

Fungal Glossary



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Absidia

Natural Habitat	<ul style="list-style-type: none">◆ Soil◆ Decaying vegetation
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Often found in stored grains◆ Other foods
Water Activity	<ul style="list-style-type: none">◆ Unknown
Mode of Dissemination	<ul style="list-style-type: none">◆ Air / wind
Allergenic Potential	<ul style="list-style-type: none">◆ Recognized as an allergen
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ In immunocompromised patients pulmonary invasions, the meninges (brain or spinal chord), and kidney infections can result from <i>Absidia</i> exposure◆ <i>Absidia</i> may also cause zygomycosis in immunocompromised patients (AIDS)
Industrial Uses	<ul style="list-style-type: none">◆ Unknown
Potential Toxins Produced	<ul style="list-style-type: none">◆ Unknown
Other Comments	<ul style="list-style-type: none">◆ <i>Absidia</i> often causes food spoilage
References	<ul style="list-style-type: none">◆ Mohammed S, Sahoo TP, Jayshree RS, Bapsy PP, Hema S. Sino-oral zygomycosis due to <i>Absidia</i> corymbifera in a patient with acute leukemia. 2004. Med. Mycol. 42(5): 475-478.

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Acremonium

Natural Habitat	<ul style="list-style-type: none">◆ Found in decaying or dead plant materials◆ Soils
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Food◆ Commonly encountered in wet, cellulose-based building materials
Water Activity	<ul style="list-style-type: none">◆ Grows well indoors when there is high water content (>0.90 Aw).
Mode of Dissemination	<ul style="list-style-type: none">◆ Insect/water droplet◆ Older spores can be dislodged by wind
Allergenic Potential	<ul style="list-style-type: none">◆ Type I (hay fever, asthma)◆ Type III (hypersensitivity pneumonitis)
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ Known to cause hyalohyphomycosis, keratitis, mycetoma, and onychomycosis◆ Also known to cause infections in immunodeficient patients◆ Causes infections in persons with wound injuries
Industrial Uses	<ul style="list-style-type: none">◆ Cephalosporins
Potential Toxins Produced	<ul style="list-style-type: none">◆ Trichothecene mycotoxins
Other Comments	<ul style="list-style-type: none">◆ There are 100 known species

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Agrocybe

Natural Habitat	<ul style="list-style-type: none">◆ Bark mulch◆ Wood chips◆ Iceplant◆ Grass
Suitable Substrates in the Indoor Environment	◆ Unknown
Water Activity	◆ Unknown
Mode of Dissemination	◆ Wind
Allergenic Potential	◆ Unknown
Potential Opportunist or Pathogen	◆ Unknown
Industrial Uses	◆ <i>Agrocybe aegerita</i> is a delicious edible mushroom cultivated commercially as "Louisiana Roman Mushroom"
Potential Toxins Produced	◆ Unknown
Other Comments	<ul style="list-style-type: none">◆ Thought to cause white rot◆ No <i>Agrocybe</i> species should be considered edible since they are hard to identify, and could be confused with several poisonous mushrooms

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Alternaria

Natural Habitat	<ul style="list-style-type: none">◆ Common saprobe and pathogen of plants. Typically found on plant tissue, decaying wood, and foods.◆ Soil◆ Air outdoors
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Indoors near condensation (window frames, showers)◆ House dust (in carpets, and air)◆ Also colonizes building supplies, computer disks, cosmetics, leather, optical instruments, paper, sewage, stone monuments, textiles, wood pulp, and jet fuel
Water Activity	<ul style="list-style-type: none">◆ Aw =0.85-0.88
Mode of Dissemination	<ul style="list-style-type: none">◆ Wind
Allergenic Potential	<ul style="list-style-type: none">◆ Type I allergies (hay fever, asthma)◆ Type III (hypersensitivity pneumonitis)
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ Phaeohyphomycosis {causing cystic granulomas in the skin and subcutaneous tissue}◆ In immunocompetent patients, <i>Alternaria</i> colonizes the paranasal sinuses, leading to chronic hypertrophic sinusitis
Industrial Uses	<ul style="list-style-type: none">◆ Biocontrol of weed plants◆ Biocontrol fungal plant pathogens
Potential Toxins Produced	<ul style="list-style-type: none">◆ Alternariol (AOH)◆ Alternariol monomethylether (AME)◆ Tenuazonic acid (TeA)◆ Altenuene (ALT)◆ Altertoxins (ATX)
Other Comments	<ul style="list-style-type: none">◆ <i>Alternaria</i> spores are one of the most common and potent indoor and outdoor airborne allergens. Additionally, <i>Alternaria</i> sensitization has been determined to be one of the most important factors in the onset of childhood asthma. Synergy with <i>Cladosporium</i> or <i>Ulocladium</i> may increase the severity of symptoms

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Amphobotrys

Natural Habitat ♦ Causal agent of flower blight and stem rot on Poinsettia plants.

Suitable Substrates in the Indoor Environment ♦ Poinsettia

Allergenic Potential ♦ Unknown

Potential Opportunist or Pathogen ♦ Unknown

Industrial Uses ♦ Unknown

Potential Toxins Produced ♦ Unknown

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Aphanocladium

Natural Habitat	<ul style="list-style-type: none">◆ <i>A. album</i> parasitizes <i>Puccinia graminis</i> (Wheat Rust)◆ Cereal based poultry feed◆ Soils
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Edible mushrooms
Mode of Dissemination	<ul style="list-style-type: none">◆ Wind
Allergenic Potential	<ul style="list-style-type: none">◆ Unknown
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ Unknown
Industrial Uses	<ul style="list-style-type: none">◆ Unknown
Potential Toxins Produced	<ul style="list-style-type: none">◆ Unknown
Other Comments	<ul style="list-style-type: none">◆ Can cause crop loss in mushroom growing crop houses with high humidity

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Arthrinium

Natural Habitat	<ul style="list-style-type: none">◆ Decaying plant material◆ Soil
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Cellulose containing materials
Water Activity	<ul style="list-style-type: none">◆ Unknown
Mode of Dissemination	<ul style="list-style-type: none">◆ Wind
Allergenic Potential	<ul style="list-style-type: none">◆ <i>Arthrinium sphaerospermum</i> is recognized as an allergen
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ Not known as a pathogen
Industrial Uses	<ul style="list-style-type: none">◆ Unknown
Potential Toxins Produced	<ul style="list-style-type: none">◆ 3-nitropropionic acid (NPA)◆ Terpestacin
References	<ul style="list-style-type: none">◆ Xingjie L, Xueyun L, Wenjuan H. 1992. Studies on the epidemiology and etiology of moldy sugarcane poisoning in China. <i>Biomed Environ Sci.</i> 5 (2): 161-177.◆ Ming L. 1995. Moldy sugarcane poisoning--a case report with a brief review. <i>J Toxicol Clin Toxicol.</i> 33(4): 363-367.◆ Oka M, Iimura S, Tenmyo O, Sawada Y, Sugawara M, Ohkusa N, Yamamoto H, Kawano K, Hu SL, Fukagawa Y. 1993. Terpestacin, a new syncytium formation inhibitor from <i>Arthrinium</i> sp. <i>J Antibiot (Tokyo).</i> 46(3):367-373.

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Arthrospore formers

Natural Habitat	◆ Many Basidiomycetes form arthrospores during their mycelial stage. <i>Geotrichum</i> and <i>Oidiodendron</i> are typical ascomycete arthrospore formers. Arthrospores are formed by microfungi, and yeast-like fungi. Please refer to individual descriptions of these fungi for more information.
Suitable Substrates in the Indoor Environment	◆ Paper ◆ Soil ◆ Textiles
Potential Opportunist or Pathogen	◆ Depends on genera and species
Potential Toxins Produced	◆ Depends on genera and species
Additional Comments	◆ Arthrospores are disarticulated cells of a formerly vegetative filament that function as spores.

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Arthrobotrys

Natural Habitat	<ul style="list-style-type: none">◆ Decaying plant debris◆ Dung◆ Moss◆ Soils
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Unknown
Allergenic Potential	<ul style="list-style-type: none">◆ Unknown
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ Unknown
Industrial Uses	<ul style="list-style-type: none">◆ Biological control agent against plant pathogenic nematodes
Potential Toxins Produced	<ul style="list-style-type: none">◆ Unknown
Additional Comments	<ul style="list-style-type: none">◆ Predacious fungi: Captures nematodes in a network of sticky and constricting rings.

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Ascospores

Natural Habitat	◆ Everywhere in nature
Suitable Substrates in the Indoor Environment	◆ Depends on genus and species
Water Activity	◆ Depends on genus and species
Mode of Dissemination	◆ Forcible ejection or passive release and dissemination by wind or insects
Allergenic Potential	◆ Depends on genus and species
Potential Opportunist or Pathogen	◆ Depends on genus and species
Industrial Uses	◆ Depends on genus and species
Potential Toxins Produced	◆ Depends on genus and species
Other Comments	◆ Ascospores are the result of sexual reproduction and produced in a saclike structure called an ascus. All ascospores belong to members of the Phylum Ascomycota, which encompasses a plethora of genera worldwide.

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Ascotricha

Natural Habitat	<ul style="list-style-type: none">◆ Decaying timber◆ Soil
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Wet sheetrock◆ Straw◆ Wood
Allergenic Potential	<ul style="list-style-type: none">◆ Unknown
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ Unknown
Industrial Uses	<ul style="list-style-type: none">◆ <i>A. amphitricha</i> produces the antifungal ascosteroside
Potential Toxins Produced	<ul style="list-style-type: none">◆ Anamorphic/asexual state of <i>Dicyma</i> (see <i>Dicyma</i>)

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Aspergillus

Natural Habitat	<ul style="list-style-type: none">◆ Soil◆ Plant debris
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Grows on a wide range of substrates indoors◆ Prevalent in water damaged buildings
Water Activity	<ul style="list-style-type: none">◆ Aw=0.75-0.94
Mode of Dissemination	<ul style="list-style-type: none">◆ Wind
Allergenic Potential	<ul style="list-style-type: none">◆ Allergic bronchopulmonary aspergillosis (ABPA) which is common in asthmatic and cystic fibrosis patients◆ Aspergillus sinusitis◆ Invasive aspergillosis in immunocompromised patients
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ Aspergilloma and chronic pulmonary aspergillosis in people with lung disease
Industrial Uses	<ul style="list-style-type: none">◆ <i>A. sojae</i> is used for fermented food and beverages in Asia◆ <i>A. oryzae</i> is used in soy sauce production◆ <i>A. terreus</i> produces mevinolin which is able reduce blood cholesterol◆ <i>A. niger</i> produces enzymes used to make some breads and beers and is also used in plastic decomposition◆ <i>A. niger</i> and <i>A. ochraceus</i> are used in cortisone production
Potential Toxins Produced	<ul style="list-style-type: none">◆ 3-Nitropropionic acid, 5-metoxystermatocystin, Aflatoxin B1, B2, Aflatoxin G1, G2, Aflatoxin M1, M2, Aflatoxin P1, Aflatoxin Q1, Aflatoxins, Aflatrem (alkaloid), Aflatrem (indole alkaloid), Aflavinin, Ascalidol, Aspergillilic acid, Aspergillomarasmin, Aspertoxin, Asteltoxin, Austamid, Austdiol, Austins, Austocystins, Avenaciolide, Brevianamide A, Candidulin, Citreoviridin,, Citrinin, Clavatul, Cyclopiazonic acid, Cyclopiazonic acid, Cytochalasin E, Emodin, Fumagillin, Fumigaclavine A, Fumigatin, Fumitremorgens, Fumitremorgin A, Gliotoxin, Griseofulvin, Helvolic acid, Kojic acid, Kotanin, Malformins, Naphtopyrones, Neoaspergillilic acid, Nidulin, Nidulotoxin, Nigragillin, Ochratoxin A, Ochratoxin B, Ochratoxin C, Ochratoxins β, Ochratoxins α, Ochratoxins (A,B,C,α, β, γ), Orlandin, Oryzacinin, Paspaline, Patulin, Penicillic acid, Phthioic acid, Secalonic acid A, B, D and F, Sphingofungins, Spinulosin, Sterigmatocystin, Terphenyllin, Terredional, Terreic acid, Terrein, Terretinin, Terretinin, Territrem A, Tryptoquivalines, Verruculogen, Versicolorin A, Viomellein, Viriditoxin, Xanthocillin, Xanthomegnin, β-nitropropionic acid
Other Comments	<ul style="list-style-type: none">◆ It is the second most common opportunistic pathogen following <i>Candida</i>

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Aureobasidium

Natural Habitat	<ul style="list-style-type: none">◆ Soils◆ Plant leaf and stem tissue◆ Wood◆ Fresh Water◆ Plant Debris
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Damp areas including kitchens, bathrooms, grout, and shower curtains◆ Painted interior surfaces and textiles◆ Skin and nails of people
Water Activity	<ul style="list-style-type: none">◆ Grows well where moisture accumulates (88.5 RH on woodchip wallpaper)
Mode of Dissemination	<ul style="list-style-type: none">◆ Water droplets, rain◆ Wind when spores become dry
Allergenic Potential	<ul style="list-style-type: none">◆ Type I (asthma and hay fever)◆ Type III (hypersensitivity)◆ Skin irritant causing dermatitis
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ Keratomycosis◆ Phaeophycomycosis◆ Pulmonary mycosis with sepsis
Industrial Uses	<ul style="list-style-type: none">◆ <i>A. pullulans</i> produces pullulan which is used for packaging food and drugs
Potential Toxins Produced	<ul style="list-style-type: none">◆ Unknown

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Bactrodesmium

Natural Habitat ♦ Tree Bark

Suitable Substrates in the
Indoor Environment ♦ Unknown

Allergenic Potential ♦ Unknown

Potential Opportunist
or Pathogen ♦ Unknown

Potential Toxins Produced ♦ Unknown

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Basidiospore

Natural Habitat	<ul style="list-style-type: none">◆ Forest floors◆ Lawns◆ Plants (saprobes or pathogens depending on genus)
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Depends on genus◆ Wood products
Water Activity	<ul style="list-style-type: none">◆ Unknown
Mode of Dissemination	<ul style="list-style-type: none">◆ Forcible ejection◆ Wind currents
Allergenic Potential	<ul style="list-style-type: none">◆ Type I allergies (hay fever, asthma)◆ Type III (hypersensitivity pneumonitis)
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ Depends on genus
Industrial Uses	<ul style="list-style-type: none">◆ Edible mushrooms are used in the food industry
Potential Toxins Produced	<ul style="list-style-type: none">◆ Amanitins◆ monomethyl-hydrazine◆ muscarine◆ ibotenic acid◆ psilocybin.
Other Comments	<ul style="list-style-type: none">◆ Basidiospores are the result of sexual reproduction and formed on a structure called the basidium. Basidiospores belong to the members of the Phylum Basidiomycota, which includes mushrooms, shelf fungi, rusts, and smuts

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Beauveria

Natural Habitat	◆ Entomopathogen that lives in soil and detritus before colonizing an insect host
Suitable Substrates in the Indoor Environment	◆ Insects
Water Activity	◆ Unknown
Mode of Dissemination	◆ Wind
Allergenic Potential	◆ Type I (asthma and hay fever)
Potential Opportunist or Pathogen	◆ Hyalohyphomycosis
Industrial Uses	◆ Biocontrol agent of insects
Potential Toxins Produced	◆ Unknown

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Beltrania

Natural Habitat	◆ Leaf litter of tropical plants Also found in temperate regions on natural flora e.g. it was found on a PAAA nature hike in San Diego last year, therefore "Widespread"
Suitable Substrates in the Indoor Environment	◆ Houseplants
Allergenic Potential	◆ Unknown
Potential Opportunist or Pathogen	◆ Unknown
Potential Toxins Produced	◆ Unknown

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Bipolaris

Natural Habitat	<ul style="list-style-type: none">◆ Plant saprophyte◆ Plant pathogen of many plants, causing leaf rot, crown rot, and root rot on warm season turf grasses.
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ House plants◆ Indoor building materials
Water Activity	<ul style="list-style-type: none">◆ Unknown
Mode of Dissemination	<ul style="list-style-type: none">◆ Wind
Allergenic Potential	<ul style="list-style-type: none">◆ Allergic and chronic invasive sinusitis
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ <i>B. australiensis</i>, <i>B. hawaiiensis</i> and <i>B. spicifera</i> have been shown to cause:<ul style="list-style-type: none">◆ cerebral and disseminated infections◆ peritonitis in patients on continuous ambulatory peritoneal dialysis (CAPD)◆ mycotic keratitis◆ subcutaneous phaeohyphomycosis (in both normal and immunocompromised people)◆ sinusitis
Industrial Uses	<ul style="list-style-type: none">◆ Unknown
Potential Toxins Produced	<ul style="list-style-type: none">◆ Sterigmatocystin

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Botryodiplodia theobromae

Natural Habitat	◆ Plant pathogen causing many tropical fruit diseases including mango twig blight and mango stem rot.
Suitable Substrates in the Indoor Environment	◆ Unknown
Allergenic Potential	◆ Unknown
Potential Opportunist or Pathogen	◆ Corneal Ulcer ◆ Keratitis ◆ Onychomycosis ◆ Phaeohyphomycosis
Potential Toxins Produced	◆ Unknown
Other Comments	◆ Synonym of <i>Lasiodiplodia theobromae</i>

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Botrytis

Natural Habitat	◆ Plant pathogen responsible for causing gray mold (<i>B. cinerea</i>) on grapes, strawberries, raspberries, blackberries, low bush blueberries, lettuce, cabbage, and onions
Suitable Substrates in the Indoor Environment	◆ Houseplants ◆ Fruits ◆ Vegetables
Water Activity	◆ Aw 0.93-0.95
Mode of Dissemination	◆ Wind ◆ Rain
Allergenic Potential	◆ Type I (asthma and hay fever) ◆ Type III (hypersensitivity pneumonitis)
Potential Opportunist or Pathogen	◆ Unknown
Industrial Uses	◆ Unknown
Potential Toxins Produced	◆ Unknown

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Calcarisporium

Natural Habitat	◆ Endophyte of stargrass (<i>Cynodon dactylon</i>)
Suitable Substrates in the Indoor Environment	◆ Unknown
Allergenic Potential	◆ Unknown
Potential Opportunist or Pathogen	◆ Unknown
Industrial Uses	◆ Can be used as an anti-fungal agent in animal feed
Potential Toxins Produced	◆ 15-azahomosterols

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Candida

Natural Habitat	<ul style="list-style-type: none">◆ Normal inhabitant of the skin, mouth, and vagina◆ Leaves◆ Flowers◆ Soil◆ Water
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Unknown
Water Activity	<ul style="list-style-type: none">◆ Unknown
Mode of Dissemination	<ul style="list-style-type: none">◆ Can be passed from newborns from their mothers◆ It is also sometimes passed from catheters or prosthetic devices to patients
Allergenic Potential	<ul style="list-style-type: none">◆ <i>Candida</i> has been reported as an allergen
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ Candidiasis (infections caused by <i>Candida</i> spp.), typically occurs in people with some predisposing factor such as pregnancy, disease (diabetes, AIDS, cancer)◆ Occurs often in patients taking drugs such as oral contraceptives and antibiotics

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Cephaloascus

Natural Habitat ♦ Ambrosia beetle tunnels on trees

Suitable Substrates in the
Indoor Environment ♦ Unknown

Allergenic Potential ♦ Unknown

Potential Opportunist
or Pathogen ♦ Unknown

Potential Toxins Produced ♦ Unknown

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Ceratocystis

Natural Habitat	◆ Plant pathogen causing wilt disease on cacao, <i>Ficus</i> , mango, and oak and causes cankers on a variety of plants.
Suitable Substrates in the Indoor Environment	◆ Wood (lumber) Lumberyard fungi
Mode of Dissemination	◆ Insects ◆ Water splash
Allergenic Potential	◆ Unknown
Potential Opportunist or Pathogen	◆ Unknown
Potential Toxins Produced	◆ Unknown

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Cercospora

Natural Habitat ♦ Plant parasite causing leaf spot

Suitable Substrates in the Indoor Environment ♦ Unknown

Water Activity ♦ Moderate –High humidity

Mode of Dissemination ♦ Irrigation water
♦ Insects
♦ Rain
♦ Wind

Allergenic Potential ♦ Unknown

Potential Opportunist or Pathogen ♦ Unknown

Industrial Uses ♦ Unknown

Potential Toxins Produced ♦ Unknown

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Chaetomium

Natural Habitat

- ◆ Dung
- ◆ Seeds
- ◆ Soil
- ◆ Straw

Suitable Substrates in the Indoor Environment

- ◆ Paper
- ◆ Sheetrock
- ◆ Wallpaper

Water Activity

- ◆ Aw=0.84-0.89

Mode of Dissemination

- ◆ Wind
- ◆ Insects
- ◆ Water splash

Allergenic Potential

- ◆ Type I (asthma and hay fever)

Potential Opportunist or Pathogen

- ◆ Onychomycosis
- ◆ *C. perlucidum* recognized as a new agent of cerebral phaeohyphomycosis.

Industrial Uses

- ◆ Cellulase production
- ◆ Textile testing

Potential Toxins Produced

- ◆ Chaetomin
- ◆ Chaetoglobosins A,B,D and F are produced by *Chaetomium globosum*
- ◆ Sterigmatocystin is produced by rare species

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Choanephora

Natural Habitat	<ul style="list-style-type: none">◆ Causal agent of soft rot on a variety of vegetable crops (especially cucurbits)◆ Soils
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Rotting vegetables
Mode of Dissemination	<ul style="list-style-type: none">◆ Insects◆ Water Splash◆ Wind
Allergenic Potential	<ul style="list-style-type: none">◆ Unknown
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ Unknown
Potential Toxins Produced	<ul style="list-style-type: none">◆ Unknown

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Chromelosporium

Natural Habitat	◆ Soils
Suitable Substrates in the Indoor Environment	◆ Soil or vermiculite from house plants ◆ Damp wood
Allergenic Potential	◆ Unknown
Potential Opportunist or Pathogen	◆ Unknown
Potential Toxins Produced	◆ Unknown
Additional Comments	◆ Contaminant of crop mushroom

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Chrysonilia

Natural Habitat	◆ Fruit ◆ Soil
Suitable Substrates in the Indoor Environment	◆ Bread ◆ Fruit ◆ Coffee grounds
Water Activity	◆ Unknown
Mode of Dissemination	◆ Air currents
Allergenic Potential	◆ Found to induce asthma in loggers
Potential Opportunist or Pathogen	◆ Unknown
Industrial Uses	◆ Related to (mitosporic state) <i>Neurospora</i> , a genetic model organism
Potential Toxins Produced	◆ Unknown
Other Comments	◆ Commonly referred to as red bread mold
References	◆ Tarlo SM, Wai Y, Dolovich J, and Summerbell R. 1996. Occupational Asthma induced by <i>Chrysonilia sitophila</i> in the logging industry. J. Allergy Clin Immunol. 97(6): 1409-1413.

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Chrysosporium

Natural Habitat	<ul style="list-style-type: none">◆ Plant materials◆ Soils
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Unknown
Allergenic Potential	<ul style="list-style-type: none">◆ Unknown
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ In immunocompromised patients it can cause:<ul style="list-style-type: none">◆ Skin infections◆ Onychomycosis◆ Systemic infection◆ Osteomyelitis◆ Endocarditis
Potential Toxins Produced	<ul style="list-style-type: none">◆ TMC-69 (Anti-tumor antibiotic)

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Circinella

Natural Habitat	◆ Dung ◆ Soil
Suitable Substrates in the Indoor Environment	◆ Unknown
Allergenic Potential	◆ Unknown
Potential Opportunist or Pathogen	◆ Unknown
Potential Toxins Produced	◆ Unknown

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Cladosporium

Natural Habitat	<ul style="list-style-type: none">◆ Dead plant matter◆ Straw◆ Soil◆ Woody Plants
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Fiberglass duct liner◆ Paint◆ Textiles◆ Found in high concentration in water-damaged building materials
Water Activity	<ul style="list-style-type: none">◆ Aw 0.84-0.88
Mode of Dissemination	<ul style="list-style-type: none">◆ Air
Allergenic Potential	<ul style="list-style-type: none">◆ Type I (asthma and hay fever)
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ Edema◆ keratitis◆ onychomycosis◆ pulmonary infections◆ sinusitis
Industrial Uses	<ul style="list-style-type: none">◆ Produces 10 antigens
Potential Toxins Produced	<ul style="list-style-type: none">◆ Cladosporin◆ Emodin

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Coelomyces

Natural Habitat	<ul style="list-style-type: none">◆ Plants (acting as saprophyte and pathogen)◆ Other fungi◆ Lichens
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Ceiling Tiles◆ Floor Tiles
Mode of Dissemination	<ul style="list-style-type: none">◆ Insects◆ Water Splash◆ Wind
Allergenic Potential	<ul style="list-style-type: none">◆ Type I (hay fever, asthma)
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ Genera dependant
Industrial Uses	<ul style="list-style-type: none">◆ Unknown
Potential Toxins Produced	<ul style="list-style-type: none">◆ Unknown
Additional Comments	<ul style="list-style-type: none">◆ These are asexual fungi that form conidia in pycnidia or acervuli (asexual fruiting structures). Examples of Coelomyces fungi include <i>Phoma</i> and <i>Pestalotia</i>

Fungal Glossary



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Coprinus

Natural Habitat	◆ Wood ◆ Dung ◆ Leaf litter ◆ Soil
Suitable Substrates in the Indoor Environment	◆ Unknown
Water Activity	◆ Unknown
Mode of Dissemination	◆ Wind
Allergenic Potential	◆ Unknown
Potential Opportunist or Pathogen	◆ Unknown
Industrial Uses	◆ Popular experimental organism in genetic research
Potential Toxins Produced	◆ Coprine

Fungal Glossary



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Cryptococcus

Natural Habitat	<ul style="list-style-type: none">◆ Soil contaminated with pigeon droppings or chicken droppings◆ Decaying wood & slime fluxes
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Unknown
Water Activity	<ul style="list-style-type: none">◆ Unknown
Mode of Dissemination	<ul style="list-style-type: none">◆ Air (wind)
Allergenic Potential	<ul style="list-style-type: none">◆ Unknown
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ <i>Cryptococcus neoformans</i> causes cryptococcosis (also known as meningoencephalitis) in immunocompromised people◆ The disease also occurs in cancer patients undergoing chemotherapy
Industrial Uses	<ul style="list-style-type: none">◆ Unknown
Potential Toxins Produced	<ul style="list-style-type: none">◆ Unknown

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Cunninghamella

Natural Habitat	◆ Soils
Suitable Substrates in the Indoor Environment	◆ Cheese ◆ Brazil Nuts
Allergenic Potential	◆ Unknown
Potential Opportunist or Pathogen	◆ <i>Cunninghamella bertholletiae</i> is known to cause rhinocerebral, pulmonary, cutaneoarticular, and disseminated forms of zygomycosis in immunocompromised or trauma patients.
Potential Toxins Produced	◆ Unknown

Fungal Glossary



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Curvularia

Natural Habitat	<ul style="list-style-type: none">◆ Plant saprobe and pathogen to cereal plants◆ Soil
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Paper◆ Wood products
Water Activity	<ul style="list-style-type: none">◆ Unknown
Mode of Dissemination	<ul style="list-style-type: none">◆ Wind
Allergenic Potential	<ul style="list-style-type: none">◆ Type I (asthma and hay fever)◆ A relatively common cause of allergic fungal sinusitis
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ In immunocompromised patients:<ul style="list-style-type: none">◆ cerebral abscess◆ endocarditis◆ mycetoma◆ ocular keratitis◆ onychomycosis◆ pneumonia◆ sinusitis
Industrial Uses	<ul style="list-style-type: none">◆ Unknown
Potential Toxins Produced	<ul style="list-style-type: none">◆ Cytochalasin B
Other Comments	<ul style="list-style-type: none">◆ All <i>Curvularia</i> species are genetically <i>Bipolaris</i>

Fungal Glossary



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Dactylaria

Natural Habitat

- ◆ Bamboo
- ◆ Decaying plant matter
- ◆ Nematodes
- ◆ Soils

Allergenic Potential

- ◆ Unknown

Potential Opportunist
or Pathogen

- ◆ Phaeohyphomycosis

Potential Toxins Produced

- ◆ Unknown

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Dicyma

Natural Habitat ♦ Plant materials

Suitable Substrates in the
Indoor Environment ♦ Cardboard
 ♦ Wallboard
 ♦ Wood

Allergenic Potential ♦ Unknown

Potential Opportunist
or Pathogen ♦ The teleomorph of *Dicyma ampullifera* (*Ascotricha chartarum*) is associated
 with maxillary sinusitis

Industrial Uses ♦ Biocontrol for *Cercosporidium peronatum* leaf spot on peanuts

Potential Toxins Produced ♦ Ergot alkaloid

Fungal Glossary



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Doratomyces

Natural Habitat

- ◆ Decaying plant matter
- ◆ Dung
- ◆ Seeds
- ◆ Soils

Suitable Substrates in the Indoor Environment

- ◆ Unknown

Allergenic Potential

- ◆ Unknown

Potential Opportunist or Pathogen

- ◆ Unknown

Potential Toxins Produced

- ◆ Unknown

Fungal Glossary



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Dreschlera

Natural Habitat	◆ Plant pathogen causing leaf spot, crown rot, and root rot of various turf grass species
Suitable Substrates in the Indoor Environment	◆ Unknown
Water Activity	◆ Most destructive during rainy weather
Mode of Dissemination	◆ Air currents ◆ Dead grass clippings ◆ Feet ◆ Lawn mowers ◆ Splashing water
Allergenic Potential	◆ Unknown
Potential Opportunist or Pathogen	◆ Rare occurrences causing corneal infections in eyes
Industrial Uses	◆ Unknown
Potential Toxins Produced	◆ Unknown

Fungal Glossary



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Emericella

Natural Habitat

- ◆ Plant material
- ◆ Seeds
- ◆ Soil

Suitable Substrates in the Indoor Environment

- ◆ Building materials
- ◆ Dust
- ◆ Food

Water Activity

- ◆ Unknown

Mode of Dissemination

- ◆ Wind

Allergenic Potential

- ◆ Type I (asthma and hay fever)

Potential Opportunist or Pathogen

- ◆ Onchomycosis

Potential Toxins Produced

- ◆ Asperthecin
- ◆ Asperugin
- ◆ Aspergiline
- ◆ Corycepin
- ◆ Echinocandin B
- ◆ Emerin
- ◆ Emericellin
- ◆ Nidurufin
- ◆ Sterigmatocystin
- ◆ Penicillin
- ◆ Pentostatin

Other Comments

- ◆ Genetically related to (meiosporic state) some *Aspergillus* species

References

- ◆ Gugnani, H.C., Vijayan, V.K., Tyagi P., Sharma, S., Stchigel, A.M., and Guarro, J. 2004. Onychomycosis due to *Emericella quadrilineata*. J. Clin Microbiol. 42 (2): 914–916

Fungal Glossary



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Emericellopsis

Natural Habitat	◆ Soils
Suitable Substrates in the Indoor Environment	◆ Unknown
Allergenic Potential	◆ Unknown
Potential Opportunist or Pathogen	◆ Unknown
Industrial Uses	◆ Emerimicins II, III and IV are antibiotics produced by <i>Emericellopsis microspora</i>
Potential Toxins Produced	◆ <i>E. minimum</i> (formerly <i>Cephalosporium acremonium</i>) produces Cephalosporin C.
Other Comments	◆ Teleomorph of <i>Acremonium</i> spp.

Fungal Glossary



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Engyodontium

Natural Habitat	<ul style="list-style-type: none">◆ Plant Debris◆ Soils
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Building materials◆ Jute◆ Paper◆ Textiles
Allergenic Potential	<ul style="list-style-type: none">◆ Unknown
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ <i>Engyodontium album</i> causes:<ul style="list-style-type: none">◆ Brain abscess◆ Keratitis◆ Native valve endocarditis
Potential Toxins Produced	<ul style="list-style-type: none">◆ Unknown

Fungal Glossary



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Epicoccum

Natural Habitat	<ul style="list-style-type: none">◆ Plant debris◆ Soil
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Paper◆ Textiles
Water Activity	<ul style="list-style-type: none">◆ Aw=0.86-0.90
Mode of Dissemination	<ul style="list-style-type: none">◆ Wind
Allergenic Potential	<ul style="list-style-type: none">◆ Type I (asthma and hay fever)
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ Unknown
Industrial Uses	<ul style="list-style-type: none">◆ Unknown
Potential Toxins Produced	<ul style="list-style-type: none">◆ Epicorazine A&B◆ Flavipin◆ Indole-3-acetonitrile

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Erysyphe

Natural Habitat	◆ Plant pathogen that cause “powdery mildew” on many plants. Is an obligate parasite that grows on leaves, stems, flowers, and fruits
Suitable Substrates in the Indoor Environment	◆ Indoor plants
Water Activity	◆ Some species can germinate in 0% humidity
Mode of Dissemination	◆ Wind
Allergenic Potential	◆ Unknown
Potential Opportunist or Pathogen	◆ Unknown
Industrial Uses	◆ Unknown
Potential Toxins Produced	◆ Unknown
Other Comments	◆ Genetically related to (meiosporic state) <i>Oidium</i>

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Eurotium

Natural Habitat

◆ See *Aspergillus*

Suitable Substrates in the
Indoor Environment

- ◆ Furniture
- ◆ Walls
- ◆ One of several teleomorphs of *Aspergillus*

Fungal Glossary



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Exophiala

Natural Habitat	<ul style="list-style-type: none">◆ Soil◆ Water◆ Saprobe of plants◆ Decaying Wood
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Unknown
Water Activity	<ul style="list-style-type: none">◆ Unknown
Mode of Dissemination	<ul style="list-style-type: none">◆ Water Splash
Allergenic Potential	<ul style="list-style-type: none">◆ Unknown
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ Mycetomas◆ Endocarditis◆ Subcutaneous lesions◆ Subcutaneous cysts◆ Phaeohyphomycosis
Industrial Uses	<ul style="list-style-type: none">◆ Potential Antibiotic
Potential Toxins Produced	<ul style="list-style-type: none">◆ Exophilin A
Other Comments	<ul style="list-style-type: none">◆ Known as one of the black yeasts
References	<ul style="list-style-type: none">◆ Doshida J, Hasegawa H, Onuki H, Shimidzu N. 1996. Exophilin A, a new antibiotic from a marine microorganism <i>Exophiala pisciphila</i>. J Antibiot (Tokyo). 49(11):1105-1109

Fungal Glossary



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Exserohilum

Natural Habitat	<ul style="list-style-type: none">◆ Pathogen to Grasses, causes root rot of corn◆ Soils
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Indoor building materials
Water Activity	<ul style="list-style-type: none">◆ Unknown
Mode of Dissemination	<ul style="list-style-type: none">◆ Wind
Allergenic Potential	<ul style="list-style-type: none">◆ Causes allergic sinusitis
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ Endocarditis◆ Mycotic keratitis◆ Subcutaneous phaeohyphomycosis◆ Osteomyelitis and sinusitis in both normal and immunocompromised patients
Industrial Uses	<ul style="list-style-type: none">◆ Potential biocontrol of weeds
Potential Toxins Produced	<ul style="list-style-type: none">◆ Monocerin◆ Phytotoxin
References	<ul style="list-style-type: none">◆ Zhang, W., and Watson, A.K. 2000. Isolation and partial characterization of phytotoxins produced by <i>Exserohilum monoceras</i>, a potential bioherbicide for control of <i>Echinochloa</i> species. Proceedings of the X International Symposium on Biological Control of weeds 4-14 July 1999, Montana State University, Boleman, Montana USA. Neal R. Spencer [ed.] pp.125-130

Fungal Glossary



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Fusariella

Natural Habitat ♦ Plant matter
 ♦ Leaf litter

Allergenic Potential ♦ Unknown

Potential Opportunist
or Pathogen ♦ Unknown

Potential Toxins Produced ♦ Unknown

Fungal Glossary



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Fusarium

Natural Habitat	<ul style="list-style-type: none">◆ Soil◆ Plant pathogen causing root rot, stem rot, and wilt of many ornamental and crop plants.
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Often found in humidifiers◆ Wet, cellulose-based building materials
Water Activity	<ul style="list-style-type: none">◆ Aw=0.86-0.91
Mode of Dissemination	<ul style="list-style-type: none">◆ Insects◆ Water droplets, rain◆ Wind when spores become dry
Allergenic Potential	<ul style="list-style-type: none">◆ Type I allergies (hay fever, asthma)
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ Esophageal cancer is believed to happen after consumption of <i>F. moniliforme</i> infected corn◆ Keratitis◆ Endophthalmitis◆ Onychomycosis◆ Cutaneous infections◆ Mycetoma◆ Sinusitis◆ Pulmonary infections◆ Endocarditis◆ Peritonitis◆ Central venous catheter infections◆ Septic arthritis◆ Neurological disease in horses after consumption of <i>F. moniliforme</i> infected corn◆ Respiratory disease in pigs after consumption of <i>F. moniliforme</i> infected corn
Industrial Uses	<ul style="list-style-type: none">◆ Biological Weapon
Potential Toxins Produced	<ul style="list-style-type: none">◆ Trichothecenes◆ Zearalenone◆ Fumonisin
Other Comments	<ul style="list-style-type: none">◆ Major plant pathogen
References	<ul style="list-style-type: none">◆ <i>Atlas of Moulds in Europe causing respiratory Allergy</i>, Foundation for Allergy Research in Europe, Edited by Knud Wilken-Jensen and Suzanne Gravesen, ASK Publishing, Denmark, 1984

Fungal Glossary



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Ganoderma

Natural Habitat	◆ Grows on conifers and hardwoods worldwide, causing white rot, root rot, and stem rot
Suitable Substrates in the Indoor Environment	◆ Unknown
Water Activity	◆ Unknown
Mode of Dissemination	◆ Wind
Allergenic Potential	◆ <i>Ganoderma species</i> are known to cause allergies in people on a worldwide scale
Potential Opportunist or Pathogen	◆ Unknown
Industrial Uses	◆ Biopulping of wood for the paper industry ◆ Potential medicinal use due to: 1. Inhibition of Ras dependent cell transformation, 2. antifibrotic activity, 3. immunomodulating activity, 4. free-radicle scavenging
Potential Toxins Produced	◆ Unknown
Other Comments	◆ Used in traditional Chinese medicine as an herbal supplement ◆ It is also known as a "shelf fungus" because the fruiting body forms a stalk-less shelf on the sides of trees and logs ◆ It is sometimes called "artists conk" because when you scratch the white pores of the fruiting body, the white rubs away and exposes the brown hyphae underneath. Thus, pictures can be produced on the fruiting body
References	◆ References: Craig, R.L., Levetin, E. 2000. Multi-year study of <i>Ganoderma</i> aerobiology. <i>Aerobiologia</i> 16: 75-81. ◆ http://www.pfc.forestry.ca/diseases/CTD/Group/Heart/heart6_e.html

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Geomyces

Natural Habitat	◆ Dung ◆ Soil
Suitable Substrates in the Indoor Environment	◆ Unknown
Allergenic Potential	◆ Unknown
Potential Opportunist or Pathogen	◆ Causes superficial infection of skin and nails
Potential Toxins Produced	◆ Unknown

Fungal Glossary



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Geotrichum

Natural Habitat	<ul style="list-style-type: none">◆ Normal flora in humans◆ Soil◆ Plants◆ Water
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Foods such as fruits and grains◆ Milk and other dairy products◆ Paper◆ Textiles
Water Activity	<ul style="list-style-type: none">◆ Aw=0.90
Mode of Dissemination	<ul style="list-style-type: none">◆ Air currents
Allergenic Potential	<ul style="list-style-type: none">◆ Unknown
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ Geotrichum causes diseases known as geotrichosis:<ul style="list-style-type: none">◆ Intestinal tract◆ alimentary and cutaneous infections◆ bronchial and pulmonary infections◆ oral◆ vaginal
Industrial Uses	<ul style="list-style-type: none">◆ Unknown
Potential Toxins Produced	<ul style="list-style-type: none">◆ Unknown
References	<ul style="list-style-type: none">◆ <i>Mould Allergy</i>, Yousef Al-Doory and Joanne F. Domson, Lea and Febiger, Philadelphia, 1984. 287 p

Fungal Glossary



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Gliocladium

Natural Habitat	<ul style="list-style-type: none">◆ Soil◆ Decaying plant tissue
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Unknown
Water Activity	<ul style="list-style-type: none">◆ Unknown
Mode of Dissemination	<ul style="list-style-type: none">◆ Water droplets◆ Insects
Allergenic Potential	<ul style="list-style-type: none">◆ Unknown
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ Unknown
Industrial Uses	<ul style="list-style-type: none">◆ <i>Gliocladium virens</i> GL-21 is used as a biological control against plant pathogenic fungi
Potential Toxins Produced	<ul style="list-style-type: none">◆ Gliotoxin is a metabolite of <i>Gliocladium deliquescens</i>
References	<ul style="list-style-type: none">◆ http://www.epa.gov/pesticides/biopesticides/ingredients/factsheets/factsheet_129000.htm

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Gliomastix

Natural Habitat

- ◆ Causes rot on potatoes
- ◆ Plant litter
- ◆ Soil
- ◆ Wood

Suitable Substrates in the Indoor Environment

- ◆ Textiles
- ◆ Water damaged areas

Allergenic Potential

- ◆ Unknown

Potential Opportunist or Pathogen

- ◆ Unknown

Potential Toxins Produced

- ◆ Unknown

Other Comments

- ◆ *G. macrocylindrica* is a mycoparasite of *Beltrania rhombica*

Fungal Glossary



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Gonatobotrys

Natural Habitat ♦ Decaying plant matter (fungicolous)

Allergenic Potential ♦ Unknown

Potential Opportunist
or Pathogen ♦ Unknown

Potential Toxins Produced ♦ Unknown

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Gonatobotryum

Natural Habitat

- ◆ Mycoparasite of *Ophiostoma* and *Certatosystis* (fungicolous)
- ◆ Rotting wood
- ◆ Soils

Suitable Substrates in the Indoor Environment

- ◆ Structural lumber

Mode of Dissemination

- ◆ Insects

Allergenic Potential

- ◆ Unknown

Potential Opportunist or Pathogen

- ◆ Unknown

Industrial Uses

- ◆ Unknown

Potential Toxins Produced

- ◆ Unknown

Fungal Glossary



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Graphium

Natural Habitat	◆ Dung ◆ Seeds ◆ Soils ◆ Woody plant tissue
Suitable Substrates in the Indoor Environment	◆ Unknown
Water Activity	◆ Unknown
Mode of Dissemination	◆ Beetles when mitosporic state of <i>Ophiostoma ulmi</i>
Allergenic Potential	◆ Unknown
Potential Opportunist or Pathogen	◆ Unknown
Industrial Uses	◆ GR135402, a compound with antifungal activity against <i>Candida albicans</i> and <i>Cryptococcus neoformans</i> , has been isolated from a fermentation broth of <i>Graphium putredinis</i>
Potential Toxins Produced	◆ Unknown
Other Comments	◆ There have not been any reports of human infections with <i>Graphium</i> species, however, it is a mitosporic state of <i>Pseudoallescheria boydii</i> which causes subcutaneous mycoses in man

Fungal Glossary



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Helminthosporium

Natural Habitat	<ul style="list-style-type: none">◆ Pathogen of turfgrass causing crown rot and leaf spot diseases◆ Pathogen of maize causing Northern leaf blight◆ Pathogen of potatoes causing silver scurf disease
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Unknown
Water Activity	<ul style="list-style-type: none">◆ Unknown
Mode of Dissemination	<ul style="list-style-type: none">◆ Water Splash◆ Foot traffic◆ Lawn mowers◆ Grass Clippings
Allergenic Potential	<ul style="list-style-type: none">◆ Unknown
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ Unknown
Industrial Uses	<ul style="list-style-type: none">◆ Unknown
Potential Toxins Produced	<ul style="list-style-type: none">◆ Helminthosporoside◆ Helminthosporal
Other Comments	<ul style="list-style-type: none">◆ This name is no longer in use. The genus <i>Helminthosporium</i> is now <i>Bipolaris</i>
References	<ul style="list-style-type: none">◆ Steiner GW, Strobel GA. 1971. J Biol Chem. 246(13):4350-4357◆ Sommereyns G, Closset JL. 1977. Arch Int Physiol Biochim. 85(2):431-433

Fungal Glossary



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Hyalodendron

Natural Habitat	◆ Soils
Suitable Substrates in the Indoor Environment	◆ Unknown
Allergenic Potential	◆ Unknown
Potential Opportunist or Pathogen	◆ Unknown
Industrial Uses	◆ Hyalodendrin is an antibiotic produced by <i>Hyalodendron</i> ◆ Hyalodendrosides A and B are anti-fungal products
Potential Toxins Produced	◆ Triterpenoid glycoside, hyalodendroside A (1) ◆ Triterpenoid glycoside, hyalodendroside B (2)

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Leptosphaeria

Natural Habitat

- ◆ Pathogen of brassica plants
- ◆ Pathogen of oilseed rape
- ◆ Pathogen of wheat
- ◆ Dead plant materials
- ◆ Soils

Suitable Substrates in the Indoor Environment

- ◆ Unknown

Water Activity

- ◆ Unknown

Mode of Dissemination

- ◆ Seed borne transmission

Allergenic Potential

- ◆ Type I
- ◆ Type III

Potential Opportunist or Pathogen

- ◆ Mycetoma
- ◆ Phaeohyphomycosis

Industrial Uses

- ◆ Unknown

Potential Toxins Produced

- ◆ Unknown

Fungal Glossary



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Memnoniella

Natural Habitat	<ul style="list-style-type: none">◆ Plant materials◆ Soils
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Paper◆ Sheetrock◆ Wood
Mode of Dissemination	<ul style="list-style-type: none">◆ Wind
Allergenic Potential	<ul style="list-style-type: none">◆ Unknown
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ Unknown
Potential Toxins Produced	<ul style="list-style-type: none">◆ Dechlorgriseofulvin◆ Epidechlorgriseofulvin◆ Griseofulvins◆ Memnopeptide A◆ Trichodermol◆ Trichodermin.
Other Comments	<ul style="list-style-type: none">◆ Griseofulvin used an anti-dermatophyte drug and is commercially available. DNA evidence demonstrated that all <i>Memnoniella</i> fungi are <i>Stachybotrys</i>.

Fungal Glossary



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Microascus

Natural Habitat

- ◆ Soil
- ◆ Soybeans
- ◆ Sunflower seeds

Suitable Substrates in the Indoor Environment

- ◆ Drywall
- ◆ Wood

Allergenic Potential

- ◆ Unknown

Potential Opportunist or Pathogen

- ◆ Brain abscess in immunocompromised patients
- ◆ Cutaneous lesions
- ◆ Mycetomas
- ◆ Onychomycosis

Industrial Uses

- ◆ Unknown

Potential Toxins Produced

- ◆ Unknown

Other Comments

- ◆ *Microascus* is the sexual state (teleomorph) of *Scopulariopsis*

Fungal Glossary



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Micstromar

Natural Habitat ◆ Plant pathogen on hickory and walnut trees causing downy leafspot.

Suitable Substrates in the Indoor Environment ◆ Unknown

Mode of Dissemination ◆ Water splash
 ◆ Wind

Allergenic Potential ◆ Unknown

Potential Opportunist or Pathogen ◆ Unknown

Industrial Uses ◆ Unknown

Potential Toxins Produced ◆ Unknown

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Monilia

Natural Habitat

- ◆ This is an obsolete name. Most *Monilia* are now referred to as *Candida* (please see description)

Fungal Glossary



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Mortierella

Natural Habitat

- ◆ Dung
- ◆ Seeds
- ◆ Soil
- ◆ Sugar cane

Suitable Substrates in the Indoor Environment

- ◆ Unknown

Mode of Dissemination

- ◆ Water splash

Allergenic Potential

- ◆ Unknown

Potential Opportunist or Pathogen

- ◆ Unknown at this time

Industrial Uses

- ◆ Unknown

Potential Toxins Produced

- ◆ Unknown

Other Comments

- ◆ *M. wolfii* is an important casual agent of bovine mycotic abortion, pneumonia and systemic mycosis

Fungal Glossary



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Mucor

Natural Habitat	<ul style="list-style-type: none">◆ Decaying fruits and vegetables◆ Dung◆ Plants◆ Soils
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Fruit◆ Leftover foods◆ Building Materials◆ Carpet Dust
Water Activity	◆ Aw=0.90-0.94
Mode of Dissemination	<ul style="list-style-type: none">◆ Water Splash◆ Wind disseminated
Allergenic Potential	<ul style="list-style-type: none">◆ Type I (hay fever, asthma)◆ Type III (hypersensitivity)
Potential Opportunist or Pathogen	◆ Zygomycosis in immunocompromised patients
Industrial Uses	◆ Proteases from <i>M. pusillus</i> and <i>M. mehei</i> are used in cheese fermentation
Potential Toxins Produced	◆ Unknown
Other Comments	◆ Produces zygomycete sporangiospores

Fungal Glossary



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Mycotypha

Natural Habitat	◆ Soils
Suitable Substrates in the Indoor Environment	◆ Unknown
Mode of Dissemination	◆ Wind
Allergenic Potential	◆ Unknown
Potential Opportunist or Pathogen	◆ Unknown
Industrial Uses	◆ Unknown
Potential Toxins Produced	◆ Unknown

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Myrothecium

Natural Habitat

- ◆ Dead agaric mushrooms
- ◆ Grasses
- ◆ Soils

Suitable Substrates in the Indoor Environment

- ◆ Rarely found indoors

Mode of Dissemination

- ◆ Insects
- ◆ Water splash

Allergenic Potential

- ◆ Unknown

Potential Opportunist or Pathogen

- ◆ Unknown

Potential Toxins Produced

- ◆ Trichothecene mycotoxins

Fungal Glossary



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Myxomycetes

Natural Habitat	<ul style="list-style-type: none">◆ Decaying logs◆ Dead leaves◆ Dung◆ Lawns◆ Mulched flower beds
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Rotting lumber
Water Activity	<ul style="list-style-type: none">◆ Unknown
Mode of Dissemination	<ul style="list-style-type: none">◆ Insects◆ Water◆ Wind
Allergenic Potential	<ul style="list-style-type: none">◆ Type I
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ Unknown
Industrial Uses	<ul style="list-style-type: none">◆ Unknown
Potential Toxins Produced	<ul style="list-style-type: none">◆ Unknown
Other Comments	<ul style="list-style-type: none">◆ Young sporophores of one genera (<i>Enteridium lycoperdon</i>) are fried and eaten in Mexico, and the dish is called caca de luna◆ Myxomycetes are not members of the Kingdom Fungi. This is due to morphological differences and DNA evidence

Fungal Glossary



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Myxotrichum

Natural Habitat	◆ Soils
Suitable Substrates in the Indoor Environment	◆ Decomposing carpets ◆ Paper ◆ Wet drywall
Mode of Dissemination	◆ Wind
Allergenic Potential	◆ Unknown
Potential Opportunist or Pathogen	◆ Unknown
Industrial Uses	◆ Unknown
Potential Toxins Produced	◆ <i>Myxotrichum stipitatum</i> produces: ◆ Clavatoic acid ◆ Myxostiolide ◆ Myxostiol
Other Comments	◆ The toxins produced by <i>M. stipitatum</i> are all plant growth regulators

Fungal Glossary



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Neosartorya

Natural Habitat ♦ Fruits

Suitable Substrates in the Indoor Environment ♦ Fruits
♦ Heat processed fruit products

Allergenic Potential ♦ Similar to *Aspergillus* spp.

Potential Opportunist or Pathogen ♦ Mycotic keratitis
♦ *N. pseudofischeri* is known to cause Osteomyelitis

Potential Toxins Produced ♦ Azaspirene

Other Comments ♦ *Neosartorya* is a teleomorphic (sexual) state of *Aspergillus*. There are multiple teleomorphs for *Aspergillus*.

Fungal Glossary



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Nigrospora

Natural Habitat	<ul style="list-style-type: none">◆ Common on live or dead grass◆ Seeds◆ Soil
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Unknown
Mode of Dissemination	<ul style="list-style-type: none">◆ Forcibly ejected
Allergenic Potential	<ul style="list-style-type: none">◆ Type I allergies (hay fever, asthma)
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ Keratitis◆ Skin lesions
Industrial Uses	<ul style="list-style-type: none">◆ Unknown
Potential Toxins Produced	<ul style="list-style-type: none">◆ Unknown metabolite reported with some toxic properties

Fungal Glossary



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Nodulisporium

Natural Habitat

- ◆ Endophytic in some trees causing wood rot disease
- ◆ Dead stems of trees
- ◆ Herbaceous plants
- ◆ Soils

Suitable Substrates in the Indoor Environment

- ◆ Unknown

Allergenic Potential

- ◆ Allergic sinusitis

Potential Opportunist or Pathogen

- ◆ Cerebral phaeohyphomycosis

Industrial Uses

- ◆ Unknown

Potential Toxins Produced

- ◆ Nodulisporic acid (a indole terpene)

Other Comments

- ◆ Nodulisporic acid has insecticidal properties and could potentially be used as an insecticide

Fungal Glossary



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Ochroconis

Natural Habitat	<ul style="list-style-type: none">◆ Decaying plant matter◆ Soils
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Unknown
Allergenic Potential	<ul style="list-style-type: none">◆ Unknown
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ Causes systemic infections◆ Causes lung abscesses
Potential Toxins Produced	<ul style="list-style-type: none">◆ Unknown

Fungal Glossary



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Oedocephalum

Natural Habitat	◆ Dung ◆ Soils ◆ Wood
Suitable Substrates in the Indoor Environment	◆ Wood structures
Mode of Dissemination	◆ Wind
Allergenic Potential	◆ Unknown
Potential Opportunist or Pathogen	◆ Unknown
Potential Toxins Produced	◆ Unknown
Other Comments	◆ Contaminant of edible mushroom cultures. Asexual state of <i>Peziza</i>

Fungal Glossary



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Oidiodendron

Natural Habitat	<ul style="list-style-type: none">◆ Leaf litter◆ Peat◆ Wood◆ Soils
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Paper◆ Textiles
Allergenic Potential	◆ Unknown
Potential Opportunist or Pathogen	◆ Unknown
Potential Toxins Produced	◆ Unknown
Other Comments	◆ Forms mycorrhizae on Ericaceae

Fungal Glossary



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Oidium

Natural Habitat	◆ It is an obligate parasite on many plant varieties causing powdery mildew disease.
Suitable Substrates in the Indoor Environment	◆ Houseplants
Mode of Dissemination	◆ Wind
Allergenic Potential	◆ Unknown
Potential Opportunist or Pathogen	◆ Unknown
Potential Toxins Produced	◆ Unknown
Other Comments	◆ Asexual state of <i>Erysiphe</i>

Fungal Glossary



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Paecilomyces

Natural Habitat

- ◆ Decaying plant matter
- ◆ Insects
- ◆ Soils

Suitable Substrates in the Indoor Environment

- ◆ Optical Lenses
- ◆ Leather
- ◆ Paper
- ◆ PVC
- ◆ Jute Fibers
- ◆ Tobacco

Water Activity

- ◆ Aw=0.79

Mode of Dissemination

- ◆ Wind

Allergenic Potential

- ◆ Type I (hay fever, asthma)
- ◆ Type III (hypersensitivity)

Potential Opportunist or Pathogen

- ◆ *P. variotii* causes paecilomycosis (symptoms include keratitis, cellulitis, and alveolitis).
- ◆ Corneal ulcers, keratitis, and endophthalmitis can occur after extended contact lens use or eye surgery due to *Paecilomyces* infection

Industrial Uses

- ◆ *Paecilomyces fumosoroseus* is currently marketed as a biocontrol insecticide

Potential Toxins Produced

- ◆ Byssochlamic acid
- ◆ Ferrirubin
- ◆ Fusigen
- ◆ Indole-3-acetic acid
- ◆ Paecilotoxins
- ◆ Patulin.variotin
- ◆ Viriditoxin

Other Comments

- ◆ *P. crustaceus* and *P. variotii* can grow well at temperatures as high as 50°C

Fungal Glossary



Laboratory Testing Services Since 1981

Penicillium

Natural Habitat	<ul style="list-style-type: none">◆ Soil◆ Seed◆ Cereal crops
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Foods (blue mold on cereals, fruits, vegetables, dried foods)◆ House dust◆ Fabrics◆ Leather◆ Wallpaper◆ Wallpaper glue
Water Activity	<ul style="list-style-type: none">◆ Aw=0.78-0.86
Mode of Dissemination	<ul style="list-style-type: none">◆ Wind◆ Insects
Allergenic Potential	<ul style="list-style-type: none">◆ Type I (hay fever, asthma)◆ Type III (hypersensitivity)
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ Penicilliosis
Industrial Uses	<ul style="list-style-type: none">◆ <i>P. chrysogenum</i> for the antibiotic penicillin◆ <i>P. griseofulvum</i> for the antibiotic griseofulvin◆ <i>P. roquefortii</i> for Roquefort cheese◆ <i>P. camemberti</i> for Camembert cheese◆ Brie, Gorgonzola, and Danish Blue cheese are also the products of <i>Penicillium</i>◆ Used to cure ham and salami◆ Production of organic acids such as fumaric, oxalic, gluconic, and gallic
Potential Toxins Produced	<ul style="list-style-type: none">◆ Citrinin◆ Citreoviridin◆ Cyclopiazonic acid◆ Fumitremorgen B◆ Grisiofulvin◆ Janthitremis◆ Mycophenolic acid◆ Paxilline◆ Penitrem A◆ Penicillic acid◆ Ochratoxins◆ Roquefortine C◆ Secalonic acid D◆ Verruculogen◆ Verrucosidin◆ Viomellein◆ Viridicatumtoxin◆ Xanthomegnin
Other Comments	<ul style="list-style-type: none">◆ <i>Penicillium</i> is one of the most common genera of fungi
References	<ul style="list-style-type: none">◆ Alexopoulos, C.J., Mims, C.W., Blackwell, M. 1996. John Wiley and Sons

Fungal Glossary



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Periconia

Natural Habitat	<ul style="list-style-type: none">◆ Grasses◆ Sedges◆ Rushes◆ Dead herbaceous plant material◆ Soils
Suitable Substrates in the Indoor Environment	◆ Unknown
Mode of Dissemination	◆ Wind
Allergenic Potential	◆ Unknown
Potential Opportunist or Pathogen	◆ Unknown
Industrial Uses	◆ Unknown
Potential Toxins Produced	<ul style="list-style-type: none">◆ <i>Periconia circinata</i> produces Periconin A and Periconin B (both are biologically inactive)◆ <i>P. circinata</i> also produces Peritoxins A and B
References	<ul style="list-style-type: none">◆ V Macko, M B Stimmel, T J Wolpert, L D Dunkle, W Acklin, R Banteli, B Jaun, and D Arigoni. 1992. Structure of the host-specific toxins produced by the fungal pathogen <i>Periconia circinata</i>. Proc Natl Acad Sci U S A. 89(20): 9574–9578

Fungal Glossary



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Peronospora

Natural Habitat	◆ Obligate pathogen causing Downy Mildew on many types of plants. May be seen on outdoor samples.
Suitable Substrates in the Indoor Environment	◆ Houseplants
Mode of Dissemination	◆ Wind
Allergenic Potential	◆ Unknown
Potential Opportunist or Pathogen	◆ Unknown
Industrial Uses	◆ Unknown
Potential Toxins Produced	◆ Unknown

Fungal Glossary



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Peziza

Natural Habitat

- ◆ Plant litter
- ◆ Rotting wood
- ◆ Damp Soil

Suitable Substrates in the Indoor Environment

- ◆ Often found in basements and in wet carpets

Allergenic Potential

- ◆ Unknown

Potential Opportunist or Pathogen

- ◆ Unknown

Potential Toxins Produced

- ◆ Unknown. Asexual state of *Oedocephalum/Chromelosporium*

Fungal Glossary



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Phialocephala

Natural Habitat

- ◆ Bark from many types of trees
- ◆ Orchids
- ◆ Wood
- ◆ Soils

Suitable Substrates in the Indoor Environment

- ◆ Unknown

Allergenic Potential

- ◆ Unknown

Potential Opportunist or Pathogen

- ◆ Unknown

Potential Toxins Produced

- ◆ Unknown

Fungal Glossary



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Phialophora

Natural Habitat

- ◆ Dung
- ◆ Soil
- ◆ Plant tissue
- ◆ Water
- ◆ Wood

Suitable Substrates in the Indoor Environment

- ◆ Unknown

Mode of Dissemination

- ◆ Infected plant debris

Allergenic Potential

- ◆ Unknown

Potential Opportunist or Pathogen

- ◆ Chromoblastomycosis in temperate to sub-tropical climates

Industrial Uses

- ◆ Unknown

Potential Toxins Produced

- ◆ Unknown

Fungal Glossary



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Phoma

Natural Habitat	<ul style="list-style-type: none">◆ Cucurbits (causing foliar disease)◆ Conifers (resulting in blight)◆ Soils
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Butter◆ Ceiling tiles◆ Cement◆ Floor tiles◆ Paint◆ Rice◆ Rubber◆ Wood
Mode of Dissemination	<ul style="list-style-type: none">◆ Splash when wet◆ Insect and wind when dry
Allergenic Potential	<ul style="list-style-type: none">◆ Type I (hay fever, asthma)◆ Type III (hypersensitivity)
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ Phaeohyphomycosis in immunocompromised patients
Industrial Uses	<ul style="list-style-type: none">◆ Unknown
Potential Toxins Produced	<ul style="list-style-type: none">◆ Unknown

Fungal Glossary



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Pithomyces

Natural Habitat	<ul style="list-style-type: none">◆ Leaf litter◆ Soils◆ Tree bark
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Paper
Water Activity	<ul style="list-style-type: none">◆ Requires high moisture level for spore germination
Mode of Dissemination	<ul style="list-style-type: none">◆ Wind
Allergenic Potential	<ul style="list-style-type: none">◆ Unknown
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ Etiologic agent in immunocompromised patients
Industrial Uses	<ul style="list-style-type: none">◆ Unknown
Potential Toxins Produced	<ul style="list-style-type: none">◆ Cyclodepsipeptides◆ Sporidesmin◆ Sporidesmolides

Fungal Glossary



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Polythrincium

Natural Habitat	◆ Leaves
Suitable Substrates in the Indoor Environment	◆ Unknown
Allergenic Potential	◆ Allergenic potential in this genus is not well understood, and is currently being studied.
Potential Opportunist or Pathogen	◆ Unknown
Potential Toxins Produced	◆ Unknown

Fungal Glossary



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Poria

Natural Habitat	◆ Wood
Suitable Substrates in the Indoor Environment	◆ Decays structural timber in buildings
Allergenic Potential	◆ Unknown
Potential Opportunist or Pathogen	◆ Unknown
Potential Toxins Produced	◆ Unknown
Other Comments	◆ Red Poria (<i>P. cocos</i>) is used in traditional Chinese medicine. Resupinate Polyporaceae

Fungal Glossary



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Pyrenochaeta

Natural Habitat	<ul style="list-style-type: none">◆ Plant pathogen to a variety of plants including tomatoes and some cucurbits.◆ Plant debris◆ Soils
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Unknown
Mode of Dissemination	<ul style="list-style-type: none">◆ Water splash
Allergenic Potential	<ul style="list-style-type: none">◆ Unknown
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ <i>Pyrenochaeta romeroi</i> has been associated with mycetoma◆ <i>Pyrenochaeta unguis-hominis</i> infects nails
Potential Toxins Produced	<ul style="list-style-type: none">◆ Unknown

Fungal Glossary



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Rhinocladiella

Natural Habitat	◆ Decaying wood ◆ Soils
Suitable Substrates in the Indoor Environment	◆ Wood
Mode of Dissemination	◆ Wind
Allergenic Potential	◆ Unknown
Potential Opportunist or Pathogen	◆ Chromoblastomycosis ◆ Fungemia
Industrial Uses	◆ Unknown
Potential Toxins Produced	◆ Unknown

Fungal Glossary



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Rhizopus

Natural Habitat

- ◆ Dung
- ◆ Fruits- causing rhizopus rot on stone fruits and strawberries
- ◆ Soils
- ◆ Vegetables

Suitable Substrates in the Indoor Environment

- ◆ Stored fruits and vegetables

Water Activity

- ◆ Aw=0.93

Mode of Dissemination

- ◆ Wind

Allergenic Potential

- ◆ Type I (hay fever, asthma)
- ◆ Type III (hypersensitivity)

Potential Opportunist or Pathogen

- ◆ Causal agent of zygomycosis in immunocompromised, malnourished or severely burned people

Industrial Uses

- ◆ Used to ferment rice into miso
- ◆ Used to ferment soybeans to tempeh and sufu

Potential Toxins Produced

- ◆ *Rhizopus oryzae* produces agroclavine (an ergot alkaloid toxic to mammals)

Fungal Glossary



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Rhodotorula

Natural Habitat

- ◆ Air
- ◆ Dairy products
- ◆ Fruit juice
- ◆ Soil
- ◆ Water

Suitable Substrates in the Indoor Environment

- ◆ Carpeting
- ◆ Cooling coils
- ◆ Humidifiers
- ◆ Water tanks

Allergenic Potential

- ◆ Reported to be allergenic

Potential Opportunist or Pathogen

- ◆ Meningitis endocarditis, Ventriculitis, Peritonitis, Endophthalmitis Central venous catheter-infections, Fungemia, and Sepsis have been reported in immunocompromised patients
- ◆ *Rhodotorula rubra* is a common airborne contaminant of skin, lungs, urine and feces

Industrial Uses

- ◆ Mannan produced by *Rhodotorula* is useful for serological diagnosis for leptospirosis (a bacterial disease)
- ◆ Carotenoid production for the food industry

Potential Toxins Produced

- ◆ Unknown

References

- ◆ Matsuo K., Isogai, E., Araki, Y. 2000. Utilization of Exocellular Mannan from *Rhodotorula glutinis* as an Immunoreactive Antigen in Diagnosis of Leptospirosis. *Journal of Clinical Microbiology*. 38(10): 3750-3754

Fungal Glossary



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Rusts

Natural Habitat	◆ Rusts are parasitic to many types of plants
Suitable Substrates in the Indoor Environment	◆ Unknown- rust fungi require a living plant host for growth
Mode of Dissemination	◆ Wind ◆ Forcible Ejection
Allergenic Potential	◆ Type I. (hay fever, asthma)
Potential Opportunist or Pathogen	◆ Unknown
Industrial Uses	◆ Unknown
Potential Toxins Produced	◆ Unknown
Other Comments	◆ There are 5000 known species of rusts belonging to at least 150 different genera ◆ Rusts are the cause of great economic losses on many cultivated plants ◆ Ancient Romans believed the god Robigus was responsible for rust disease on crops and attempted to ward off rust disease by celebrating Robigus in an annual festival
References	◆ Alexopoulos, C.J., Mims, C.W., Blackwell, M. 1996. John Wiley and Sons

Fungal Glossary



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Scedosporium

Natural Habitat	<ul style="list-style-type: none">◆ Decaying plant matter◆ Dung◆ Soil
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Unknown
Allergenic Potential	<ul style="list-style-type: none">◆ Unknown
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ Subcutaneous infections◆ Osteomyelitis◆ <i>S. prolificans</i> causes phaeohyphomycosis
Potential Toxins Produced	<ul style="list-style-type: none">◆ Unknown

Fungal Glossary



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Schizophyllum commune

Natural Habitat	<ul style="list-style-type: none">◆ Decaying deciduous trees◆ Logs◆ Stumps
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Plaster◆ Wood
Mode of Dissemination	<ul style="list-style-type: none">◆ Wind
Allergenic Potential	<ul style="list-style-type: none">◆ Unknown
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ Chronic lung disease◆ Meningitis◆ Onychomycosis
Potential Toxins Produced	<ul style="list-style-type: none">◆ Unknown
Other Comments	<ul style="list-style-type: none">◆ This fungus goes dormant in dry weather and revives itself when it rains. It can remain dormant for as many as 50 years and will unroll their gills and release spores when moistened.

Fungal Glossary



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Scolecobasidium

Natural Habitat	◆ Soils
Suitable Substrates in the Indoor Environment	◆ Unknown
Allergenic Potential	◆ Unknown
Potential Opportunist or Pathogen	◆ Unknown
Industrial Uses	◆ <i>Scolecobasidium constrictum</i> is a biocontrol agent of clover cyst nematode
Potential Toxins Produced	◆ Unknown
Other Comments	◆ <i>Scolecobasidium humicola</i> , causes phaeohyphomycosis in fish, and cutaneous lesions in tortoises

Fungal Glossary



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Scopulariopsis

Natural Habitat	◆ Soil
Suitable Substrates in the Indoor Environment	◆ Dairy products ◆ Fruit ◆ Grain ◆ Meat ◆ Paper ◆ Wood
Mode of Dissemination	◆ Wind
Allergenic Potential	◆ Type III (hypersensitivity)
Potential Opportunist or Pathogen	◆ Onychomycosis in toe nails ◆ Skin lesions ◆ Mycetoma ◆ Keratitis ◆ Endophthalmitis, invasive sinusitis, pulmonary infections, endocarditis, and brain abscess typically only afflict immunocompromised patients.
Industrial Uses	◆ Unknown
Potential Toxins Produced	◆ <i>Scopulariopsis brevicaulis</i> produces arsine gas from arsenate dyes found in wallpaper covered with Paris Green

Fungal Glossary



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Sepedonium

Natural Habitat	<ul style="list-style-type: none">◆ Mycoparasitic on Agaric and Bolete mushrooms◆ Plant tissue◆ Soil
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Unknown
Mode of Dissemination	<ul style="list-style-type: none">◆ Wind
Allergenic Potential	<ul style="list-style-type: none">◆ Unknown
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ Unknown
Potential Toxins Produced	<ul style="list-style-type: none">◆ <i>S. ampullosporum</i> produces Ampullosporin A

Fungal Glossary



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Septonema

Natural Habitat	◆ Tree bark ◆ Mycoparasite of various other fungi
Suitable Substrates in the Indoor Environment	◆ Unknown
Allergenic Potential	◆ Unknown
Potential Opportunist or Pathogen	◆ Unknown
Potential Toxins Produced	◆ Unknown

Fungal Glossary



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Serpula lacrymans

Natural Habitat ♦ Trees, causing dry rot of many types
 ♦ Syn. *Merulius lacrymans*

Suitable Substrates in the Indoor Environment ♦ Lumber structures

Mode of Dissemination ♦ Wind

Allergenic Potential ♦ Unknown

Potential Opportunist or Pathogen ♦ Unknown

Industrial Uses ♦ Unknown

Potential Toxins Produced ♦ Unknown

Fungal Glossary



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Smuts

Natural Habitat	◆ Pathogens of cereals crops, corn, grasses, onion, and sorghum
Suitable Substrates in the Indoor Environment	◆ Unknown- smut fungi require a living plant host for growth
Mode of Dissemination	◆ Wind ◆ Rain ◆ Shoes ◆ Mowers
Allergenic Potential	◆ Type I. (hay fever, asthma)
Potential Opportunist or Pathogen	◆ Unknown
Industrial Uses	◆ Galls of <i>Ustilago maydis</i> are considered a delicacy and are known in Mexico as “Huitlacoche” and in the U.S.A. as “maize mushroom”, “Mexican truffles” or “caviar azteca”
Potential Toxins Produced	◆ Unknown
Other Comments	◆ Smut fungi belong to the order Ustilaginales and there are about 4000 known species

Fungal Glossary



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Sordaria

Natural Habitat	<ul style="list-style-type: none">◆ Dung◆ Seeds◆ Soils
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Unknown
Mode of Dissemination	<ul style="list-style-type: none">◆ Forcible ejection◆ Wind
Allergenic Potential	<ul style="list-style-type: none">◆ Unknown
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ Unknown
Industrial Uses	<ul style="list-style-type: none">◆ Commonly used in genetic studies
Potential Toxins Produced	<ul style="list-style-type: none">◆ Unknown

Fungal Glossary



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Spadicoides

Natural Habitat ♦ Bark of a variety of trees
 ♦ Dead wood

Suitable Substrates in the Indoor Environment ♦ Unknown

Allergenic Potential ♦ Unknown

Potential Opportunist or Pathogen ♦ Unknown

Potential Toxins Produced ♦ Unknown

Fungal Glossary



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Spegazzinia

Natural Habitat	◆ Plants ◆ Soils
Suitable Substrates in the Indoor Environment	◆ Unknown
Allergenic Potential	◆ Unknown
Potential Opportunist or Pathogen	◆ Unknown
Industrial Uses	◆ Unknown
Potential Toxins Produced	◆ Unknown

Fungal Glossary



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Sporobolomyces

Natural Habitat	<ul style="list-style-type: none">◆ Diseased plant tissue◆ Leaves◆ Rotting Fruit◆ Soil
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Humidifiers◆ Drain pans◆ Water tanks
Water Activity	<ul style="list-style-type: none">◆ Requires extremely high humidity for growth
Mode of Dissemination	<ul style="list-style-type: none">◆ Forcible Ejection
Allergenic Potential	<ul style="list-style-type: none">◆ Type I (hay fever, asthma)◆ Type III (hypersensitivity)
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ Dermatitis
Industrial Uses	<ul style="list-style-type: none">◆ Unknown
Potential Toxins Produced	<ul style="list-style-type: none">◆ Unknown
Other Comments	<ul style="list-style-type: none">◆ Can be differentiated from <i>Rhodotorula</i> in that ballistoconidia form a mirror-image on an inverted agar plate

Fungal Glossary



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Sporormiella

Natural Habitat	◆ Dung
Suitable Substrates in the Indoor Environment	◆ Fiberglass insulation
Allergenic Potential	◆ Unknown
Potential Opportunist or Pathogen	◆ Unknown
Potential Toxins Produced	◆ Unknown

Fungal Glossary



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Sporothrix

Natural Habitat

- ◆ Plant matter
- ◆ Soils

Suitable Substrates in the Indoor Environment

- ◆ Unknown

Allergenic Potential

- ◆ Unknown

Potential Opportunist or Pathogen

- ◆ *S. schenckii* causes cutaneous infections, ocular mycosis, and sporotrichosis in immunocompromised patients.

Potential Toxins Produced

- ◆ Unknown

Fungal Glossary



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Sporotrichum

Natural Habitat	◆ Decaying wood ◆ Soils
Suitable Substrates in the Indoor Environment	◆ Unknown
Allergenic Potential	◆ Unknown
Potential Opportunist or Pathogen	◆ <i>S. pruinosum</i> has been isolated from the respiratory secretions of some patients
Industrial Uses	◆ Unknown
Potential Toxins Produced	◆ Unknown

Fungal Glossary



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Stachybotrys

Natural Habitat	<ul style="list-style-type: none">◆ Decaying plant materials◆ Soil
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Water damaged building materials such as: ceiling tiles, gypsum board, insulation backing, sheet rock, and wall paper◆ Paper◆ Textiles
Water Activity	<ul style="list-style-type: none">◆ Aw=0.94
Mode of Dissemination	<ul style="list-style-type: none">◆ Insects◆ Water◆ Wind
Allergenic Potential	<ul style="list-style-type: none">◆ Type I (hay fever, asthma)
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ Unknown
Industrial Uses	<ul style="list-style-type: none">◆ Unknown
Potential Toxins Produced	<ul style="list-style-type: none">◆ Cyclosporins◆ Macrocyclic trichothecenes: roridin E, satratoxin F, G & H, sporidesmin G, trichoverrol, verrucarins J◆ Stachybotryolactone
Other Comments	<ul style="list-style-type: none">◆ <i>Stachybotrys</i> may play a role in the development of sick building syndrome. The presence of this fungus can be significant due to its ability to produce mycotoxins. Exposure to the toxins can occur through inhalation, ingestion, or skin exposure

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Stemphylium

Natural Habitat	<ul style="list-style-type: none">◆ Dead plant material◆ Spinach (causing a leaf spot disease)◆ Wood
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Paper
Mode of Dissemination	<ul style="list-style-type: none">◆ Wind
Allergenic Potential	<ul style="list-style-type: none">◆ Type I (hay fever, asthma)
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ May cause phaeohiphomycosis
Industrial Uses	<ul style="list-style-type: none">◆ Unknown
Potential Toxins Produced	<ul style="list-style-type: none">◆ Stemphol

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Stephanosporium

Natural Habitat	<ul style="list-style-type: none">◆ Bark◆ Soil◆ Wood
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Paper◆ Soil◆ Textiles
Mode of Dissemination	<ul style="list-style-type: none">◆ Wind
Allergenic Potential	<ul style="list-style-type: none">◆ Unknown
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ Unknown
Potential Toxins Produced	<ul style="list-style-type: none">◆ Unknown

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Syncephalastrum

Natural Habitat	◆ Dung ◆ Soils
Suitable Substrates in the Indoor Environment	◆ Unknown
Allergenic Potential	◆ Unknown
Potential Opportunist or Pathogen	◆ Unknown
Potential Toxins Produced	◆ Unknown

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Taeniolella

Natural Habitat	◆ Leaves ◆ Wood
Suitable Substrates in the Indoor Environment	◆ House Plants ◆ Wood
Allergenic Potential	◆ Unknown
Potential Opportunist or Pathogen	◆ Unknown
Potential Toxins Produced	◆ Unknown

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Tetraploa

Natural Habitat ♦ Various plants

Suitable Substrates in the
Indoor Environment ♦ Unknown

Allergenic Potential ♦ Unknown

Potential Opportunist
or Pathogen ♦ Keratitis

Potential Toxins Produced ♦ Unknown

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Thysanophora

Natural Habitat ♦ Decaying plant matter
 ♦ Soils

Suitable Substrates in the ♦ Unknown
Indoor Environment

Allergenic Potential ♦ Unknown

Potential Opportunist ♦ Unknown
or Pathogen

Potential Toxins Produced ♦ Unknown

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Torula

Natural Habitat	<ul style="list-style-type: none">◆ Leaves◆ Plant roots◆ Plant litter◆ Soil◆ Wood
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Baskets◆ Paper◆ Wicker Furniture◆ Wood
Mode of Dissemination	<ul style="list-style-type: none">◆ Wind
Allergenic Potential	<ul style="list-style-type: none">◆ Type I (hay fever, asthma)
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ Unknown
Industrial Uses	<ul style="list-style-type: none">◆ Unknown
Potential Toxins Produced	<ul style="list-style-type: none">◆ Unknown
Other Comments	<ul style="list-style-type: none">◆ Some species cause stains in hardwoods

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Trichocladium

Natural Habitat	<ul style="list-style-type: none">◆ Pine needles◆ Soils◆ Wood
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Wood materials
Allergenic Potential	<ul style="list-style-type: none">◆ Unknown
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ Keratitis
Potential Toxins Produced	<ul style="list-style-type: none">◆ Unknown

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Trichoderma

Natural Habitat	<ul style="list-style-type: none">◆ Decaying wood◆ Dead leaves◆ Soil
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Paper◆ Textiles◆ Wood (wet)
Mode of Dissemination	<ul style="list-style-type: none">◆ Insects◆ Water splash◆ Wind
Allergenic Potential	<ul style="list-style-type: none">◆ Type I allergies (hay fever, asthma)◆ Type III (hypersensitivity)
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ Has occasionally been associated with disease in immunocompromised individuals
Industrial Uses	<ul style="list-style-type: none">◆ Biocontrol agent against a variety of plant pathogens◆ Biproducts of <i>T. viride</i> is used to make beer and wine
Potential Toxins Produced	<ul style="list-style-type: none">◆ Gliotoxin◆ Isocyanides◆ Trichothecene◆ Trichodermin◆ T-2 toxin

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Trichosporon

Natural Habitat	<ul style="list-style-type: none">◆ Compost piles◆ Normal flora of mouth, skin and nails of humans◆ Soils◆ Water
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Unknown
Allergenic Potential	<ul style="list-style-type: none">◆ Unknown
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ Fungemia in immunocompromised patients◆ Invasive trichosporonosis◆ Superficial infections◆ White piedra
Industrial Uses	<ul style="list-style-type: none">◆ Unknown
Potential Toxins Produced	<ul style="list-style-type: none">◆ Unknown

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Trichothecium

Natural Habitat	<ul style="list-style-type: none">◆ Corn seeds◆ Decaying plant matter◆ Plant roots◆ Soils
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Food products (flour products, hazelnuts)
Water Activity	<ul style="list-style-type: none">◆ Aw=0.90
Allergenic Potential	<ul style="list-style-type: none">◆ Reported to be allergenic
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ Unknown
Potential Toxins Produced	<ul style="list-style-type: none">◆ Trichothecene mycotoxins

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Tritirachium

Natural Habitat	<ul style="list-style-type: none">◆ Decaying plant matter◆ Insects◆ Soils
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Jute◆ Paper◆ Textiles
Allergenic Potential	<ul style="list-style-type: none">◆ Reported to be allergenic
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ Corneal ulcers
Potential Toxins Produced	<ul style="list-style-type: none">◆ Unknown

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Ulocladium

Natural Habitat	<ul style="list-style-type: none">◆ Soil◆ Plant materials◆ Soil, dung, paint, grasses, fibers, wood, decaying plant material, paper, and textiles
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Gypsum board◆ Jute◆ Paper◆ Rotten wood◆ Textiles◆ Wood
Water Activity	<ul style="list-style-type: none">◆ Aw=0.89
Mode of Dissemination	<ul style="list-style-type: none">◆ Wind
Allergenic Potential	<ul style="list-style-type: none">◆ Type I (hay fever, asthma)
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ Unknown
Industrial Uses	<ul style="list-style-type: none">◆ Unknown
Potential Toxins Produced	<ul style="list-style-type: none">◆ Unknown
Other Comments	<ul style="list-style-type: none">◆ <i>Alternaria</i> sensitive allergy sufferers have a multiplied reaction when <i>Ulocladium</i> and <i>Alternaria</i> are present together

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Ustilago

Natural Habitat	<ul style="list-style-type: none">◆ Cereal crops◆ Grasses◆ Mycoparasite of some other fungi◆ These spores are often seen in outdoor samples.
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Unknown
Allergenic Potential	<ul style="list-style-type: none">◆ Type I (hay fever, asthma)
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ Unknown
Industrial Uses	<ul style="list-style-type: none">◆ Unknown
Potential Toxins Produced	<ul style="list-style-type: none">◆ Unknown
Other Comments	<ul style="list-style-type: none">◆ <i>Ustilago</i> spp. are smut fungi

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Verticillium

Natural Habitat	<ul style="list-style-type: none">◆ Root pathogenic fungi that cause vascular wilt and other diseases on a variety of plants◆ Entomopathogenic◆ Mycopathogenic◆ Soils
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Paper◆ Textiles◆ Wool
Mode of Dissemination	<ul style="list-style-type: none">◆ Propagative plant parts◆ Seeds◆ Water splash◆ Wind
Allergenic Potential	<ul style="list-style-type: none">◆ Unknown
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ Keratitis
Industrial Uses	<ul style="list-style-type: none">◆ Produces an antibiotic◆ Produces an antifungal substance
Potential Toxins Produced	<ul style="list-style-type: none">◆ Unknown
Other Comments	<ul style="list-style-type: none">◆ <i>Verticillium</i> is a major plant disease agent

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Walleimia

Natural Habitat	<ul style="list-style-type: none">◆ Hay◆ Soil
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Jam◆ Salted Fish◆ Mattresses◆ Textiles◆ Wood in crawl spaces
Water Activity	<ul style="list-style-type: none">◆ Considered xerophillic◆ Aw=0.69-0.75
Mode of Dissemination	<ul style="list-style-type: none">◆ Wind
Allergenic Potential	<ul style="list-style-type: none">◆ Type I (hay fever, asthma)
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ Unknown
Industrial Uses	<ul style="list-style-type: none">◆ Unknown
Potential Toxins Produced	<ul style="list-style-type: none">◆ Tryptophol◆ UCA 1064-beta◆ Walleminol

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Zygomycetes

Natural Habitat	<ul style="list-style-type: none">◆ Decaying plant matter◆ Decaying animal matter
Suitable Substrates in the Indoor Environment	<ul style="list-style-type: none">◆ Fruits◆ Vegetables
Water Activity	<ul style="list-style-type: none">◆ Aw=0.90-0.95
Mode of Dissemination	<ul style="list-style-type: none">◆ Water splash◆ Wind
Allergenic Potential	<ul style="list-style-type: none">◆ Type I (hay fever, asthma)◆ Type III (hypersensitivity)
Potential Opportunist or Pathogen	<ul style="list-style-type: none">◆ Some Zygomycetes can cause zygomycosis in immunocompromised patients. Zygomycosis can occur in the lungs, nasal sinus, brain, eye, skin, and mucous membranes.
Industrial Uses	<ul style="list-style-type: none">◆ Depends on genus
Potential Toxins Produced	<ul style="list-style-type: none">◆ Depends on genus
Other Comments	<ul style="list-style-type: none">◆ The Zygomycetes represent a class of fungi that includes the genera <i>Rhizopus</i>, <i>Rhizomucor</i>, <i>Mucor</i>, and <i>Absidia</i>◆ Many are extremely fast growing and can inhibit other fungi when competing for food or space