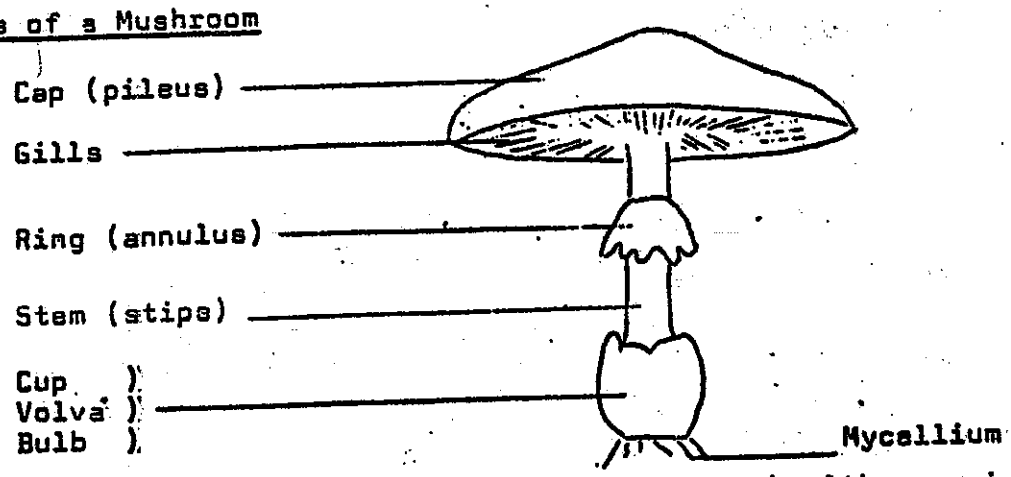
USEFUL INFORMATION ABOUT MUSHROOMS

The Parts of a Mushroom



How To Gather Mushrooms: Select one or two mature healthy specimens. Hold the stem near the ground and pull. This will insure your getting the bulb, or volva, which is so important to the identification of some mushrooms. As mushrooms are fragile, carry them on the bottom of a wide, flat-bottomed basket.

How To Get A Spore Print: Remove the cap carefully. Place it gills downward on a piece of white or coloured paper. The best solution is to have the cap straddle half white paper and half black. Then the spores will show clearly whether they are coloured or white. Cover the cap with a jar. After two or three hours check for spore print.

Glossary of Terms for Handy Reference

Spore:	Coloured powder, the seed of the mushroom which falls from the gills.
Genus:	Family of mushrooms. Group of mushrooms sharing certain characteristics.
Species:	Individuals within the larger family, or genus.
Margin:	The edge of the cap.
Cortina:	Cobweb-like material partially covering the gills.
Fibrillose:	Composed of parallel fibres, espacially the cap or stem.
Floccose:	Fluffy, wool-like.
Sessile:	Of a cap without a stem.
Striate:	With lines or minute grooves. Common on the upper surface of the cap near its margin.
Tomentose:	Densely matted with a covering of soft hairs.
Umbonate:	Having a raised central mound or peak an umbo.
Viscid:	Covered by a slimy or slippery layer when wet.
onate:	Having zones, often in the form of concentric rings on the surface of the cap.

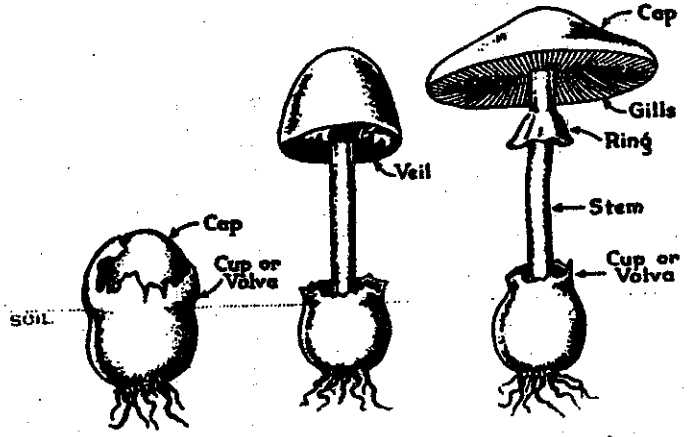
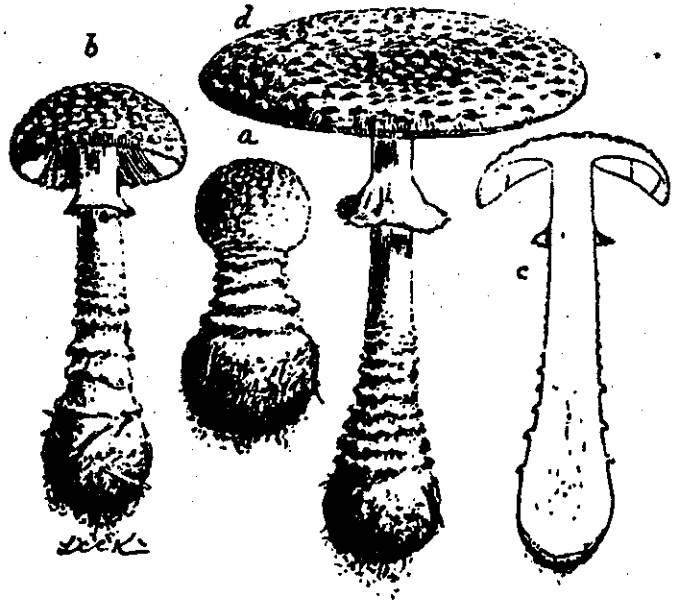


Diagram 1. Three stages in the development of a typical mushroom.



From the Therapeutic Gazette, Philadelphia

Figure 38 The development of the deadly poisonous Fly Mushroom, *Amanita muscaria* (see also pl. I and 5, figs. 36 and 24c). *a*, Young plant showing the formation of the warts on the cap, and of the concentric volva remains on the base of the stem. *b*, More advanced stage. *c*, Section of *b*. *d*, Mature plant.

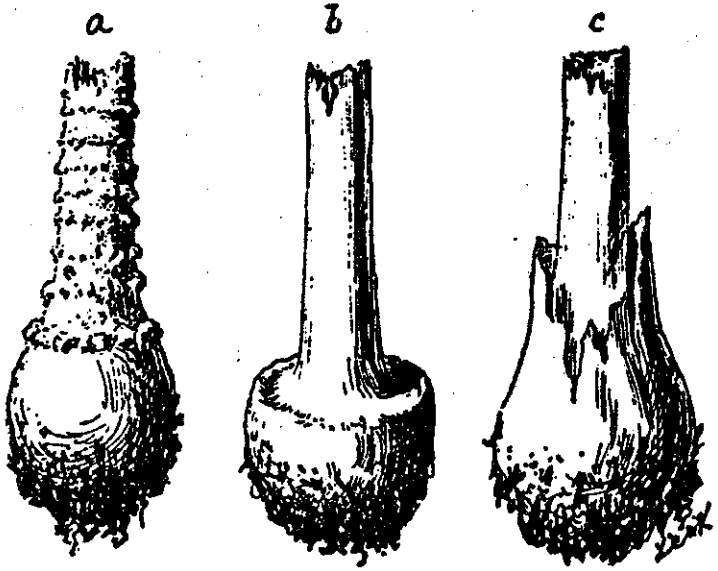


Figure 39 Bases of the stems of three deadly species of Amanita: *a*, *Amanita muscaria*, showing scaly type of volva. *b*, *Amanita mappa*, circumscissile type. *c*, *Amanita virosa*, bag-like type. Like the triangular shape of a rattlesnake's head, these danger signs of deadly mushrooms should be well heeded

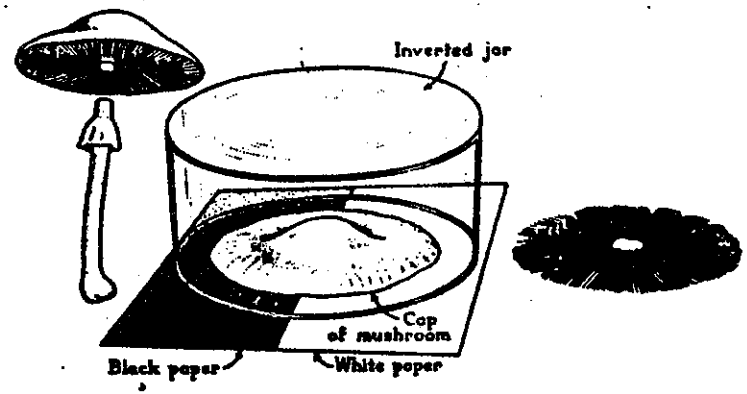


Diagram 2. A spore print is made as follows: The stem is cut off just below the cap (left); the cap is placed on paper, gills down (center); the resulting spore print is shown on the right.

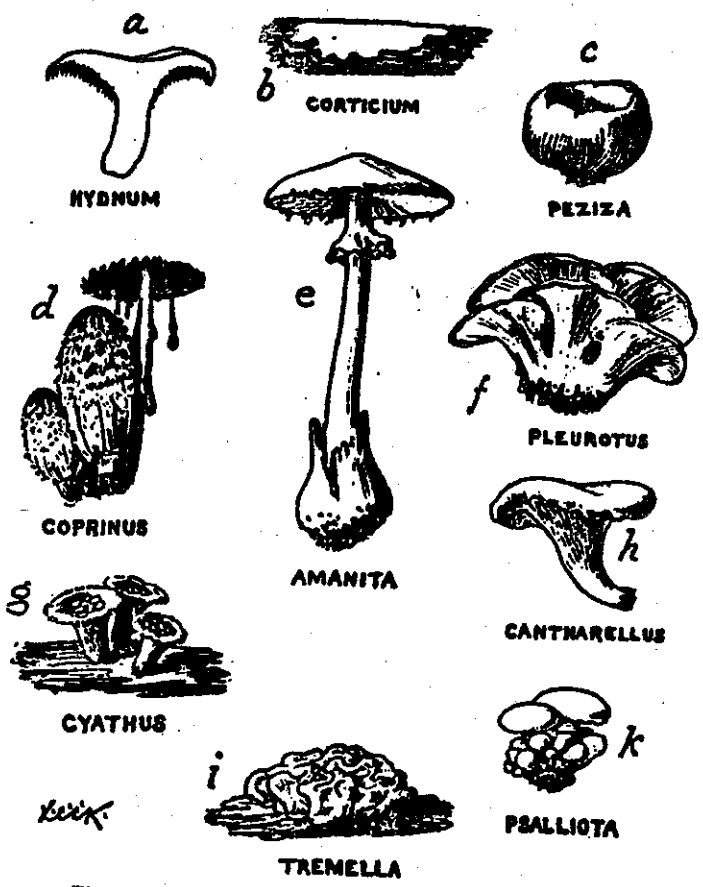


Figure 2 Selected generic types of fleshy fungi

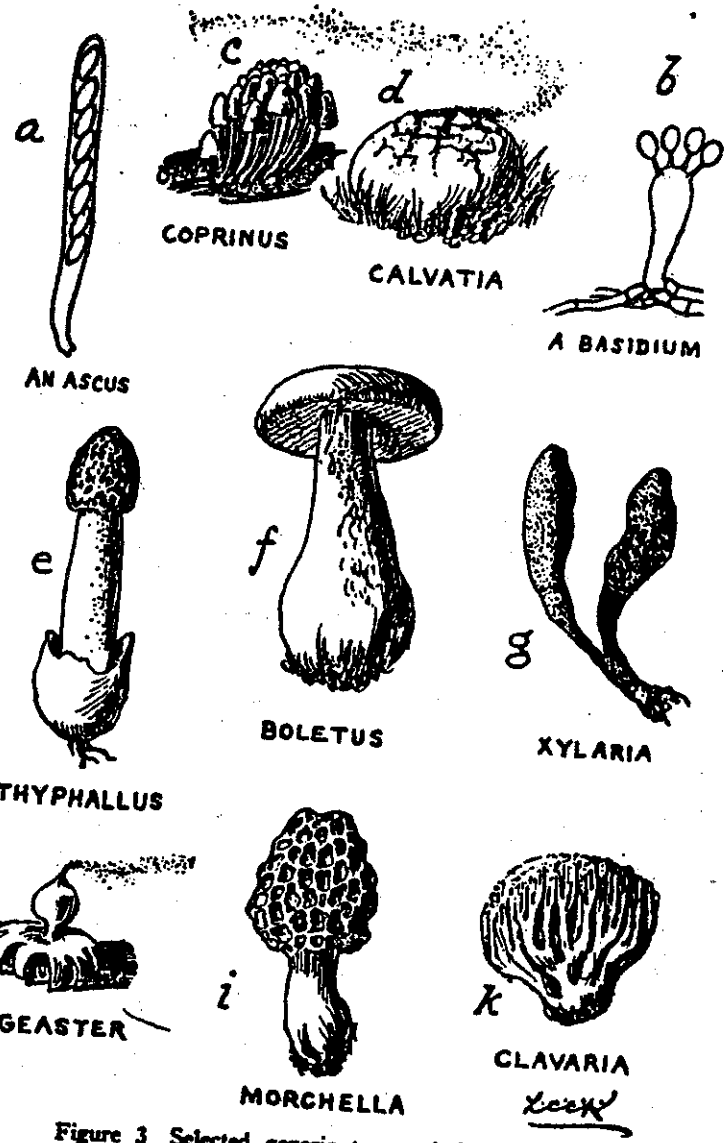


Figure 3 Selected generic types of fleshy fungi

IDENTIFICATION OF MUSHROOMS

Examine a mushroom by trying to answer the following questions about it, then consult a text on mushrooms to find the exact one.

Cap:

Is it slimy, dry, rough, smooth?

Is it flat, rounded, hollow in the centre, bell-shaped, or?

What is the diameter of it?

Describe the colour.

Is the edge of it rolled under, fringed, smooth and sharp, or?

Underside of the Cap:

Are there gills (plate-like forms) tubes (spongy), pores (hard and almost flat), or tooth-like projections on it?

Is there a sort of cobweb covering the gills?

Does the bruised part change colour? (Shove your thumb into part of the underside of the cap.)

If there are Gills:

Cut them. Does a juice come out of the cap?
Does the juice change colour?
What colour is it?
Do the gills touch the stem?
Do they run down it?
Are they close together or wide apart?
Are they all of equal length?

Spores:

What is their colour?

Stem:

Is there a stem at all?
Is there a ring?
Is the stem attached at the centre of the cap, side, other?
Is it hollow?
Does it break easily?
How long is it? How thick is it?
Is it an even thickness?
Is it rough or smooth?
What colour is it?

Habitat:

Is the mushroom growing on wood, grass, a caterpiller, a Douglas Fir cone, in gravel, deep humus, sand, manure, other? Is it growing near birch trees, cottonwoods, rhododendrons, other?

Odour:

Does the cap, when broken smell like almonds, creosote, dead leaves, other?

Miscellaneous:

What is the overall height of the mushrooms?
What is the date and location?
Name the mushroom.

THE IDENTIFICATION OF MUSHROOMS

1. Scientific Name _____ Date _____
2. Common Name _____ Reference _____
3. Location _____
4. Pileus (cap) a. Colour _____
   b. Surface Texture _____ c. Markings _____
   d. Surface Condition _____ e. Flesh Thickness _____
   f. Shape _____ g. Diameter _____
   h. Flesh Colour _____
5. Spore Colour _____
6. Attachment _____ 7. Annulus (ring) _____
8. Stipe (stem) a. General Shape _____
   b. Colour _____ c. Surface texture _____
   d. Attachment to pileus _____ e. Break test _____
   f. Base _____ g. Density _____
   h. Interior Colour _____
9. Test Effects a. Taste Raw _____
   b. Odour _____ c. Exudations _____
10. Height Overall _____ 11. Edibility _____
12. Habitat _____
13. Manner of Growth _____
14. Season _____
15. Comments.

KEY TO THE GENERA OF MUSHROOMS

1. Lamellae fold-like, thick on edge, forked ..... *Cantharellus*
1. Lamellae well developed, crowded to distant but not fold-like 2

2. Spore deposit white 3
2. Spore deposit colored 25

3. Lamellae free from stipe 4
3. Lamellae attached to stipe 6

4. Volva and annulus present ..... *Amanita*
4. Volva present; annulus absent ..... *Amanitopsis*
4. Volva absent; annulus present 5

5. Pileus viscid ..... *Limacella*
5. Pileus not viscid ..... *Lepiota*

6. Annulus present 7
6. Annulus not present 8

7. Cuticle of cap granulose to warty ..... *Cystoderma*
7. Cuticle smooth or scaly but not granulose ..... *Armillaria*

8. Fruit body soft and fleshy, not reviving when moistened 9
8. Fruit body tough, corky to leathery, more or less reviving when moistened 21

9. Stipe excentric, lateral, or absent ..... *Pleurotus*
9. Stipe central 10

10. Lamellae of waxy consistency 11
10. Lamellae not waxy 12

11. Spores smooth ..... *Hygrophorus*
11. Spores echinulate ..... *Laccaria*

12. Trama of fruit body composed of both filamentous and globular cells; texture brittle; lamellae stiff and easily broken; spores amyloid 13
12. Trama of filamentous cells only; lacking above combination of characters 14

13. Milky juice present ..... *Lactarius*
13. Milky juice absent ..... *Russula*

14. Stipe cartilaginous in texture, different from the pileus 15
14. Stipe fleshy or fibrous, somewhat similar to the pileus in consistency or tougher 17

15. Stipe somewhat horny in consistency; lamellae decurrent ..... *Xeromphalina*
15. Stipe not horny; lamellae adnate to adnexed 16

16. Margin of pileus incurved; pileus becoming expanded ..... *Collybia*
16. Margin of pileus straight; pileus usually somewhat bell-shaped ..... *Mycena*

17. Lamellae decurrent 18
17. Lamellae not decurrent 19

18. Spores amyloid ..... *Leucopaxillus*
18. Spores not amyloid ..... *Clitocybe*

19. Spores not amyloid ..... *Tricholoma*
19. Spores amyloid 20

20. Pileus hygrophanus; lamellae with harpoonlike cystidia ..... *Melanoleuca*
20. Pileus rarely hygrophanous, usually dull colored, large and fleshy; lamellae without harpoonlike cystidia ..... *Leucopaxillus*

21. Lamellae split along edge ..... *Schizophyllum*
21. Lamellae not split along edge 22

22. Lamellae serrate-torn on edge ..... *Lentinus*
22. Lamellae not serrate-torn on edge 23

23. Lamellae crisped, thick ..... *Trogia*
23. Lamellae entire 24

24. Stipe central; pileus membranous to somewhat fleshy, reviving ..... *Marasmius*
24. Stipe excentric, lateral, or wanting; pileus tough, fleshy-leathery to corky ..... *Panus*

25. Spore deposit greenish ..... see *Lepiota molybdites*
25. Spore deposit lilac to grayish lilac ..... *Pleurotus* (see *Laccaria ochropurpurea*)
25. Spore deposit pinkish 26
25. Spore deposit yellowish to rusty or brown 33
25. Spore deposit purplish to purple-brown or blackish 45

26. Stipe lateral or lacking ..... *Phyllotopsis*
26. Stipe central 27

27. Lamellae free from the stipe 28
27. Lamellae attached to the stipe 29

28. Volva present; annulus lacking ..... *Volvariella*
28. Both annulus and volva lacking ..... *Pluteus*

29. Lamellae decurrent ..... *Clitopilus*
29. Lamellae adnate to adnexed 30

30. Lamellae sinuate 31
30. Lamellae not sinuate 32

31. Spores angular ..... *Entoloma*
31. Spores not angular, slightly rough ..... *Tricholoma*

32. Margin at first incurved; pileus convex ..... *Leptonia*
32. Margin at first straight; pileus usually more or less conical to campanulate ..... *Nolanea*

33. Stipe excentric, lateral or wanting ..... *Crepidotus*
33. Stipe central 34

34. Veil composed of cobweb-like filaments; spore deposit dark brown ..... *Cortinarius*
34. Veil membranous or lacking 35

35. Annulus present 36
35. Annulus lacking 37

36. Pileus with a mealy-granulose surface ..... *Phaeolepiota*
36. Surface of pileus smooth or scaly, not mealy-granulose ..... *Pholiota*

37. Lamellae separating readily from the pileus trama ..... *Paxillus*
37. Lamellae not separating readily from the pileus trama 38

38. Trama of pileus composed of filamentous and globose cells; spores amyloid 39
38. Trama of pileus filamentous; spores not amyloid 40

39. Milky juice present ..... *Lactarius*
39. Milky juice lacking ..... *Russula*

40. Stipe fleshy to fibrous 41
40. Stipe cartilaginous 43

41. Growing on wood; lamellae usually bright colored, yellow to rusty ..... *Flammula*
41. Growing on the ground; lamellae dull brownish to pallid 42

42. Pileus viscid, smooth ..... *Hebeloma*
42. Pileus more or less fibrillose to silky or scaly, or splitting ..... *Inocybe*

43. Lamellae decurrent ..... *Tuburia*
43. Lamellae not decurrent 44

44. Pileus convex to plane; margin at first incurved ..... *Naucoria*
44. Pileus more or less conical; margin straight; cuticle composed of vesiculose cells ..... *Conocybe*
44. Fruiting bodies fairly large, white, staining brown; spores pale yellow ..... see *Collybia maculata*

45. Lamellae waxy, decurrent ..... *Gomphidius*
45. Lamellae not decurrent 46

46. Lamellae deliquescing ..... *Coprinus*
46. Lamellae not deliquescing 47

47. Annulus present 48
47. Annulus lacking 50

48. Lamellae free from the stipe ..... *Agaricus*
48. Lamellae attached to the stipe 49

49. Lamellae mottled ..... *Panaeolus*
49. Lamellae not mottled ..... *Stropharia*

50. Cuticle of pileus filamentous ..... *Naematoloma*
50. Cuticle of pileus composed of vesiculose cells 51

51. Pileus plicate-striate and paraphyses coprinoid ..... *Pseudocoprinus*
51. Not with above combination of characters 52

52. Lamellae mottled ..... *Panaeolus*
52. Lamellae not mottled ..... *Psathyrella*