



Beginner's Fungi Identification Guide

Introduction

Fungi are a fascinating kingdom of life, distinct from plants and animals. They include mushrooms, molds, yeasts, and many other organisms. Unlike plants, fungi lack true roots or leaves; instead, they grow as fine, threadlike filaments called hyphae that form an underground network known as mycelium. The mushrooms we see are the fruiting bodies that produce spores for reproduction.

Fungi thrive in almost every environment on Earth. In Gujarat, they are especially abundant in moist forests, grasslands, and areas rich in decaying plant matter. For accurate observation, examine specimens while they are fresh; shapes and colors can change quickly as they age.

Where and When to Look for Fungi?

Season: Fungi are most commonly found after rainfall, especially during the monsoon.

Habitats:

- Woodlands: Search at the base of living or dead trees for clusters like honey fungi.
- Tree trunks & branches: Look for bracket fungi such as polypores.
- Deadwood & fallen logs: Species like Turkey Tail or Velvet Shank often appear.
- Grasslands & gardens: You may spot waxcaps, puffballs, or coral fungi on short grasses.

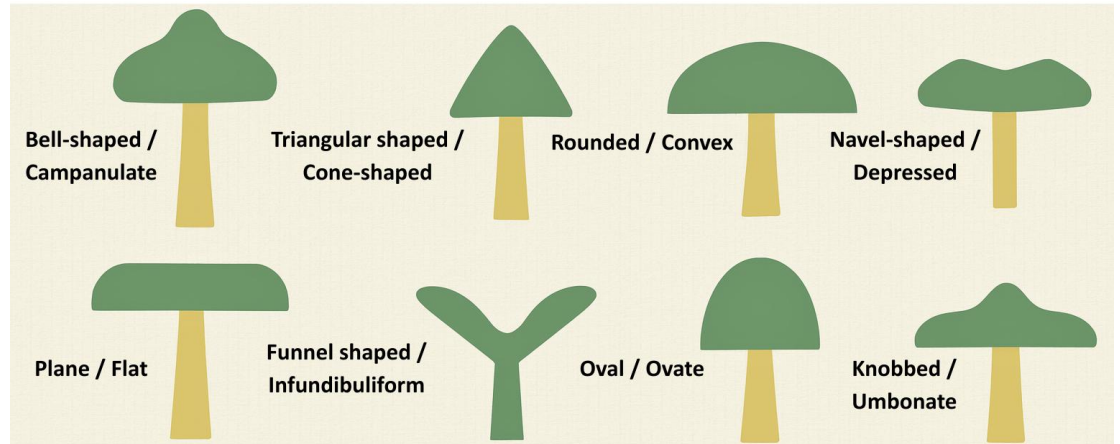
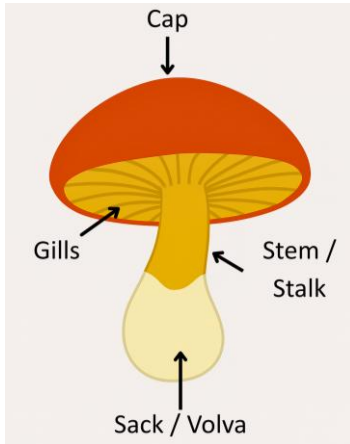
Tip: Carry a notebook, camera, and paper bags to record details and safely collect small samples for closer study.

Observing Fungal Features

When you encounter a fungus, take time to examine it carefully:

- Cap - Look at the size, shape (round, bell-shaped, flat), and surface texture (smooth, scaly, velvety, slimy).
- Color - Note fresh and older shades, as colors may fade with age or rain.
- Underside - Check if it has gills, pores, or spines and how they attach to the stem.
- Stem (Stipe) - Observe its thickness, height, surface texture, and whether it has a ring or bulbous base.
- Bruising or Secretion - Some fungi change color or ooze liquid when touched or cut.
- Smell - Many fungi have distinctive odors that can help with identification.

The Cap Shape:



Safety Tips for Beginners

Important: Not all fungi are safe to handle or eat. Some are deadly.

- Never eat wild fungi unless confirmed edible by an expert.
- Wash your hands after handling unknown fungi.
- Avoid damaging habitats - collect only a small number for study.
- When in doubt, admire fungi in their natural setting and take photos instead of picking.
- when specimens are fresh, as their shapes and colors can change quickly as they age.

Further Learning

If you're keen to explore more about fungi, we recommend:

- Illustrated field guides to mushrooms and toadstools
- Read all Research papers on fungal biodiversity of Gujarat as well worldwide.
- Read available books on Fungal diversity and Identification.

Photographs

Geastrum of Gujarat (Earthstar fungi): Easily recognized by their star-like rays that open to expose a central spore sac. Found on soil with rich organic matter, especially after rains.



Geastrum saccatum

Geastrum triplex

Geastrum rufescens

Phallales of Gujarat (Stinkhorn fungi): Known for their tall stalks and foul odor, often covered with a slimy spore mass to attract insects.



Phallus multicolor

Clathrus delicatus

Itajahya galericulata

Earthball, Dyeballs and puffball of Gujarat : Round, ball-like mushrooms that release a cloud of spores when mature and pressed. Found on soil, grasslands, and decaying organic matter after rains.



Scleroderma bovista

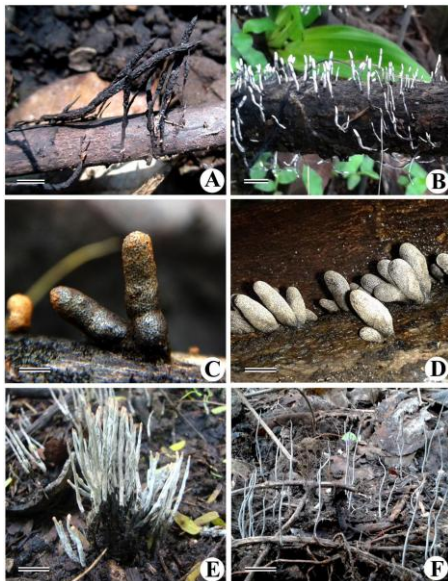


Pisolithus albus



Calvatia holothurioides

Xylaria of Gujarat (Xylariaceae fungi): Commonly recognized by their dark, club-shaped or branched fruiting bodies that grow on decaying wood.



A - *Xylaria apiculata*
B - *Xylaria carpophila*
C - *Xylaria cubensis*
D - *Xylaria curta*
E - *Xylaria feejeensis*
F - *Xylaria filiformis*



A - *Xylaria gigantea*
B - *Xylaria longipes*
C - *Xylaria nigripes*
D & E - *Xylaria polymorpha*