

# Short guide to some common mycological terms

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## Macro-morphology

English (*latinised English*)

Bulb-like (= *bulbous*) – used for swollen stem bases, can be rimmed (= *marginate*).

Cap (= *pileus*) – mainly used for agarics = mushrooms with lamellae.

Flesh (= *context* = *trama*) - supporting tissues in fruitbodies

Fruitbody (= *basidiome/basidiocarp* or *ascoma/ascocarp*) – a ± fleshy structure that supports the spore-producing tissues.

Gills (= *lamellae*, sing *lamella*) - the structures hanging vertically under the cap of agarics.

Gill edge - the free lower part of the gill that sometimes has a special colour or can be serrated like a saw blade etc.

Pores – tube-like structures that cannot be separated into individual tubes – with hymenium on the inside - found in polypores.

Ring (= *annulus*) (a protective structure (partial veil covering the gills) that at maturity can be seen on the stem of some agarics)

Rooting (= *radicating*) (used for stem bases if penetrating the substrate)

Spines – pointy elongate structures covered with hymenium if on underside of cap or covering surface of flat crust

Spore producing tissue (= hymenophore) - can be configured from (in Basidiomycota) flat or club-shaped to lamellate, poroid, spiny, coralloid etc. The hymenium is where the basidia are, e.g. on the sides of the lamellae or inside the pores.

Stem (= *stipe*) (the structure that elevated the cap above the substrate in most agarics)

Tubes (± separable long, hollow structures with hymenium on the inner surface - in boletes)

Wrinkled (= *meruloid*) or veined spore producing area (hymenium)

Veil (= *velum*) (a structure covering the entire fruitbody – universal veil (= *velum universale*); covering the gills only (= *velum partiale*))

General types of fruitbodies (Basidiomycota) – from MycoKey (www.mycokey.com)

**start**

growing inside fruitbodies of other fungi

with spores formed in a mass inside (gasteroid)  ?

folded to brain-like  ?

Sparassis-like (of lobes and folded plates)  ?

coral-shaped  ?

club-shaped  ?

with head-shaped top  ?

nail-shaped  ?

funnel-shaped or with slit side  ?

with many pilei/branches from a common stipe  ?

resupinate  ?

resupinate but with the upper border forming a shelf  ?

cushion-like  ?

with pileus and stipe  ?

shelf- to obliquely funnel-shaped  ?

hoof-like  ?

ear-, bell- to tube-shaped  ?

pendent club-shaped  ?

pendent coral-shaped  ?

hymenophore  ?

tongue-shaped  ?

top-shaped  ?

General types of fruitbodies (apothecial Ascomycota) – from MycoKey (www.mycokey.com)

**fruit-body type**

a single ascus or a small cluster of asc  ?

subterranean (hypogeous)  ?

narrowly attached to short stipitate disc- to cup-shaped  ?

cushion-like  ?

spherical to barrel-shaped  ?

disc- to cup-shaped, attached to the margin  ?

attached oblong disc-shaped  ?

crack- to mouth-shaped  ?

stipitate mussel-shaped  ?

stellate crack-shaped  ?

long stipitate disc- to cup-shaped  ?

funnel-shaped or with slit side  ?

tongue-shaped  ?

compound disc- to cup-shaped  ?

folded to brain-like  ?

club-shaped  ?

hymenium  ?

with head-shaped top  ?

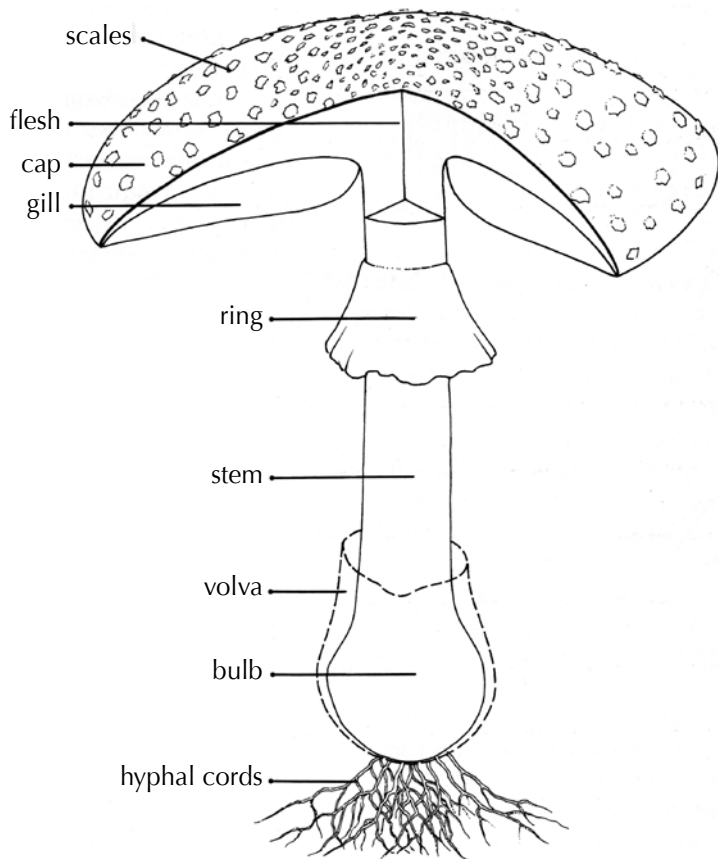
spathula-shaped  ?

like a bell centrally fixed on a stipe (verpoid)  ?

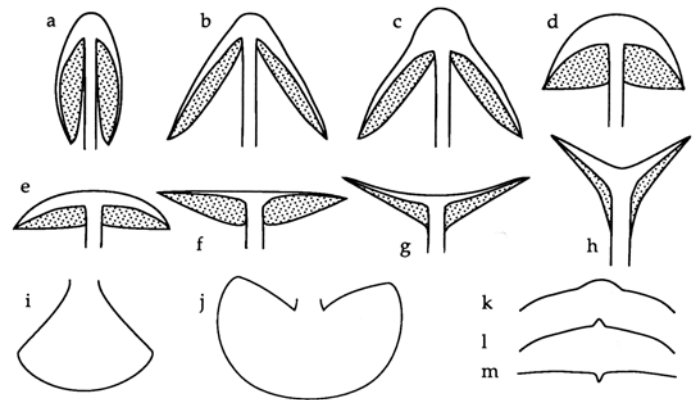
with a folded head on a stem (helvelloid/gyromitroid)  ?

with a honeycomb-like folded head (morchelloid)  ?

## General parts of an agaric

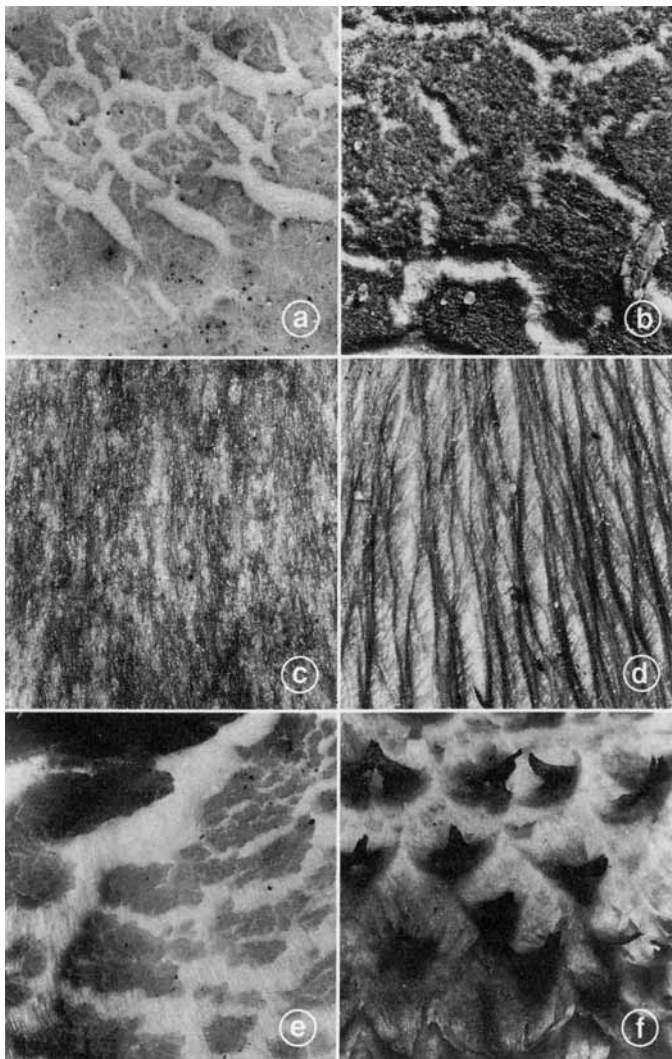


## Cap shapes



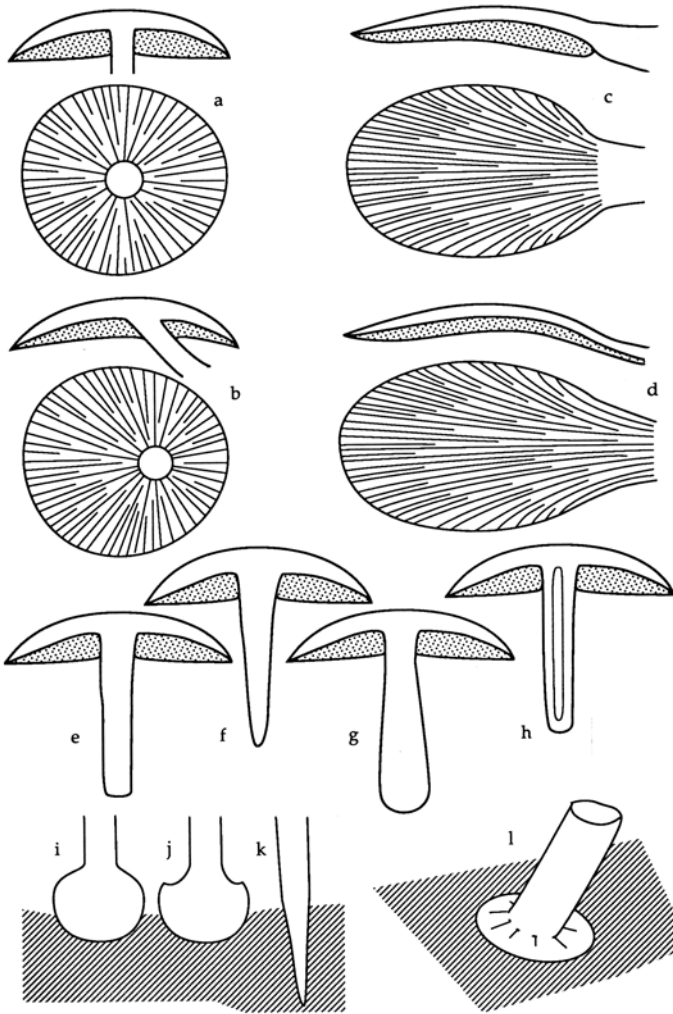
**a** ellipsoid or ovoid (egg-shaped); **b** conical; **c** bell-shaped (= campanulate); **d** semiglobose; **e** convex; **f** flat (= applanate); **g** depressed; **h** funnel-shaped; **i-j** fan-shaped (seen from above); **k** umbonate cap; **l** papillate cap; **m** cap with a navel (= umbilicate).

## Cap surfaces



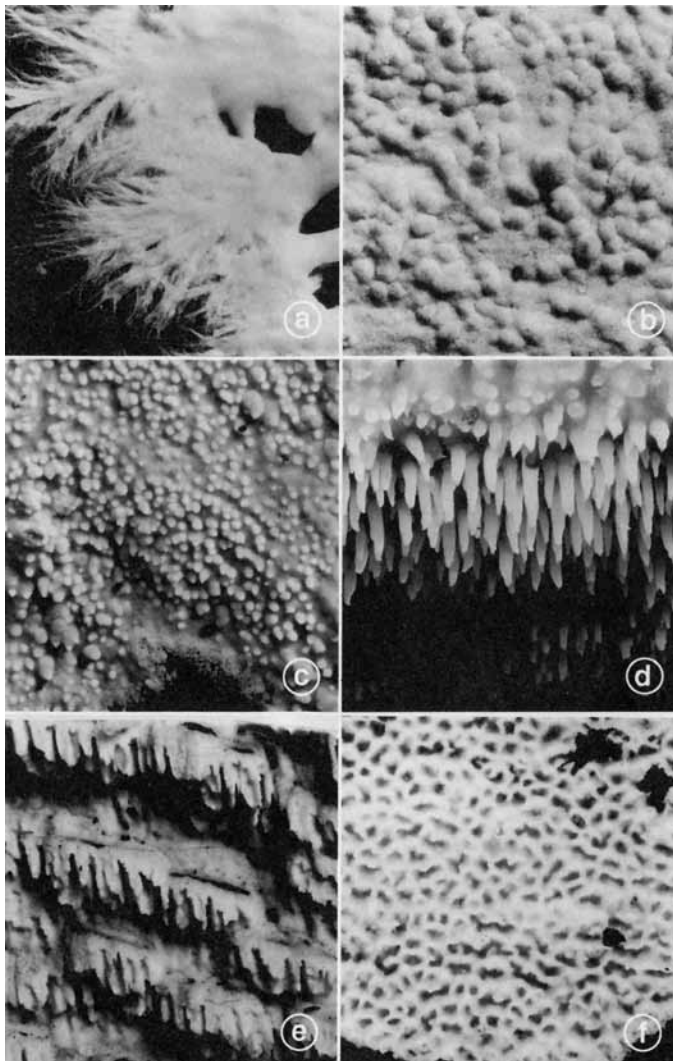
**a** without structure (but cracking); **b** felty (and cracking); **c** radially fibrillose; **e** cracking into scales; **f** with pointed scales

## Stem morphology

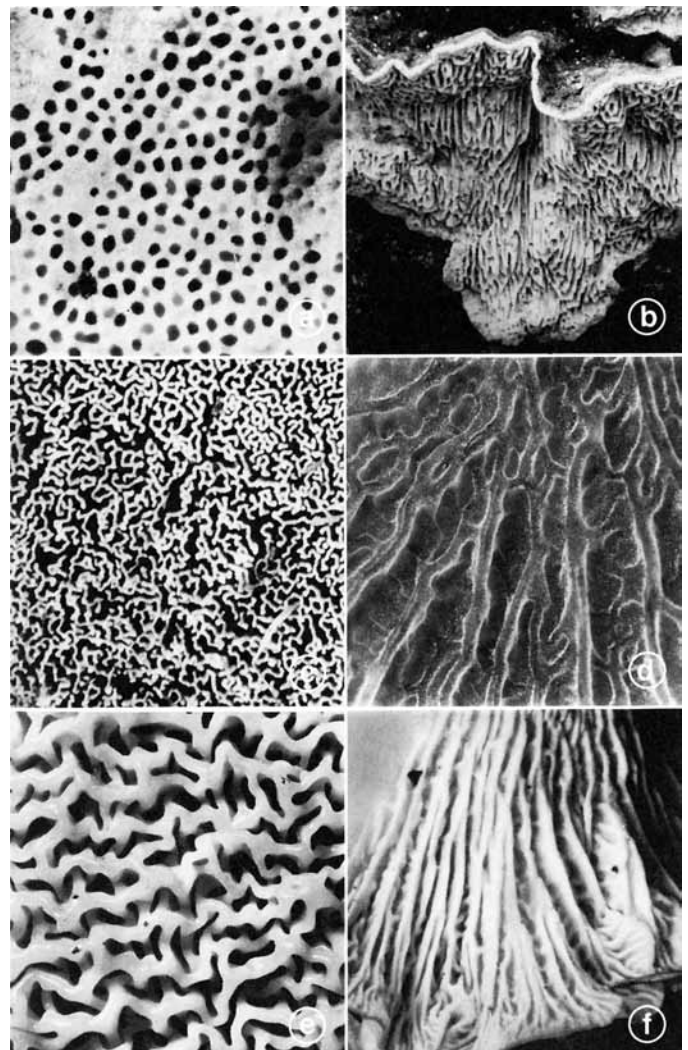


**a-d** positions, **a** central, **b** eccentric, **c** lateral, **d** tongue-shaped; **e-h** shapes, **e** cylindrical, **f** tapering, **g** club-shaped, **h** hollow; **i-l** stem base, **i** bulb-like (= bulbous), **j** rimmed (marginate) bulb, **k** rooting (= radicating), **l** with basal disk.

**Various types of hymenophores (the area covered by the hymenium)**



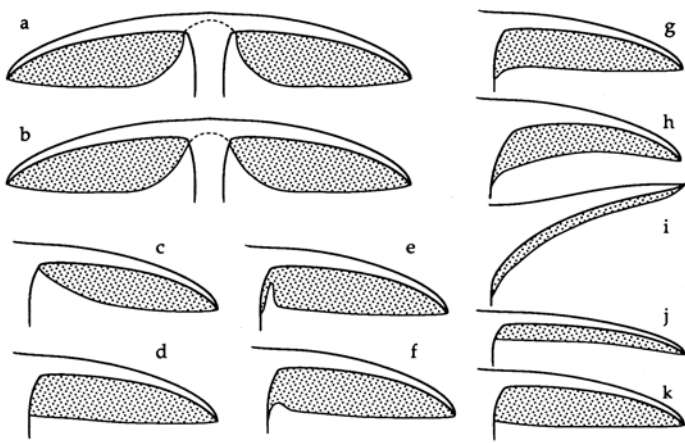
Hymenophore: **a** smooth (with hyphal cords at the margin); **b** of rounded warts; **c** of pointed warts; **d** of spines; **e** of teeth; **f** of angular pores.



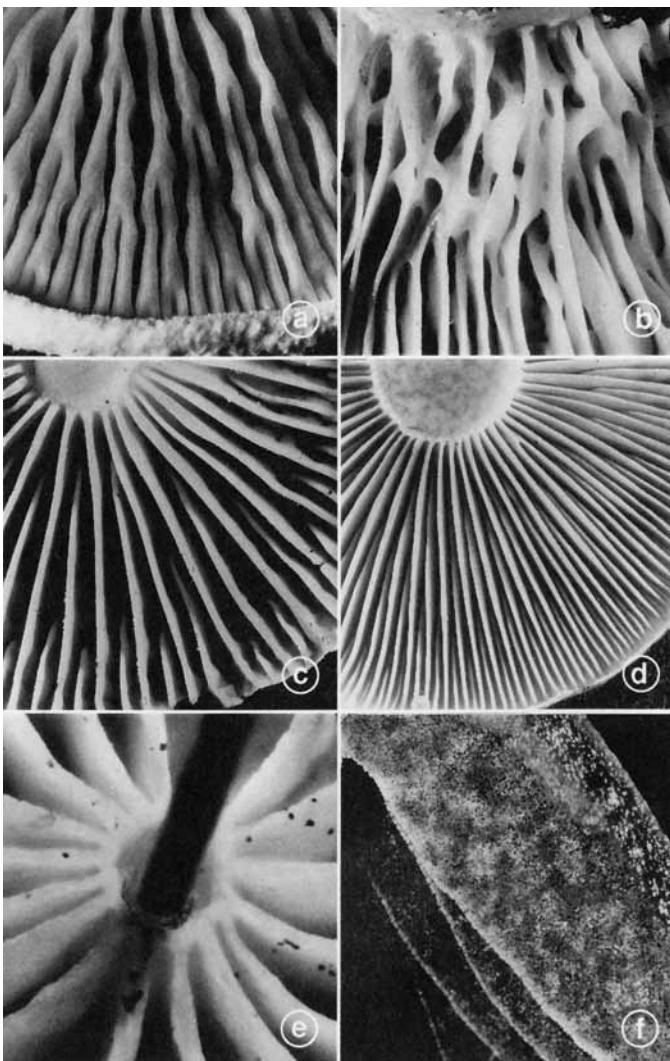
Hymenophore: **a** of round pores; **b** of round pores splitting into labyrinths; **c** of labyrinthic pores; **d** of low veins; **e** of labyrinthic veins; **f** of raised veins.

For gills, see next page . . .

## Gill morphology



**a-b** free gills; **c** adnexed, **d** adnate, **e-f** emarginate to strongly emarginate, **g** shortly decurrent, **h - i** decurrent; **j** narrow gills, **k** broad gills.



**a** forked gills; **b** anastomosing gills; **c** distant gills; **d** crowded gills; **e** gills united in a collarium; **f** marbled gills caused by uneven spore maturation.

## Micro-morphology

Amyloid – a bluish reactions of spores or hyphae in iodine reagents

Apical apparatus (apical ring, apical plug) – a structure found in the top of many asci and often diagnostic. May stain in iodine and other reagents.

Ascus (pl. asci) – the special cell that contains the sexual spores within the Ascomycota – globose to more commonly cylindric in shape. Often 8-spored.

Basidium (pl. basidia) – the cell that gives rise to basidiospores on the outside; either oneroomed as in fx agarics and divided transversely or lengthwise as in many gelly fungi; typically 4-, more rarely 1-,2-,3-, 6- or 8-spored.

Clamp – a small eye placed at the division of hypahe (only Basidiomycota and not all of those)

Conidia (= mitospores)– used for asexual propagules

Cystidia – sterile special cells in the hymenia of Basidiomycota

Cheilocystidia – situated at the gill edge, pleurocystidia on the sides of the gills, caulocystidia on the stem surface and pileocystidia on the cap surface.

Dextrinoid – a reddish reaction of spores or hyphae with iodine reagents.

Hyphae (sing. Hypha) – the ± threadlike cells that make up fungal mycelia and fruitbodies

Melzer's reagent – a special iodine reagent with chloralhydrate, used esp. when studying Basidiomycota . Ascomycota can be studied with Lugol stain (without the chloralhydrate and hence less poisonous).

Mycelium (pl. mycelia)- a fungus individual, composed of thread-like filaments (hyphae) (or of yeast cells).

Paraphyses – sterile cells, sometimes diagnostic shapes or colours in the hymenium of many Ascomycota.

Spore (= meiospore) – used for sexual spores produced from asci (ascospores) or basidia (basidiospores).