

WESTERN POLYPORES

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649194032

Western polypores by William Alphonso Murrill

Except for use in any review, the reproduction or utilisation of this work in whole or in part in any form by any electronic, mechanical or other means, now known or hereafter invented, including xerography, photocopying and recording, or in any information storage or retrieval system, is forbidden without the permission of the publisher, Trieste Publishing Pty Ltd, PO Box 1576 Collingwood, Victoria 3066 Australia.

All rights reserved.

Edited by Trieste Publishing Pty Ltd.
Cover @ 2017

This book is sold subject to the condition that it shall not, by way of trade or otherwise, be lent, re-sold, hired out, or otherwise circulated without the publisher's prior consent in any form or binding or cover other than that in which it is published and without a similar condition including this condition being imposed on the subsequent purchaser.

www.triestepublishing.com

WILLIAM ALPHONSO MURRILL

**WESTERN
POLYPORES**

WESTERN POLYPORES

BY

WILLIAM ALPHONSO MURRILL, A.M., PH.D.

ASSISTANT DIRECTOR OF THE NEW YORK BOTANICAL GARDEN

ASSOCIATE EDITOR OF NORTH AMERICAN FLORA

EDITOR OF MYCOLOGIA

NEW YORK

PUBLISHED BY THE AUTHOR

1915

Copyright, 1915
By WILLIAM ALPHONSO MURRILL

PRESS OF
THE NEW ERA PRINTING COMPANY
LANCASTER, PA.

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 snowcapped mountain or every treeless prairie within the region.

The author visited the Pacific coast in the autumn and winter of 1911 and obtained a representative collection of the polypores occurring there. Additional collections by Zeller, McMurphy, Harper, House, Abrams, Oleson, Hedgcock, Humphrey, Graves, Meinecke, Owens, and the instructors and students of the botanical department of the University of California have added much to our knowledge of the western species and their distribution. The older literature relating to the region is comparatively worthless because most of the specimens are lost.

W. A. MURRILL.

NEW YORK BOTANICAL GARDEN,
JANUARY 15, 1915.

WESTERN POLYPORES

Including the pileate species occurring in California, Oregon, British Columbia, and Alaska.

POLYPORACEAE

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

Hymenium porose.

Hymenophore annual.

Volva wanting.

Tribe 1. POLYPOREAE.

Volva present.

Tribe 2. VOLVATAE.

Hymenophore perennial.¹

Tribe 3. FOMITAE.

Hymenium furrowed.²

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.

Pileus very soft, spongy, and elastic throughout.

3. SPONGIPORUS.

Pileus more or less firm, flexible or rigid.

Context duplex, spongy above, firm below; surface sodden and bibulous.

5. SPONGIFELLIS.

Context not duplex as above.

Pileus fleshy-tough to woody and rigid.

Hymenium more or less smoke-colored at maturity.

6. BJERKANDERA.

Hymenium white or pallid.

4. TYROMYCES.

Pileus thin, leathery, and more or less flexible; surface usually zonate.

Hymenophore normally pileate; tubes small and nearly always regular.

1. CORIOLUS.

Hymenophore semiresupinate; tubes large and irregular.

2. CORIOLELLUS.

¹ Exceptions occur in species of *Ganoderma* and *Fomes*. *Porodaedalea* is closely related to the Daedaleae.

² *Cerroreus* shows an irpiciform hymenium at maturity, much resembling species of *Coriolus*. *Daedalea* and *Gloeophyllum* sometimes show poroid forms that are very confusing.

- Hymenophore stipitate.
 Plants fleshy, terrestrial.
 Plants tough, epixylous.
- Context bright-colored, yellow or red; hymenophore sessile.
 Pores red or reddish.
 Context soft and spongy.
 Context firm.
 Tubes fragile; surface anoderm.
 Tubes firm and regular; surface pelliculose.
 Pores yellow; plants very large.
 Context brown.
 Hymenophore sessile.
 Spores hyaline.
 Context light-brown.
 Context at first fleshy, becoming slightly corky.
 Context tough from the first.
 Surface glabrous or nearly so.
 Surface distinctly hairy.
 Context dark-brown, friable.
 Spores brown.
- Hymenophore stipitate.
 Spores hyaline.
 Spores brown.
- 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. *Fomitaeae*. 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 *Poly-poreae*; 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.
 Surface of hymenophore not as above.
 Context white, flesh-colored, or wood-colored.
 Context brown or latericeous.
 Surface not encrusted; or, if so, context woody.
 Hymenium porose.
 Hymenium porose-daedaleoid.
 Surface encrusted; context punky.
 Spores hyaline or subhyaline.
 Spores decidedly brown.
8. SCUTIGER.
 7. POLYPORUS.
 9. AURANTIPORELLUS.
 10. PYCNOPORELLUS.
 11. PYCNOPORUS.
 12. LANTIPORUS.
 15. ISCHNODERMA.
 14. HAPALOPILUS.
 13. FUNALIA.
 17. PHAEOLUS.
 16. INONOTUS.
 17. PHAEOLUS.
 12. COLTRICIA.
 19. CRYPTOPORUS.
 25. GANODERMA.
 20. FOMES.
 21. PYROPOLYPORUS.
 22. PORODAEDALEA.
 23. ELFVINGIELLA.
 24. ELFVINGIA.

Tribe 4. DAEDALAE. Hymenium annual, very rarely perennial, coriaceous to woody, variable in size; surface anoderm, hairy or glabrous, variously marked; context white or brown, fibrous, woody, or punky; hymenium exceedingly variable, normally labyrinthiform or lamelloid, but often poroid or even irpiciform, never stratified; spores smooth, brown or hyaline. Poroid and irpiciform plants of this group are difficult to separate from certain species of Polyporeae, forms of *Daedalea confragosa* in particular being troublesome to the beginner. On the other hand, there is little to cause confusion between this group and the Fomitaceae, if we except the single distinctly perennial species of *Daedalea* and the daedaleoid forms of *Porodaedalea*.

Context white or wood-colored.

- | | |
|--|-----------------|
| Hymenium labyrinthiform, often becoming lamellate or irpiciform. | |
| Hymenium very soon becoming irpiciform. | 26. CERRENA. |
| Hymenium rarely becoming irpiciform and then not until maturity. | 27. DAEDALEA. |
| Hymenium lamellate from the first, not becoming irpiciform. | 28. LENZITES. |
| Context brown. | 29. GLOPHYLLUM. |

I. CORIOLUS Quéf.

Hymenophore annual, epixylous, sessile, usually zonate, anoderm, hairy or glabrous; context thin, white, flexible, fibrous, leathery; tubes thin-walled, white, at length splitting into irpiciform teeth in several species, mouths polygonal or irregular; spores smooth, hyaline.

Surface of pileus zonate.

- | | |
|---|--------------------------------|
| Tubes more or less entire, at least until the hymenophore is quite old. | |
| Surface marked at maturity with conspicuous glabrous zones of different colors. | 1. <i>C. versicolor</i> . |
| Surface clothed entirely with a conspicuous hairy covering. | 2. <i>C. nigromarginatus</i> . |
| Tubes soon breaking up into long, irpiciform teeth. | 3. <i>C. abietinus</i> . |
| Surface azonate, smooth, subglabrous, white. | 4. <i>C. washingtonensis</i> . |

I. CORIOLUS VERSICOLOR (L.) Quéf.

Pileus densely imbricate, very thin, dimidiate, conchate, 2-4 × 3-7 × 0.1-0.2 cm.; surface smooth, velvety, shining, marked with conspicuous, glabrous zones of various colors, mostly latericeous, bay, or black; margin thin, sterile, entire; context thin, membranous; tubes punctiform, less than 1 mm. long, white to isabelline within, mouths circular to angular, regular, even, 4-5 to a mm., edges thick and entire, becoming thin and dentate, white, glistening, at length opaque-isabelline or slightly umbrinous; spores allantoid, 4-6 × 1-2 μ.