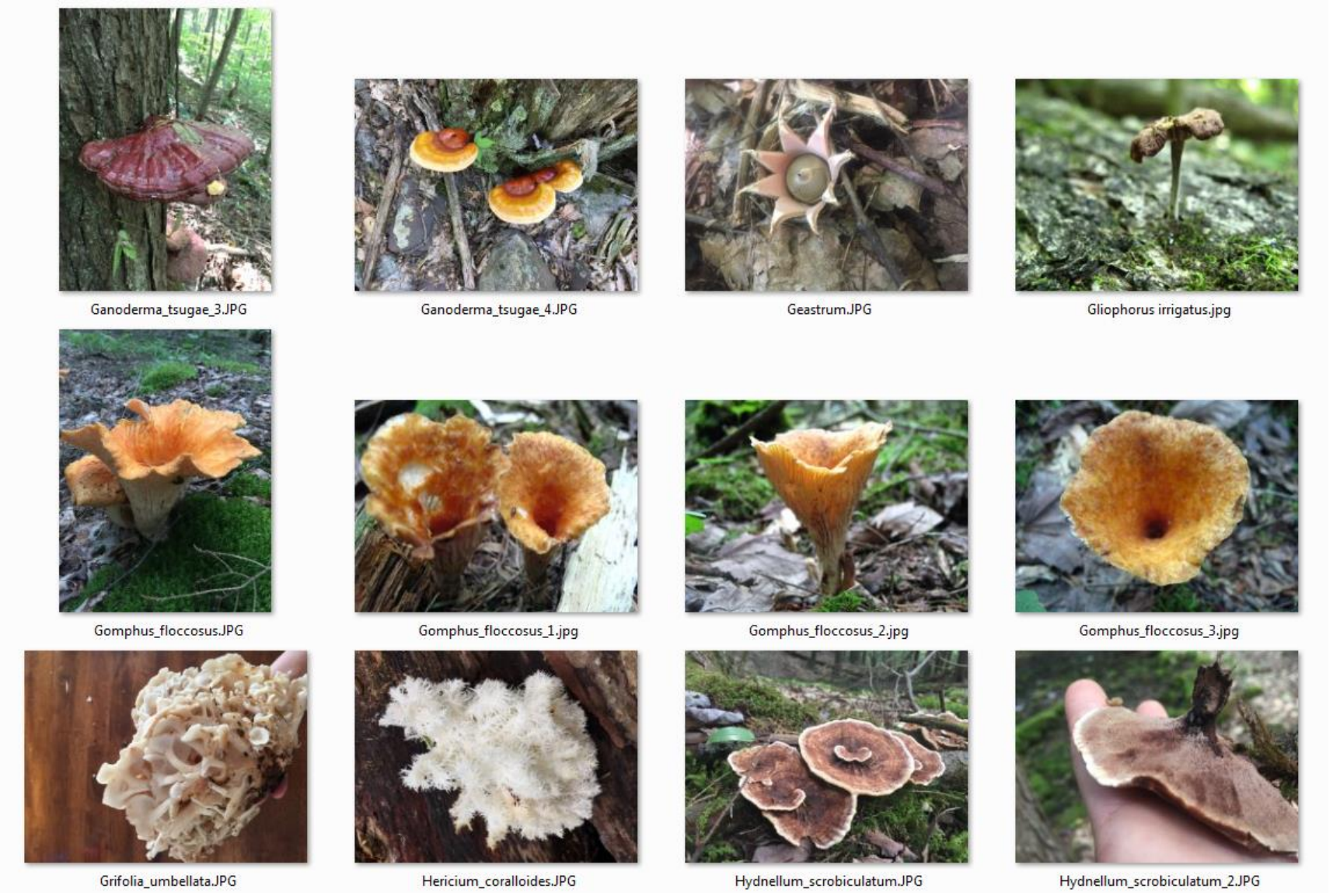

**Appendix B Figure 1 (continued).** Photographic vouchers of known fungi taxa observed Eastern Rivers and Mountains Network parks.




**Appendix B Figure 1 (continued).** Photographic vouchers of known fungi taxa observed Eastern Rivers and Mountains Network parks.




**Appendix B Figure 1 (continued).** Photographic vouchers of known fungi taxa observed Eastern Rivers and Mountains Network parks.




**Appendix B Figure 1 (continued).** Photographic vouchers of known fungi taxa observed Eastern Rivers and Mountains Network parks.



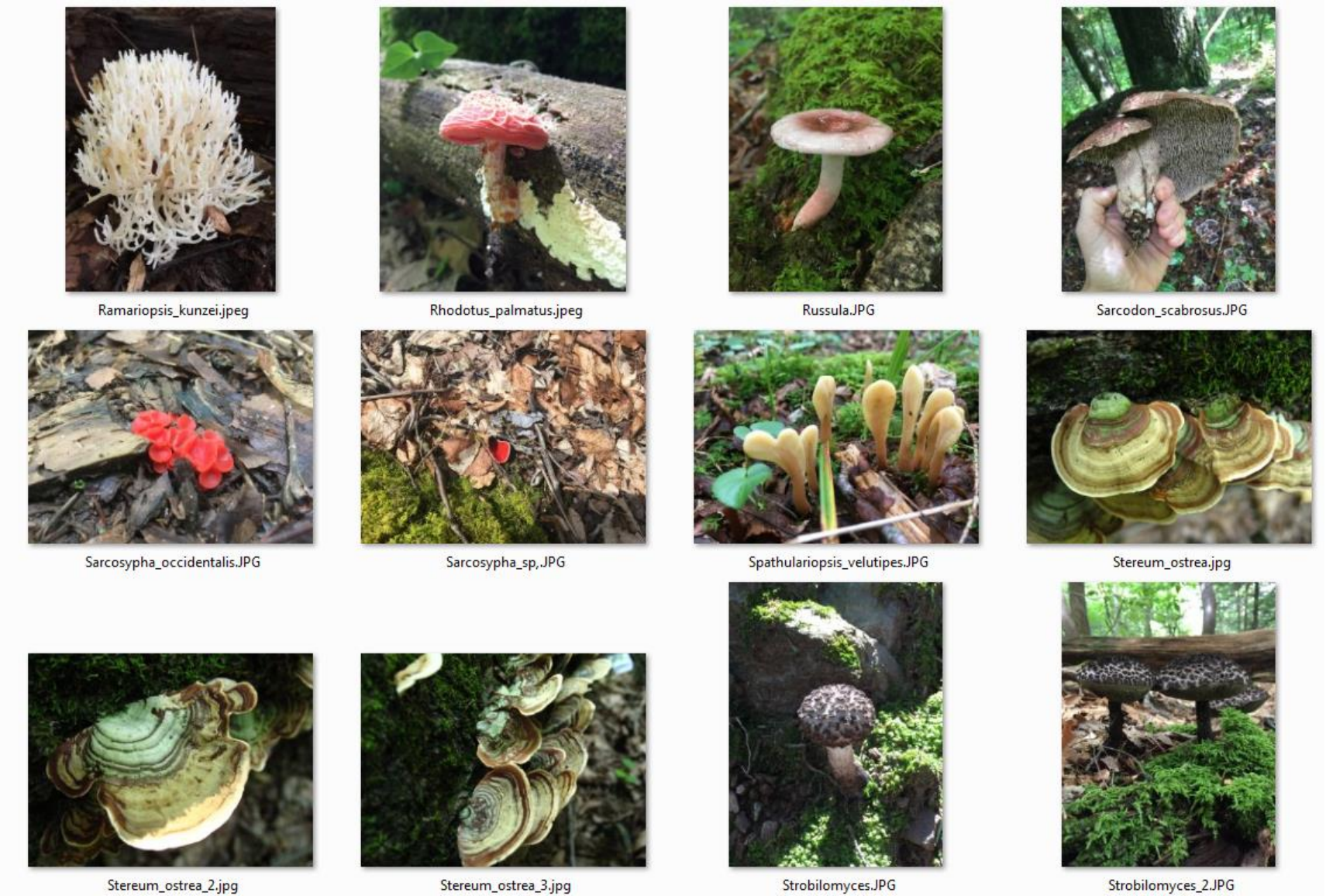

**Appendix B Figure 1 (continued).** Photographic vouchers of known fungi taxa observed Eastern Rivers and Mountains Network parks.



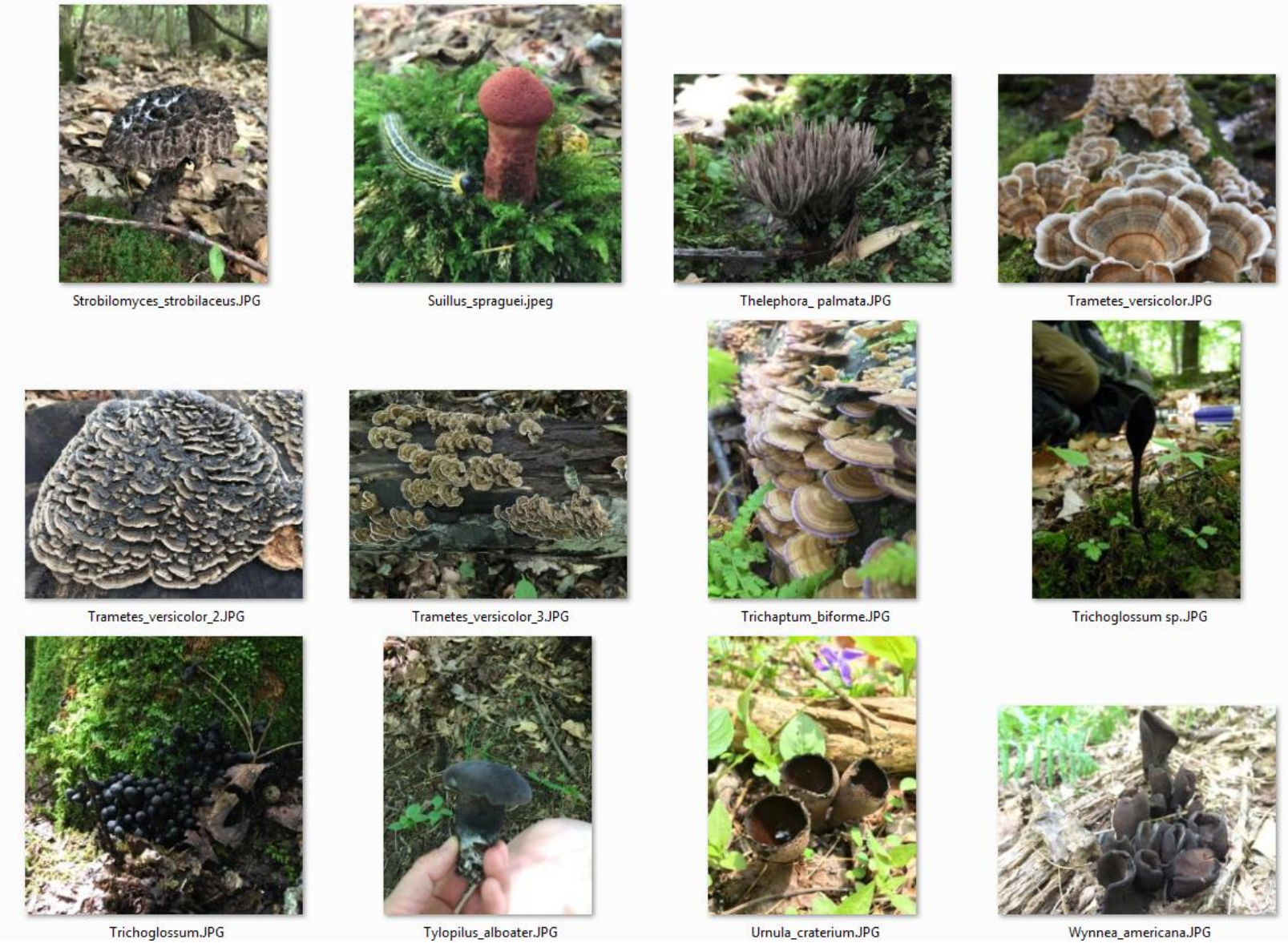

**Appendix B Figure 1 (continued).** Photographic vouchers of known fungi taxa observed Eastern Rivers and Mountains Network parks.




**Appendix B Figure 1 (continued).** Photographic vouchers of known fungi taxa observed Eastern Rivers and Mountains Network parks.




**Appendix B Figure 1 (continued).** Photographic vouchers of known fungi taxa observed Eastern Rivers and Mountains Network parks.




**Appendix B Figure 1 (continued).** Photographic vouchers of known fungi taxa observed Eastern Rivers and Mountains Network parks.



Xerocomus_hortonii.JPG



Xeromphalina_campanella.jpg



Xeromphalina_campanella_2.jpg

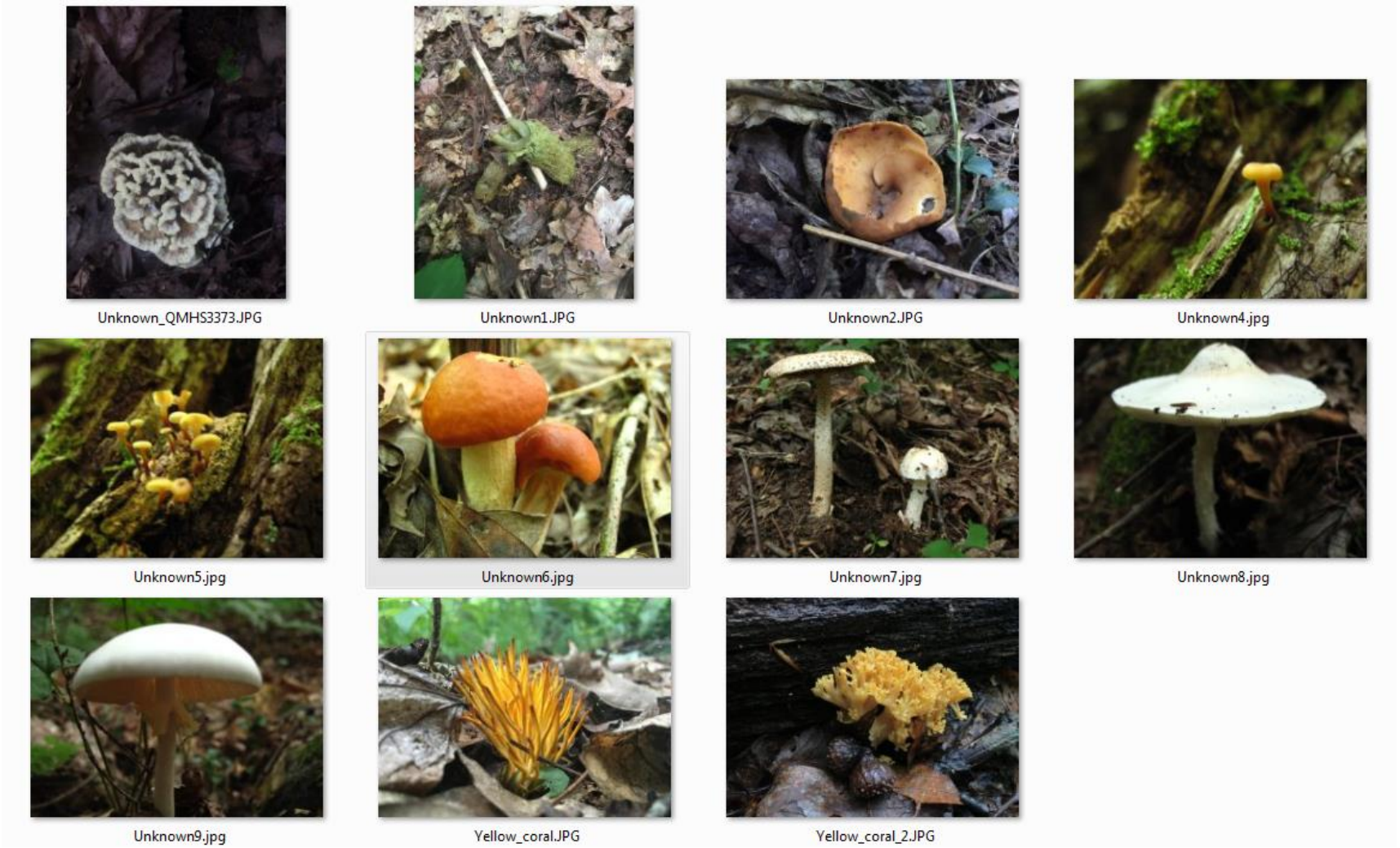


Xylaria.JPG



Xylaria_1.JPG

**Appendix B Figure 1 (continued).** Photographic vouchers of known fungi taxa observed in Eastern Rivers and Mountains Network parks.




**Appendix B Figure 2.** Photographic vouchers of unknown fungi taxa observed in Eastern Rivers and Mountains Network parks.

The Department of the Interior protects and manages the nation's natural resources and cultural heritage; provides scientific and other information about those resources; and honors its special responsibilities to American Indians, Alaska Natives, and affiliated Island Communities.

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