

**Contribution to the Flora of Indiana:
Fungi of West-Central Indiana on the Occasion of
The Sixth Annual A. H. Smith Great Lakes Foray**

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Introduction

Distribution records of fungi, particularly the microfungi are limited. Often distribution records of fungi are limited to sites visited by mycologists. In order to record the distribution of fungi, mycologists and the fungi need to be brought together. The purpose of this study was to organize a group of mycologists, mycophagists and friends to collect all visible fungi from selected sites, to identify the specimens collected and to provide a record of these collections by placing samples in recognized herbaria for future reference.

Study Sites

The sixth Annual Great Lakes Foray based at Indiana State University, Terre Haute was held on September 19 and 20, 1980. Three locations were visited, designated here and in the list of fungi by letters. Kiewig Woods (K) near the Wabash River in West Terre Haute is an area of ridges dominated by Beech-Maple and ravines dominated by Oak-Hickory and was deeded to the Indiana Nature Conservancy in 1979. Portland Arch (PA) in Fountain County Indiana is an area of sandy ridges and bottom land and ravines cut by Bear Creek. The diversity of soil and topography is matched by a diversity of plant types and associated fungi. The forest cover is mixed hardwood and pine. Portland Arch is under the protection of the Indiana Department of Natural Resources, and the Nature Conservancy; and the Field Campus (FC) of Indiana State University, Terre Haute is located in Brazil, Indiana. Stripmining until 1867 left 5 lakes totaling 35 acres, with adjacent mixed hardwood woodland and creek bottom, and field sites. These stripmine lakes are mainly fed by an underground water supply. Some of the flat area had been farmed. Since I.S.U. purchased the area in 1964, it has been used for science education, field biology, recreation and recreation education.

Special appreciation is extended the Foray participants who helped collect, and identify the fungi; Charles B. Arzeni, I. L. Conners, Fred Cizek, J. L. Crane, Robert V. Gessner, Beverly Holler, James Holler, Nina Johnson, John McCain, Bill McKnight, Alan Parker, Norb Rolnicki, Stephen Saupe, Wesley Whiteside and John Wilcott. In addition to Wesley Whiteside, A. H. Smith provided professional identification of macrofungi such as the mushrooms, J. L. Crane provided identification of Hyphomycete microfungi and John McCain collected and identified the rusts. The Foray was organized and directed by Jean Schoknecht.

Results

Some of the interesting finds were the species of *Cortinarius* under the pine at Portland Arch. *Lactarius indigo* (Schw.) Fr., which is considered to be common in the southeastern United States and rare elsewhere was also identified on the 1970 Indiana Foray which took place near Bloomington in conjunction with the Mycological Society of America annual meetings. All specimens collected on this Foray which were reported from the Indiana Foray List (1) are indicated by an asterisk. Some of these Fungi are commonly collected throughout the west-central

section of Indiana and east-central Illinois such as *Scutellinia scutellata* (L. ex. Fr) Lambotte and *Bisporella sulfurina* (Quel.) Carpenter.

The fungi which were collected are listed alphabetically within major groups. The collection is identified by herbarium numbers which refer to the Illinois Natural History Survey number (ILLS) and duplicate specimens are in Indiana State University's Herbarium (TER). Some rusts are only housed at Purdue and the numbers are preceded by the PUR designation. The herbarium numbers are followed by the location, Kiewig woods (K), Portland Arch (PA) and the I.S.U. Brazil Field Campus (FC).

MYXOMYCETES

Arcyria denudata (L.) Wettst.* 40721 - (K), 40725 - (PA), 41135 - (K); *Arcyria incarnata* (Pers.) Pers. 40647 - (PA); *Arcyria nutans* (Bull.) Grev. 40744 - (PA); *Hemitrichia stipitata* (Massee) Maebr. 40751 - (PA), 40752 - (PA); *Metatrichia vesparium* (Batsch) Nann-Brem. 40681 - (PA), 40756 - (PA); *Perichaena corticalis* (Batsch) Rost. 40760 - (PA).

ZYGOMYCETE

Syzygites megalocarpus, Ehrenberg ex Fr.,* 40740 - (PA).

HYPHOMYCETES

Alysidium aureofulvum (Cooke & Ellis). 40644 - (PA); *Bactridiopsis* (sp. I)* 41136 - (K), 42167 - (FC), 41128 - (K); *Bispora betulina* (Corda) Hughes. 40648 - (PA); *Brachysporium nigrum* (Link) Hughes. 40630 - (FC); *Calcarisporium arbuscula* Preuss 40631 - (FC); *Cladobotryum verticillatum* (Link ex S.F. Gray) Hughes. 42161 - (K) on old Agaricales, 41130 (K) on *Lactarius* sp.; *Clonostachys compactiuscula* (Sacc.) D. Hawksworth & W. Gams. 40632 (FC); *Conioscypha varia* Shearer 40626 - (K); *Crinula caliciformis* Fries. 41133 - (K), 41134 - (K); *Dendryphiopsis atra* (Corda) Hughes. 40732 (PA) on wood; *Monodictys lepraria* (Berk.) M.B. Ellis. 42354 - (PA) on wood; *Pseudobotrytis terrestris* (Timonin) Subramanian. 40763 - (PA); *Spadicoides bina* (Corda) Hughes. 40766 - (PA); *Stilbella tomentosa* (Schrad ex Grev.) Bres. 41153 - (FC) on *Metatrichia vesparium*; *Torula herbarum* (Pers.) Link ex S.F. Gray. 40628 - (K); *Trichoderma hamatum* (Bon.) Bain. 40643 - (FC); *Verticillium rexianum* (Sacc.) Sacc. 40769 - (PA) on *Stemonitis fusca* Roth, 41152 - (FC) on *Arcyria pomiformis*, 41137 - (K) on *Didymium* sp, 41140 - (K) on *Stemonitis splendens*.

ASCOMYCETES

Bisporella citrina (Batsch ex Fries) Korf & Carpenter.* 40726 - (PA), 40745 - (PA), 40746 - (PA), 41129 - (K); *Bisporella sulfurina* (Quel.) Carpenter. 40747 - (PA); *Ciboria Peckiana* (Cke) Korf.* *forma gigaspora* (Korf) Korf* listed in 1970 Foray as *Rutstroemia macrospora* (PK) Kanouse. 42575 - (PA); *Creopus gelatinosus* (Tode ex Fr.) Link. 40731 - (PA); *Diatrypella nigro-annulata* Grev. Nit. 40733 - (PA) on *Fagus americana* Sweet; *Glonium abbreviatum* (Schw.) Lohman. 41132 - (K); *Glonium lineare* (Fries) deNotaris. 40635 - (FC); *Hyalinia rubella* (Fries) Nannfeldt. 40753 - (PA), 40754 - (PA); *Holwaya mucida* (Schulzer) Korf and Abawi. 42572 - (K), 42402 - (K); *Hymenoscyphus fructigenus* (Bulliard & Merat) S.F. Gray. 41139 - (K) on *Carya* sp. shells; *Hypocreëa rufa* (Pers. ex Fr.) Fr.* 40734 - (PA) decayed wood, 40755 - (PA); *Hypoxyylon cohaerens* Pers. ex Fr. 40670 - (PA) on decayed *Fagus americana* Sweet log, 40735 - (PA), 41126 - (K) branch; *Leotia lubrica* (Scop.) Persoon.* 40722 - (K), 42411 - (PA), 42412 - (PA); *Mollisia caespiticia* Karsten. 40736 - (PA); *Mollisia* cf. *enceloioides* Karst. 42301 - (FC); *Orbilia coccinella* (Sommerf.)

Fries. 40790 - (PA); *Orbilia luteo rubella* (Nylander) Karsten. 40758 - (PA), 41150 - (FC), 42302 - (K); *Orbilia xanthostigma* (Fries) Fries.* 40759 - (PA), 42303 - (K); *Peziza badia* Pers. 40737 - (PA) sandy soil & wood; *Rutstroemia luteovirescens* (Roberge) White 42148 - (FC); *Sarcoscypha coccinea* (Fries) Lambotte. 40642 - (FC), 40693 - (PA); *Scutellinia scutellata* (L. ex Fr.) Lambotte.* 40694 - (PA), 40765 - (PA); *Strossmayeria basitrichia* (Sacc.) Dennis. 40768 - (PA).

BASIDIOMYCETES

Agaricus placomyces Peck.* 40667 - (PA); *Amanita fulva* Pers. 40724 - (PA); *Amanita rubescens* (Fr.) S.F. Gray. 40645 - (PA), 42361 - (PA); *Amanita vaginata* (Fr.) Vitt. 40646 - (PA); *Boletus castaneus* Bull. 40649 - (PA), 40668 - (PA); *Boletus curtissii* Berk. 40621 - (K); *Boletus felleus* Bull. Var. minor, Coker & Beers. 40650 - (PA); *Boletus rubellus* Krombolz. 42201 - (PA); *Boletus rubropunctus* Peck. 40651 - (PA), 42346 - (PA); *Boletus subsanguineus* Peck. 42345 - (K); *Calocera cornea* (Fr.) Loudon.* 40748 - (PA); *Cantharellus cibarius* Fries.* 40652 - (PA), 40653 - (PA); *Cantharellus cinnabarinus* Schweinitz. 40654 - (PA), 40655 - (PA), 42366 - (PA), 42367 - (PA); *Cantharellus lateritius* Berkeley. 40656 - (PA); *Clitocybe adirondackensis* (Peck) Saccardo. 40727 - (PA), 40728 - (PA); *Clitocybe nuda* (Fr.) Bigl. & Sm. 40657 - (PA); *Clitocybe odora* (Fr.) Kummer.* 40623 - (K), 40658 - (PA); *Coleosporium asterum* (Diet) Syd. 40794 PUR 65989 - (PA) Uredinia on *Solidago casia* L., 40797 PUR 65987 - (K) Uredinia some Telia on *Solidago altissima* L.; *Coleosporium vernoniae* Berk & Curt. 40795 - (K) Uredinia on *Vernonia altissima*, 80034, PUR 65988; *Collybia dryophila* (Fr.) Kummer.* 40624 - (K), 40659 - (PA), 40660 - (PA), 42376 - (PA); *Collybia radicata* (Fr.) Quel. 40625 - (K), 40661 - (PA), 40729 - (PA); *Cortinarius alboviolaceus* (Fr.) Kummer. 40662 - (PA), 42391 - (PA); *Cortinarius claricolor* Fries. 42348 - (PA); *Cortinarius semisanquineus* (Fr.) Gill. 40663 - (PA), 42392 - (PA); *Cortinarius violaceus* (Fr.) Fries. 40664 - (PA); *Craterellus cornucopioides* Pers. 40730 - (PA), 41145 - (PA), 42350 - (PA), 42393 - (PA); *Craterellus cantharellus* (Schw.) Fries. 41144 - (PA), 42347 - (PA), 42394 - (PA), 42353 - (PA); *Crepidotus mollis* (Fr.) Staude. 40633 - (FC); *Crucibulum vulgare* Tul. 40665 - (PA), 42574 - (PA); *Cyathus striatus* Per.* 40634 - (FC); *Daedalea confragosa* Bolt. ex Fr. 40749 - (PA) decayed branches, 40750 - (PA); *Dentinum repandum* (Fr.) S.F. Gray.* 42349 - (PA) soil with moss, 42397 - (PA) soil with moss; *Excidia glandulosa* Bull ex. Fr. 40666 - (PA); *Fomes everhartii* (Ell & Gall.) Von Schrenk & Spauld. 42307 - (FC); *Hygrophorus coccineus* (Fr.) Fr. 42403 - (FC); *Laccaria laccata* (Fr.) Berk & Br.* 40671 - (PA) sandy ridge, 42407 - (PA) sandy ridge; *Lactarius canadensis* A.H. Smith. 41143 - (PA); *Lactarius corrugis* Peck. 40672 - (PA); *Lactarius luteolus* Peck. 40673 - (PA); *Lactarius indigo* (Schw.) Fries.* 40637 - (FC), 40638 - (FC), 42408 - (FC); *Lactarius neuhoffii* Hes. & Sm. var. *neuhoffii*. 40674 - (PA); *Lactarius psammicola* 42202 - (FC); *Lactarius pubescens* Fr. var *pubescens*. 42352 - (PA); *Lactarius subvellereus* Peck. var *subdistans* Hes. & Sm. 40676 - (PA); *Lentinellus ursinus* (Fr.) Kuehn. 42410 - (PA) Rotten log; *Lenzites trabea* Fr. 42589 - (PA); *Lepiota acutesquamosa* (Weinm.) Kummer.* 42415 - (PA); *Lepiota americana* Peck. 40677 - (PA); *Leucopaxillus paradoxus* (Cost. & Duf.) Bours. 41146 - (PA); *Lycoperdon perlatum* Pers.* 40678 - (PA), 42469 - (PA); *Marasmius delectans* Morg.* 42424 - (K) oak leaves, 41142 - (K); *Marasmius siccus* (Schw.) Fries. 40679 - (PA) leaf litter, 40680 - (PA) oak leaf litter, 42425 - (K); *Mycena galericulata* (Fr.) S.F. Gray. 42200 - (K); *Mycena haematopus* (Fr.) Kummer.* 40639 - (FC); *Mycena leaiiana* (Berk.) Sacc. 40682 - (PA) rotten wood; *Mycena luteopallens* (Peck) Sacc. 40640 - (FC), 40683 - (PA), 40757 - (PA), 41127 - (K); *Oxydonta chrysorhiza* (Torrey) Rogers & Martin.* 42308 - (FC) decayed leaves; *Phellodon*

niger (Peck) Banker. var. *alboniger* (Peck) H. 40684 - (PA); *Phlebiella vaga* (Fr.) Karsten. 41142 - (K) decayed wood; *Phleogenia faginea* (Fries) Lind. on *Fagus americana* Sweet. - (PA) 40685; *Pleurotus ostreatus* (Fr.) Kummer.* 40686 - (PA); *Polyporus adustus* Willd. ex. Fr. 41151 - (FC); *Polyporus cinnabarinus* Jacq. ex Fries. 40641 - (FC), 40687 - (PA), 42443 - (PA); *Polyporus frondosus* 42466 - (PA), 42351 - (PA); *Polyporus gilvus* (Schw.) Fries. 40761 - (PA); *Polyporus tulipiferae* (Schw.) Overholts. 40762 - (PA); *Polyporus versicolor* L. ex. Fr. 40688 - (PA); *Pterula plumosa* (Schw.) Fr. 40764 - (PA); *Puccinia bolleyana* Sacc. PUR 65994 - (K) Telia, (some uredinia on *Carex frankii* Kunth); *Puccinia dioicae* P. Magn. PUR 65993 - (K) PUR 65992 - (K) Uredinia on *Viola* sp; *Pucciniastrum hydrangeae* (Magn.) Arth. 40796 - Uredinia and Telia on *Carex annexans* (Bickn.) Bickn; *Puccinia violae* (Schum.) Oc. (PA) uredinia on *Hydrangea arborescens*, PUR 65990 - (PA) Uredinia on *H. arborescens*, PUR 65986 - (K) Uredinia (some Telia); *Ramaria aurea* (Fr.) Quelet. 40738 - (PA), 40739 - (PA); *Ramaria botrytis* (Fr.) Ricken. 40689 - (PA); *Ramaria obtusissima* (Peck) Corner. 40690 - (PA); *Rhodophyllus griseus* (Peck) 40691 - (PA); *Russula paludosa* Britzelmayr. 40627 - (K), 40692 - (PA); *Scleroderma citrinum* Pers. 42591 - (PA); *Stereum ostrea* (Blume & Nees ex Fr.) Fr.* 41138 - (K); *Sphaerobolus stellatus* Tode. 40723 - (FC); *Strobilomyces floccopus* (Fr.) Karst. 41147 - (PA); *Suillus americanus* (Pk.) Snell. 42457 - (FC); *Thelephora intybacea* Fr. 42590 - (PA) *Tomentella ferruginosa* (Pers.) Schroet. 41154 - (FC) rotten wood; *Tomentella rubiginosa* (Bres.) R. Maire. 40695 - (PA); *Tremellob dendron Schweinitzii* (Pk.) Atkinson.* 40741 - (PA), 40742 - (PA); *Tyromyces guttulatus* (Peck) Murrill. 40743 - (PA) on decayed wood.

The following species were reported but specimens were not preserved. *Amanita brunnescens* Atk.* - (PA), *Amanita flavoconia* Atk.* - (PA); *Clitocybe caespitosa* Pk. - (K); *Clitocybe multiceps* Pk.; *Craterellus foetidus* A.H. Smith. (PA); *Dacryopinax elegans* (B & C) Martin. (K); *Entoloma rhodopodium* Fr. (K); *Fomes fraxinophilus* (Pk.) Sacc. (PA); *Gastrum morgani* Lloyd (PA); *Helio Myces nigripes* (Schw.) Morg. (K); *Hydnus imbricatum* Fr. (PA); *Lactarius volemus* Fr.* (PA); *Lentinellus ursinus* (Fr.) Kueh.; *Marasmius rotula* Fr. (K); *Russula virescens* Fr. (PA).

Many of the fungi were growing on decaying leaf litter or rotten wood. Although most of the species of *Mycena* were ubiquitous wood decomposers *Mycena luteopallens* (Peck) Sacc. which is always found growing on walnut, *Carya*, sp. shells is interesting because of its apparently restricted substrate. *Rutstroemia luteovirescens* (Roberge) White was collected on petioles of much decomposed leaves and leaves of ash, *Fraxinus*, were identified as substrate for *R. luteovirescens*. Some of the mushrooms were probably mycorrhizal, for example, the three species of *Cortinarius* were only collected near pine.

Also of interest are the mycoparasites *Verticillium rexianum* (Sacc.) Sacc. on various species of Myxomycete, *Stibella tomentosa* (Schrad.) ex Bres. also on Myxomycetes and *Syzgites megalocarpus* Ehrh. ex Fr. on mushrooms.

Summary

In all, six Myxomycetes, one Zygomycete, seventeen Hyphomycetes, twenty-three Ascomycetes and eighty-seven Basidiomycetes are recorded and documented with herbarium samples. A few fleshy fungi were not preserved and are listed as reported without herbarium specimens.

Literature Cited

COOKE, W.M. BRIDGE, 1975. The 1970 Indiana Foray. *Mycologia* 67:1065-1071.