

Elio Schaechter

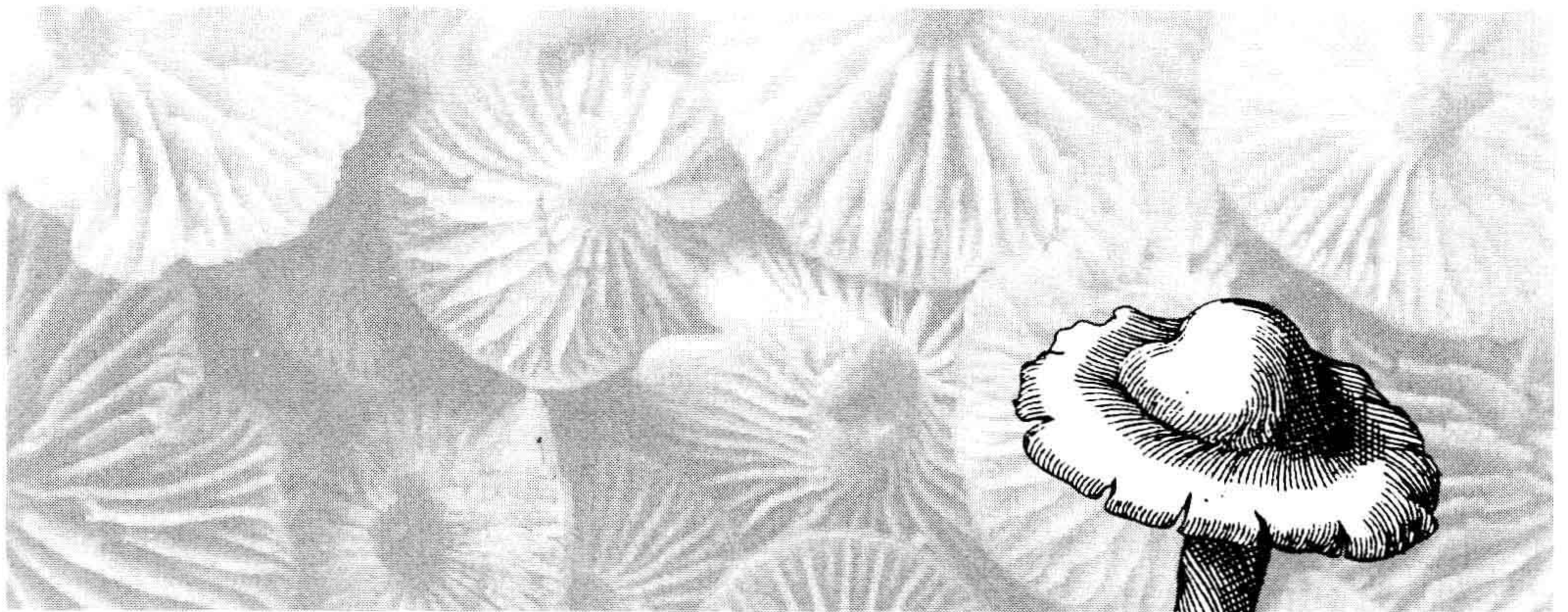
IN THE
COMPANY
OF *M*USHROOMS

A Biologist's Tale



ELIO SCHAECHTER

IN THE
COMPANY
OF **M**USHROOMS



A Biologist's Tale

HARVARD UNIVERSITY PRESS • Cambridge, Massachusetts • London, England

Copyright © 1997 by the President and Fellows of Harvard College
All rights reserved
Printed in the United States of America
Second printing, 1998

Design by Marianne Perlak

First Harvard University Press paperback edition, 1998

Caution: This book is not intended as a recipe book or an identification guide. There are risks involved in consuming wild mushrooms. To minimize them, you must obtain positive identification of each specimen. Even with proper identification, the possibility exists that the consumer may be allergic to a mushroom, or that the mushroom may in some way be anomalous. The author has been conscientious in his efforts to alert the reader to potential hazards of consuming wild mushrooms, but the reader must accept full responsibility for deciding to consume any particular specimen. Descriptions of medicinal uses of mushrooms given in this book are for educational purposes only. The author is not recommending the use of mushrooms for self-medication. Always consult a physician about such use.

Library of Congress Cataloging-in-Publication Data
Schaechter, Moselio.

In the company of mushrooms : a biologist's tale / Elio
Schaechter.

p. cm.

Includes bibliographical references and index.

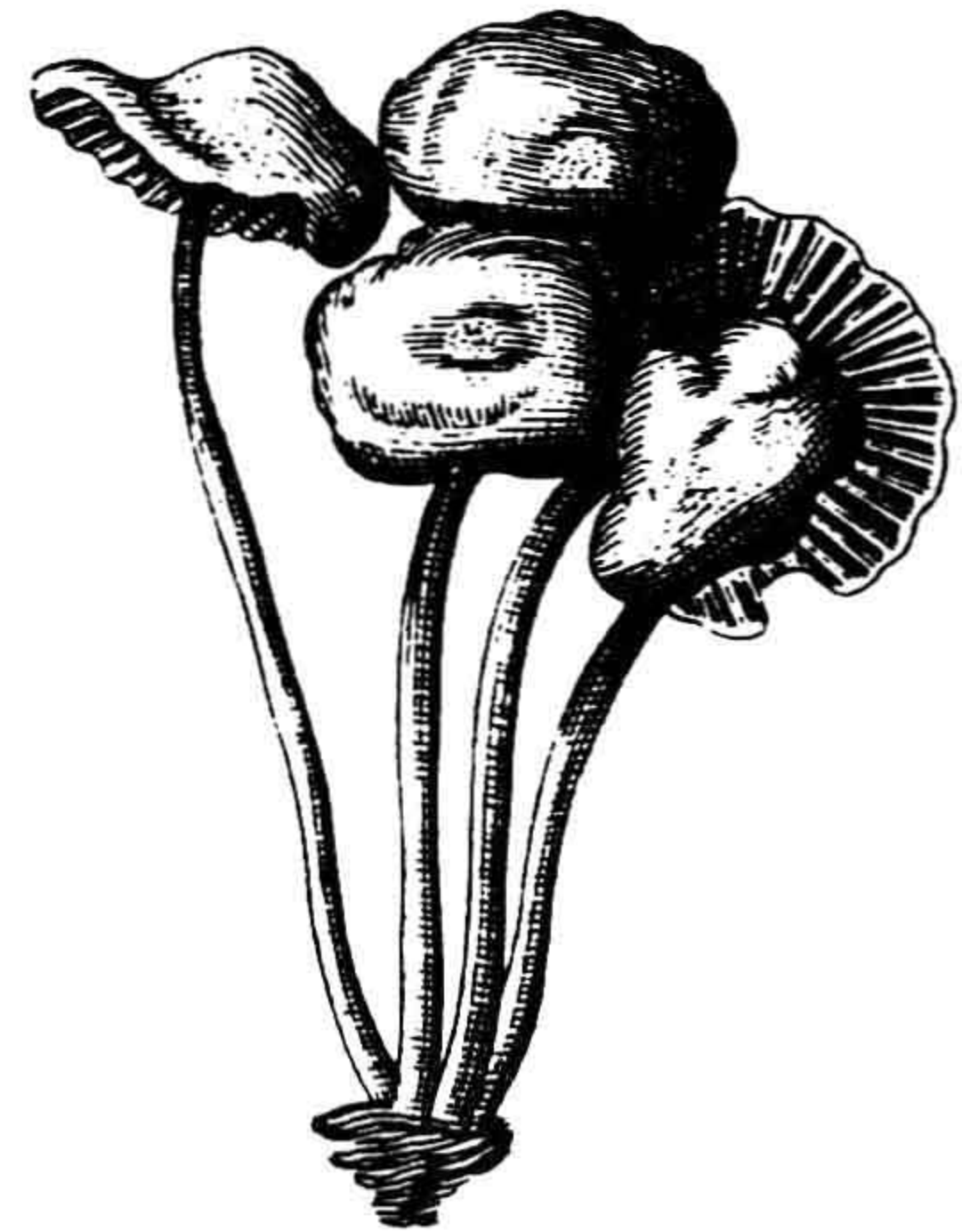
ISBN 0-674-44554-6 (cloth)

ISBN 0-674-44555-4 (pbk.)

1. Mushrooms. 2. Mushrooms, Edible. I. Title.

QK617.S32 1997

579.6—dc21 96-29568



ACKNOWLEDGMENTS

I was aided in writing this book by the encouragement and help given by many friends who spent considerable time with the manuscript and provided incisive and insightful suggestions. For being so supportive and helping me both explicitly and implicitly, I wish to thank Donna Be-secker, Sarah Boardman, Douglas Brown, Jean Cargill, Harry Davidow, Karen Davis, George Davis, Jack Fellman, Al Ferry, Joan Finger, Joanne Gilbert, Ilona Karmel, Geraldine Kaye, Jhanara Kriston, Milton Landowne, Larry Millman, Patty Morrison, Linda Napor, Lynn Payer, Donald Pfister, Tim Satterfield, Linc Sonenshein, Jack Walsh, Vivian Walworth, and Andrew Wright. I also thank Jean Cargill, Al Ferry, Rose Treat, and Christal Whelan for useful items of information. I am grateful to the members of the 1994 Mushroom Course at the Harvard Institute for Learning in Retirement for sharing with me their reaction to an early draft.

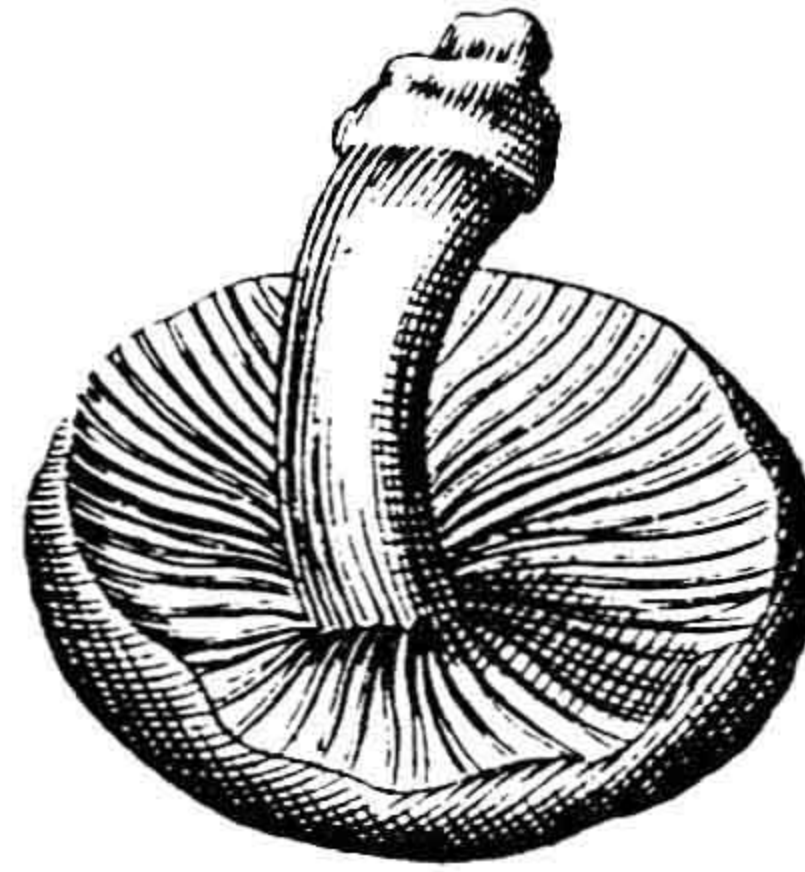
I thank two exceptional photographers, Charlie Hrbek and Kenneth Kleene, for providing me with beautiful photo-

Acknowledgments

graphs of mushrooms. Many of the figures in the text are the work of John Woolsey, a lover of mushrooms whose fine work has accompanied other projects of mine.

I am especially grateful to Michael Fisher of Harvard University Press, who got so involved with the subject that he became this book's first convert. I appreciate his skill, patience, and good humor at all stages, from agreeing to read my early scribbles to lending a robust helping hand when needed. To thank my editor, Kate Schmit, I must resort to superlatives. Her suggestions were imaginative, thoughtful, sensible, and invariably helpful. I could not ask for greater competence or a more generous engagement with my work. I also thank Kate Brick, who followed in that tradition toward the end of the project.

One of the earliest readers of this manuscript was my daughter, Judith Schaechter. Her keen ear for language, not to mention her warmth and encouragement, helped guide me in my writing. My deepest thanks go to my wife Edith, who lovingly nourished this project with her support, understanding, and finely tuned critical sense.



PROLOGUE ~ THE HUNT

Like most people, I first got interested in wild mushrooms with eating in mind. I was tantalized by the prospect of being able to gather specimens of rare taste scarcely available by other means. I still delight in foraging for edible species, but my horizons have expanded as I have discovered that there is more to mushroom hunting than just looking for those that are good to eat. By now, I have become convinced that a mushroom collector searching only for provisions for the table would be comparable to a bird watcher looking only for quail, ducks, or pheasants. Going on a mushroom walk fulfills all sorts of other yearnings besides the gratification of foraging for natural food. I am excited by the zest of the hunt, challenged by the demands of identification, pleased by the encounter with species that have a special meaning to me, and charmed by especially handsome specimens.

Mushrooms, growing on the ground or sticking out from tree trunks as brackets, seem to color the motif of the forest. Many mushrooms are lovely to look at, varied in hue and

shape, smell and texture. As resplendent as flowers, they present us with a range of shades, from forceful brights to subdued pastels. The shiny, lacquer-box red of certain bracket fungi, the violet of the eastern *Cortinarius iodes*, the royal blue of *Lactarius indigo*, or even the spotless white of deadly amanitas feast the eye of the passer-by.

When I lived in Boston, I enjoyed mushroom collecting in the collegiality of a few fellow devotees. Picking wild mushrooms is not the common occupation in North America that it is in most parts of the world where mushrooms can be found in abundance. Still, this is a growth industry: more and more people are getting into mushrooming, especially in northern California and the Pacific Northwest. Because of the abundant rainfall and extensive forests, these are some of the best picking regions on this continent. There seems to be a great deal of latent interest elsewhere as well; I find that “laymen,” people who never expressed the urge to look for wild mushrooms before, often respond to my passion with curiosity.

I am often asked how I first became interested in mushrooms, where I go looking for them, and if I have ever been in trouble from eating them. The questions seem to arise mainly from curiosity, but occasionally there is also concern. Some people worry about me, perhaps from an ingrained belief that eating from the wild is a reckless thing to do, akin to keeping poisonous snakes or tarantulas in the house. Many others, however, are truly interested in the topic and ask me, sometimes insistently, to include them in a future

mushroom hunt. Often I am told of grandparents, usually of European origin, who used to pick wild mushrooms both here and in the old country and who tried to teach this art to their grandchildren, usually with little success.

Why is mushrooming catching on in North America, albeit slowly? Love of Nature comes in waves. One of the largest of these waves took place at the end of the nineteenth century, when all kinds of outdoor activities, including hiking in the mountains and “botanizing,” became not only accepted but even stylish. A more recent wave was part of the social changes of the 1960s and ’70s, and we are still feeling its effects. What is more, interest in wild mushrooms parallels the enormous expansion of the American cuisine. In recent years “wild” mushrooms that can be cultivated, such as shiitake or oyster mushrooms, have become commonplace on supermarket shelves. Even truly wild mushrooms—chanterelles, morels, porcini—are dished out (often in pitifully small amounts) in expensive restaurants, where they serve as a mark of culinary refinement. Wild mushrooms are part of the same revolution that brings us readily available cappuccino, sun-dried tomatoes, radicchio, and, miraculously, decent bread.

From enjoying wild mushrooms at the table it is only a small step to searching them out in the forest. (After all, this has appeal for both the foraging instinct and the pocket-book.) More and more people go out in pursuit of edible species, either on their own or with knowledgeable friends. Others do it in an organized way, joining one of the over one

hundred North American mushroom clubs, most of which have sprung up in recent years. Once hooked, however, mushroom hunters pursue their avocation with enthusiasm, some with an intense passion. They sometimes talk about mushrooms in a charged, nearly poetic language. Here are the words of Larry Stickney, a San Francisco mushroom lover: “Early in the season, hunting in the cool, magnificent redwood forests . . . can produce both many choice edible mushrooms . . . and an exquisite sense of beauty, tranquillity, and exultation from the deep silence and sheer size of the trees. Right next to a thousand-year-old, three-hundred-foot giant, you can find tiny, fragile, elegant *Lepiotas* and *Mycenas*, which can set your sense of proportion and perspective atingle.”

My sentiments exactly. I wrote this book to share these sentiments—for the hunt, for nature, for biology. My expectation is that by telling you stories about mushrooms and the people who study and enjoy them, you too will share my enthusiasm. Mushrooms surprise us in many ways. Do they in fact burst forth “like mushrooms”? Are they friend or foe? All of us know that some mushrooms are food, some are poison, and some alter the mind, but many are not aware of the essential role they play in the perpetuation of life on earth. The study of mushrooms is not an unassuming subject.

Each encounter with a mushroom is a singular event.

Every specimen makes demands of me: Do I know it, and, if not, should I collect it and try to find out what it is? Should I bring it home for the kitchen? Am I to share it with fellow mushroomers? Should I photograph it, sketch it? Should I guess how long it's been around, how long it will last, whether or not it will come back the next week or the next year? What role does this particular species play in human affairs? Has it, or one of its relatives, been used for food, or, in malevolent hands, for poisoning someone? Was it used for altering the mind, for understanding the present, for divining the future?

This book is not a field guide and does not attempt to help you distinguish between edible and poisonous species. To advance in that direction, I suggest that you enlist the help of knowledgeable friends or acquaintances or that you join (or start) a mushroom club. Telling mushrooms apart is not an easy undertaking, especially if all you have at your disposal is a field guide. Should you be blessed with a good visual memory, you may well retain the name-specimen connection, once it is made, for a long time. The more often you go out collecting, the more you are likely to remember. In time, you should develop a warm sense of familiarity with many of the mushrooms you encounter.

In this book I present mushrooms as more than a source of food, even though I find that an interesting and rewarding matter. I am intrigued by how mushrooms have been viewed through time and by different cultures. As a biologist, I find

the ways they grow and reproduce unique and fascinating. As a lover of nature, I am fascinated by the different niches in which mushrooms and other forms of fungi are found—ants and termites, for example, have evolved an intriguing interdependence with fungal life. And, lastly, I have found that the people who share my hobby are second in interest only to the mushrooms themselves.

To bring these disparate interests together, I have organized this book to focus on four major topics. The first is the biology and history of the type of organisms that produce mushrooms: the fungi. Next I introduce the reader to the art of mushroom collecting. Then, like many devoted collectors, I have some culinary tales to tell. Finally, I return to the wonder of the biology of the fungi, where the subject is the great variety of nonedible fungi. As poisons, hallucinogens, and the principal crop of ants and termites, fungi have a great many uses both in nature and in human affairs. What a rich subject matter are the mushrooms!

No space is wasted underneath the cap of the mushroom. Gills in a variety of forms and colors have evolved to increase the surface area on which spores are produced.



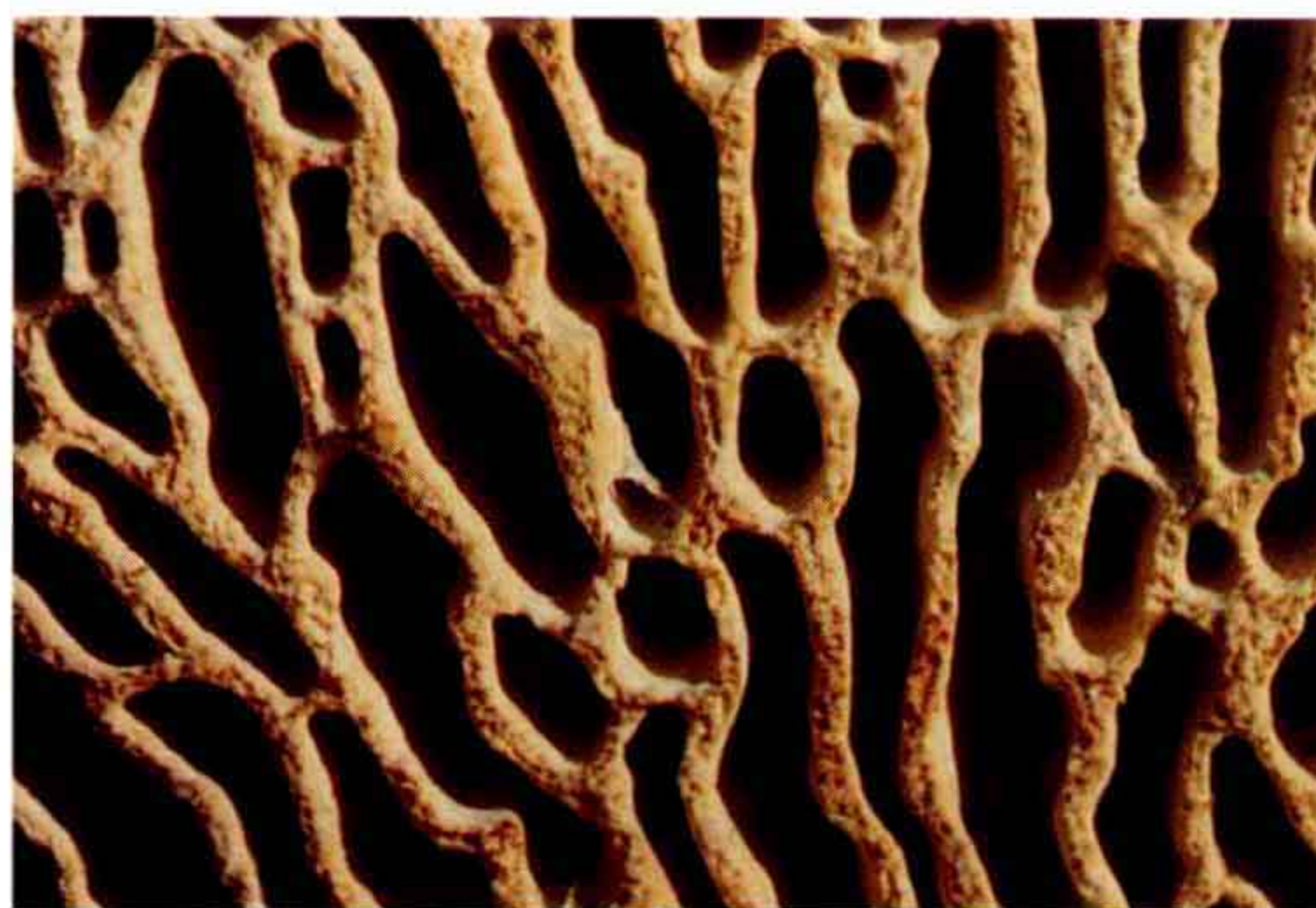
Cortinarius sp.

Gills



Laccaria laccata
(common laccaria)

Daedalea quercina



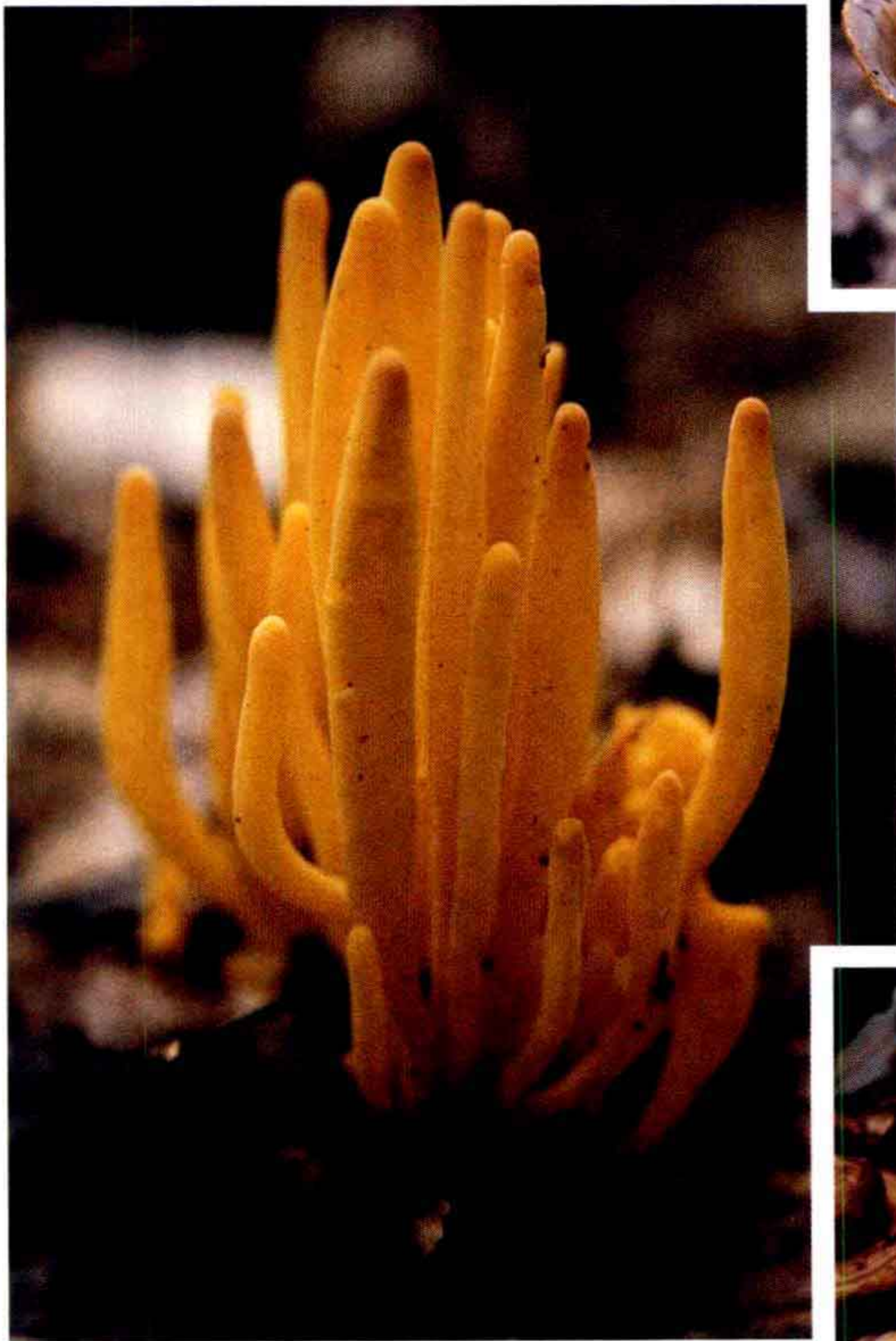
Collybia maculata

Alternatives to Gills

Spores are made not only on gills but in sacs, columns, and open surfaces. Mushrooms take different forms to disperse the spores.



Crucibulum vulgare
(bird's nest fungus)



Clavaria fusiformis



Geastrum saccatum (earth star)



Peziza badioconfusa

Color

You don't need to eat a mushroom in order to enjoy it. Many mushrooms have intriguing shapes and dramatic colors.

Chlorociboria aeruginascens (blue stain)



Laccaria amethystina

