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POLYPORES. [1915]**

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WILLIAM ALPHONSO MURRILL

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POLYPORES. [1915]**

TROPICAL POLYPORES

BY

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PREFACE

Polypores are tough or woody fungi found chiefly on wood in the form of brackets of various shapes and sizes, the fruiting surface being composed of tubes or furrows. Sometimes the walls of these tubes split with age and the hymenium appears spiny, resembling the hydnums; sometimes the furrows change with age to appear like gills. When the fruit-body is perennial, the tubes are often arranged in layers. The family may be divided into five groups, the resupinates, the annual poroid species, the volvate species, the perennial poroid species, and the agaric-like species. The resupinate species cannot be satisfactorily studied without the advantages of a large herbarium and are therefore omitted here, but some of the larger species of the other groups are comparatively easy.

Polypores as a class are very destructive to trees and timber. On the other hand, one species possesses medicinal properties, some of the encrusted species supply tinder, and several of the more juicy ones are excellent for food if collected when young. The only species recognized as poisonous is the medicinal one, *Fomes Laricis*, and it is so tough and bitter that no one would think of eating it.

Polypores are very easily collected and preserved and they largely retain their characters when dried, which makes them excellent objects for class study during the winter months. Many of them, also, remain *in situ* during the winter in perfect condition for collecting. As a group, they lend themselves remarkably well to studies in gross and minute anatomy, variation, adaptation, and injurious effects on trees and structural timbers.

North America may be conveniently divided into five regions: (1) eastern Canada and the northern United States southward to the southern boundaries of Virginia, Kentucky, Missouri, and Kansas, and westward to the western boundaries of Kansas, Nebraska, and the Dakotas; (2) the southern United States,

including North Carolina, South Carolina, Tennessee, Arkansas, Oklahoma, Texas, Louisiana, Mississippi, Alabama, Georgia, and the northern portion of Florida; (3) the Rocky Mountain region, including the remainder of the western United States and Canada with the exception of states bordering on the Pacific Ocean; (4) the far West, including California, Oregon, Washington, British Columbia, and Alaska; and (5) tropical North America, including Mexico, Central America, southern Florida, the Bermudas, the West Indies, and all other islands between North America and South America with the exception of Trinidad.

In all these regions, there is an abundance of work still to be done before our knowledge of the polypores is complete, and it is believed that the publication of a series of books treating the species of each region separately will stimulate effort in this direction.

The terms here used to express the abundance of a species are "rare" or "occasional," "rather frequent," "frequent," "rather common," "common," "very common," and "extremely common." For the sake of brevity, certain liberties have been taken with the term "brown," especially in the keys, where it is often used as a general term for some shade of yellowish-brown or brown. In the same way, allowances must be made for the term "throughout" when used to indicate occurrence, which does not imply the actual presence of a given species on every mountain top or every desert within the region.

Our knowledge of the polypores of tropical North America has been obtained chiefly through the large number of exploring expeditions sent into this interesting region during the past fifteen years by the New York Botanical Garden.

W. A. MURRILL.

NEW YORK BOTANICAL GARDEN,
March 15, 1915.

TROPICAL POLYPORES

Including the pileate species occurring in Mexico, Central America, southern Florida, the Bermudas, the West Indies, and all other islands between North America and South America with the exception of Trinidad, Tobago, and Curaçao, whose flora is essentially South American.

POLYPORACEAE

Hymenophore annual or perennial; context fleshy-tough, corky, or woody; hymenium poroid or lamelloid, fleshy to woody, never gelatinous.

Hymenium porose.

Hymenophore annual.¹

Volva wanting.² ?

Volva present.³ ,

Hymenophore perennial.⁴

Hymenium furrowed.⁵

Tribe 1. POLYPOREAE.

Tribe 2. VOLVATAE.

Tribe 3. FOMITIAE.

Tribe 4. DAEDALEAE.

Tribe 1. POLYPOREAE. Hymenophore variable in size and shape, fleshy-tough to corky, annual, sometimes reviving; surface encrusted or anoderm, glabrous or hairy, zonate or azonate; context fibrous, rarely punky, variously colored; tubes cylindric, sometimes splitting into teeth, usually thin-walled; spores rounded or oblong, brown or hyaline; cystidia frequently present; surface of pileus never conidia-bearing; stipe often present, variously attached.

Context white.

Hymenophore sessile.

Tubes hexagonal, arranged in radiating rows; context thin.

13. HEXAGONA.

Tubes alveolar; context thin, dry; surface zonate.

27. FAVOLUS.

Tubes mostly shallow, marginal and obsolete; hymenium hydroid or irpiciform at a very early stage.

1. IRPICIPORUS.

¹ Apparent or real exceptions occur at times in *Eariella*, *Corioloipsis*, and *Hapalopilus*.

² Exceptions occur in *Fomitella*, *Ganoderma*, and *Amauroderma*. *Perodaealea* is closely allied to the Daedaleae.

³ *Cerrena* shows an irpiciform hymenium at maturity, much resembling species of *Coriolus*. *Daedalea* and *Gloeophyllum* sometimes show poroid forms that are very confusing.

TROPICAL POLYPORES

- Tubes normally poroid, sometimes irpiciform from the rupture of the dissepiments at maturity.
- Pileus very soft, spongy, and elastic throughout.
- Hymenophore small; tubes large, not fragile. 4. SPONGIPORUS.
- Hymenophore of immense size; tubes small, fragile when dry. 5. TOMOPHAGUS.
- Pileus more or less firm, flexible or rigid.
- Context duplex, spongy above, firm below; surface sodden and bibulous.
- Context not duplex as above. 7. SPONGIPELLIS.
- Pileus fleshy-tough to woody and rigid.
- Surface anoderm, rarely zonate.
- Hymenium more or less smoke-colored at maturity. 8. BJERKANDERA.
- Hymenium white or pallid.
- Context fleshy to fleshy-tough, friable when dry. 6. TYROMYCES.
- Context punky to corky, not friable when dry. 9. TRAMETES.
- Surface pelliculose, often zonate.
- Plants large, more than 5 cm. in diameter; hymenium flesh-colored. 10. EARLIELLA.
- Plants small, 5 cm. or less in diameter; hymenium white or pallid. 11. RIGIDOPORUS.
- Pileus thin, leathery, and more or less flexible; surface usually zonate.
- Hymenophore normally pileate; tubes small and nearly always regular. 2. CORIOLUS.
- Hymenophore semirespinate; tubes large and irregular. 3. CORIOLELLUS.
- Hymenophore stipitate. 17. GRIFOLA.
- Stipe compound.
- Stipe simple.
- Tubes large, hexagonal and radially elongate from the first. 13. HEXAGONA.
- Tubes not as above.
- Pileus inverted, erumpent from lenticels. 12. PORODISCOLUS.
- Pileus erect or lateral, not erumpent.
- Context duplex, spongy above, woody below. 16. ABORTIPORUS.
- Context homogeneous, firm.
- Surface zonate. 14. MICROPORELLUS.
- Surface azonate. 15. POLYPORUS.
- Context bright-colored, yellow or red.
- Hymenophore sessile or subsessile.
- Tubes red. 18. PYCNOPORUS.
- Tubes yellow.
- Context thin; plants small. 19. FLAVIPORELLUS.

- Context thick; plants very large.
 Hymenophore distinctly stipitate; context yellow.
 Context brown.
 Hymenophore sessile, rarely substipitate.
 Spores hyaline.
 Context light-brown.
 Surface glabrous or nearly so.
 Hymenium alveolate.
 Hymenium normally poroid.
 Surface distinctly hairy.
 Tubes small and regular.
 Tubes large and irregular.
 Context dark-brown.
 Context duplex, mostly of intricately woven black hairs.
 Context simple.
 Context friable.
 Context tough.
 Tubes yellow.
 Tubes brown, rarely greenish.
 Tubes entire.
 Surface heavily bearded.
 Surface not bearded.
 Tubes soon splitting into teeth.
 Tubes black.
- Spores brown.
 Hymenophore thin, dry, multizonate.
 Hymenophore not as above.
 Hymenophore stipitate.
 Spores hyaline.
 Spores brown.
 Pileus inverted, pendant.
 Pileus erect; stipe central.
- Tribe 2. VOLVATAE.* Hymenophore corky to woody, annual; surface smooth, encrusted; context corky; tubes cylindric, concealed at first by a volva, which is perforated at one or more points at maturity; spores hyaline.
 Pileus sessile, subglobose, white or slightly reddish-brown.
- Tribe 3. FOMITAE.* Hymenophore large, woody, perennial, rarely small or annual; surface anoderm or encrusted, usually sulcate, sometimes varnished; context punky or woody, variously colored; tubes cylindric, usually thick-walled; spores rounded, smooth or verrucose, hyaline or brown; cystidia frequently present; surface of pileus conidia-bearing in a few species; stipe rarely present, the hymenophore usually being sufficiently elevated by its host. Annual forms and species in a few genera connect this group with the Polyporeae; while the tendency at times to produce a daedaleoid hymenium, shown especially in *Porodaedalea*, connects it with the Daedaleae.
- Surface of hymenophore covered with reddish-brown varnish; context punky to corky.
20. LAETIPORUS.
 21. PHAEOLOPSIS.
 27. FAVOLUS.
 26. HALALOPHILUS.
 23. CORIOLOPSIS.
 24. FUNALIA.
 25. TRICHAPTUM.
 33. PHAEOLUS.
 28. FLAVIPORUS.
 29. POGONOMYCES.
 23. CORIOLOPSIS.
 22. CERRENELLA.
 30. NIGROPORUS.
 31. CYCLOPORELLUS.
 32. INONOTUS.
 33. PHAEOLUS.
 34. COLTRICIELLA.
 35. COLTRICIA.
 36. CRYPTOPORUS.
 46. GANODERMA.