

## DOCUMENT 8

## BASIC FIELD CHARACTERS FOR SOME COMMON MUSHROOM GENERA

GENUS (English name)	CAP	GILLS / PORES	STEM	SMELL	SPORE PRINT and any other COMMENTS	SUBSTRATE and HABITAT	Approx no. of UK species
<b>AGARICUS</b> (Mushroom)	Basically whitish, smooth or with brownish scales; <b>staining pink, red, yellow, or not.</b> Small to (very) large.	Gills at first pale pink to almost white, then gradually becoming pinker then brown then <b>black.</b> <b>Gill attachment free.</b>	<b>Ring diagnostic</b> , eg large, cog-wheel, disappearing, persistent, thick, thin, ascending, pendant. Stem whitish, smooth, sometimes staining red, yellow, base sometimes clavate.	Mostly either pleasant and 'mushroomy', of aniseed or unpleasant and 'inky'.	Spore print dark brown/black. Yellowing of flesh in cap, stem, stem base, can be significant.	Soil in woodland, soil in grassland. Saprotrophic.	About 40
<b>AMANITA</b> (Amanita if with a ring; Grisette if with no ring.)	Colour varied, eg white, greenish, pinkish, yellow, red, brown; often has <b>white to greyish veil patches which rub off;</b> margin striate in some. Medium to large.	Gills persistently <b>white</b> , at most pale cream, even when cap differently coloured. <b>Gill attachment free.</b>	<b>Large ring</b> and/or fibrous (coloured) bands present in some, absent in others; shape of <b>volva or swelling</b> at base diagnostic; stem colour white or pale, concolorous.	Absent in all but a few when significant, eg raw potato, sickly, of honey.	Spore print white.	Soil in mixed woodland. Mycorrhizal with trees: <b>host tree often critical</b> (one with Rock Rose).	About 30
<b>The BOLETES</b> Many allied genera - too many to list here, most originally in genus <i>Boletus</i>	Colour varied: mainly a range of browns, also red, cream, whitish in a few; smooth but with cracks in some, scaly in one, dry in most but <b>sticky in Suillus</b> (and a few others but only after rain). Medium to (very) large and chunky.	<b>Pores</b> (not gills) usually pale: yellow, beige, cream, but orange, red in a few; when pressed <b>bruising blue or unchanging</b> - diagnostic. Pore attachment varied, occasionally subdecurrent	Ring only in a few <i>Suillus</i> sp., <b>Stem markings and colour often diagnostic</b> , eg with coloured squamules (in <i>Leccinum</i> ), with fine dots, a meshlike reticulation, staining blue when damaged, stem base sometimes with coloured mycelial threads.	Absent in all but a few when significant, eg aromatic, fruity, acidic, earthy, rubber, garlic, iodoform.	Spore print dirty olive brown. <b>Flesh colour</b> in cap, stem, stem base can be significant, eg unchanging, turning slowly, rapidly blue when exposed to air.	Soil in mixed woodland. Mycorrhizal with trees: <b>noting host tree often critical</b> (a few with Rock Rose).	About 80, split into a growing number of different genera.
<b>CLITOCYBE</b> (Funnel) including allied genera	Mostly whitish, cream, greyish; often funnel-shaped or with sunken centre; ± smooth, hygrophanous or not.	Gills concolorous with cap. <b>Gill attachment often (sub)decurrent</b> but not always.	No ring. Stem smooth, white to cream, mostly cylindrical, base occasionally clavate.	Present in most eg mealy, fragrant, aniseed, can be significant.	Spore print white to cream.	Litter in mixed woodland, soil in grassland. Saprotrophic.	About 30

GENUS (English name)	CAP	GILLS / PORES	STEM	SMELL	SPORE PRINT and any other COMMENTS	SUBSTRATE and HABITAT	Approx no. of UK species
<b>COPRINUS</b> (Inkcap) also <i>Coprinellus</i> , <i>Coprinopsis</i> , <i>Parasola</i> , <i>Tulosesus</i>	Generally white, grey, beige, sometimes centre coloured; <b>fine white veil flecks significant</b> if present; smooth, fluted or scaly; unopened caps often notably tall and thin. Tiny to medium.	Gills white at first but quickly turning black; crowded or widely spaced; <b>deliquescent in all but genus <i>Parasola</i>. Gill attachment free.</b>	White, smooth, pruinose, sometimes with bulbous base, generally brittle and in small species fragile. Ring only in a very few rare sp.	Absent in all but a few when significant, eg yeast, foetid, unpleasant.	Spore print black. <b>Unique in being deliquescent, sometimes in hours, becoming an inky wet mess.</b>	A wide range (woodland and grassland) including dung, soil, wood, herbaceous stems. Saprotrophic.	About 100, split into several different genera.
<b>CORTINARIUS</b> (Webcap) (4 sections: <i>Myxadium</i> , <i>Phlegmacium</i> , <i>Cortinarius</i> , <i>Telamonia</i> )	Colour varied, shades of brown but also eg white, cream, yellow, purple, reddish; dry (viscid in <i>Phlegmacium</i> and <i>Myxadium</i> ); hygrophanous or not. Small to very large.	<b>Gills varied in colour when young (diagnostic)</b> eg beige, violet, purple, greenish, red, yellow, <b>but soon turning rusty</b> ; crowded, widely spaced. Gill attachment adnate.	No ring but <b>with a fine web-like cortina</b> – diagnostic of genus, soon disappearing. Stem dry, viscid in Sect. <i>Myxadium</i> ; colour, fibrous bands, other markings, stem base clavate, bulbous, flesh colour - all significant.	<b>Significant:</b> a wide range, eg pelargonium, fruity, earthy, cheesy, radish, iodoform etc	Spore print rust-brown. Use of KOH on cap, stem, stem base often useful, turning red or not.	Soil in mixed woodland. Mycorrhizal with trees: <b>noting host tree often critical.</b> (A few with Rock Rose.)	Over 600
<b>ENTOLOMA</b> (Pinkgill)	Mostly shades of brown, also white, some <b>notably blue</b> (mainly in Sect. <i>Leptonia</i> ); mostly smooth, some translucent, some hygrophanous, a few textured. Tiny to large.	<b>Gills</b> at first pale beige but <b>turning pinkish – diagnostic</b> ; in Sect. <i>Leptonia</i> <b>blue or with blue edge</b> . Stem attachment adnate or subdecurrent.	No ring or bulb; colour and texture both significant, eg white, brown, blue, smooth, shiny, streaky fibrous, roughened.	Absent in some, in others significant, eg mealy, rancid, bubble-gum, garlic, cabbage.	Spore print pink. If on wood consider genus <i>Pluteus</i> – also with free pink gills.	A wide range, many species in grassland, also soil in woodland litter, occasionally on wood. Saprotrophic.	About 160
<b>GYMNOPUS</b> (Toughshank)	Mostly shades of brown, smooth, some hygrophanous. Small to medium.	Gills white to cream or beige, <b>distant to very crowded</b> . Gill attachment adnate.	No ring or bulb; <b>notably rubbery, tough and flexible</b> ; colour, texture, mycelial fuzz at base, clustered – all possible significant features.	Absent in all but a few when significant, eg garlic, cabbage.	Spore print white to cream	Mainly in mixed woodland litter, on submerged roots, one on wood. Saprotrophic.	About 15

GENUS (English name)	CAP	GILLS / PORES	STEM	SMELL	SPORE PRINT and any other COMMENTS	SUBSTRATE and HABITAT	Approx no. of UK species
<b>HEBELOMA</b> (Poisonpie)	Mostly some shade of cream or brown, some two-tone, paler at centre or margin; smooth but <b>notably sticky</b> . Medium to large.	Gills dull beige to clay-brown; <b>gill edge sometimes with droplets</b> . Gill attachment adnate.	No ring (one exception), no bulb; usually $\pm$ concolorous with cap or paler, fibrous and mostly pruinose in upper section.	<b>Predominantly of radish</b> , less often of cocoa, burnt sugar, marzipan.	Spore print clay-brown	Soil in mixed woodland. Mycorrhizal with trees; <b>noting host tree critical</b> . (A few with Rock Rose)	About 40
<b>HYGROCYBE</b> (Waxcap) also <i>Gliphorus</i> , <i>Cuphophyllus</i> & others	Very varied, often <b>brightly coloured</b> eg red, yellow, green, white, pink, etc; hygrophanous or not, viscid, waxy or dry; textured or smooth. Small to medium.	Gills often concolorous with cap but not always; crowded or widely spaced; in one species with gelatinous edge. Gill attachment adnate to decurrent.	No ring or bulb; colour, texture, viscid or dry, grooved or not - all significant	Absent in all but a few when significant, eg honey, Russian leather, oily like <i>Lactarius quietus</i> .	Spore print white.	Soil in grassland, rarely in woodland; mainly late autumn. Saprotrophic.	About 60
<b>INOCYBE</b> (Fibre-cap) also <i>Inosperma</i> , <i>Pseudosperma</i> , <i>Mallocybe</i> .	Mostly shades of brown, a few yellowish, white, lilac; texture notably <b>fibrous, often radially splitting</b> , smooth, tomentose, flocculose, or scaly, sometimes with umbo. Small to medium.	Gills at first pale beige to off-white, <b>later snuff brown</b> ; edges white or not. Gill attachment $\pm$ adnate.	No ring but sometimes a cortina visible when immature; sometimes <b>with a bulb</b> ; fibrous or pruinose, often concolorous with cap (not always). Vital to collect carefully without damage – <b>all features significant</b> .	<b>Predominantly spermatic</b> or acidic, a few of peardrops, marzipan, fishy, other - always significant.	Spore print mid-brown, snuff-brown.	Soil in mixed woodland; mycorrhizal with trees: <b>noting host tree critical</b> . (A few with Rock Rose.)	About 160
<b>LACCARIA</b> (Deceiver)	When fresh rusty palish brown, amethyst in one, but <b>markedly hygrophanous – drying out to almost white</b> ; smooth to scurfy. Small to barely medium.	Gills concolorous with young cap before faded, significantly <b>retaining colour in age</b> or turning pinker; <b>widely spaced</b> . Gill attachment adnate to subdecurrent.	No ring or bulb; concolorous with cap – in one species contrastingly lilaceous at base; texture fibrous; hygrophanous.	Not significant.	Spore print white.	Soil in mixed woodland litter, one in heathland. Mycorrhizal with a wide range of trees and shrubs.	About 10

GENUS (English name)	CAP	GILLS / PORES	STEM	SMELL	SPORE PRINT and any other COMMENTS	SUBSTRATE and HABITAT	Approx no. of UK species
<b>LACTARIUS</b> (Milkcap) also <i>Lactifluus</i>	Mainly shades of brown (white in <i>Lactifluus</i> ), colour even to zoned concentrically, some with droplet markings; smooth, shiny, matt, hairy with margin inturned, dry, sticky. Mainly medium (a few tiny, large in <i>Lactifluus</i> ).	Gills generally beige to buff, <b>with latex droplets when damaged. NB latex colour diagnostic</b> , can change in minutes once exposed to air, eg yellow, pink, grey-green, orange. Gill attachment adnate to subdecurrent.	No ring or bulb; often concolorous with cap; dry or sticky, pitted or smooth, quite brittle.	Absent in some, significant in others, eg coconut, oily, rubbery, fishy, spicy.	Spore print cream to dark pinkish buff. A few with brighter colours: orange, green, yellow. Flesh crumbly as in <i>Russula</i> .	Soil in woodland. Mycorrhizal with trees: <b>noting host tree critical.</b> (A few with Rock Rose.)	About 70
<b>LEPIOTA</b> (Dapperling) also <i>Cystolepiota</i> , <i>Echinoderma</i> , <i>Macrolepiota</i> (Parasol) & others	Basically whitish, often with brown, black centre; <b>often fibrous and notably scaly</b> ; dry. Small to large - very large in <i>Macrolepiota</i> and <i>Chlorophyllum</i> .	Gills white to pale cream, crowded. Flesh sometimes reddening. Gill attachment <b>free</b> .	<b>Ring</b> usually present when young though then sometimes lost; bulb, swollen stem base present in Parasol. whitish and fibrous but markings below ring often significant eg brown snakeskin, other.	Absent in some but significant in a few: eg of rubber, of <i>Scleroderma</i> , soapy, unpleasant.	Spore print white. Flesh in cap, stem staining red, orange in some when handled, damaged.	Soil in mixed woodland litter, occasionally in grassland. Saprotrophic.	About 50 in the various genera.
<b>MYCENA</b> (Bonnet)	Typically white, greyish, beige, some exceptions eg brown, pink, violet, blue; often $\pm$ conical; smooth, shiny, frosted, fluted, translucent, partly striate. Tiny to medium	Gills basically white, sometimes grey / pinkish; a few with <b>coloured gill edge</b> ; crowded, distant. <b>Gill attachment varied</b> , from free to subdecurrent.	No ring or bulb but a few with hairy base or small basal disc; thin and flimsy in smaller species, tough and fibrous in larger species; white or concolorous, smooth or frosted; <b>a few with latex</b> – colour important	Absent in some but significant in others, eg of bleach, radish, nitrous, iodoform.	Spore print white.	A large range of substrates and habitats: eg litter, soil, wood, plant stems; in mixed woodland and grassland. Saprotrophic.	About 80
<b>PHOLIOTA</b> (Scalycap)	Yellow, ochre, cream, rust; dry, sticky & slimy; <b>some (markedly) scaly</b> . Medium to large.	Gills yellowish becoming rust-brown; $\pm$ crowded. Gill attachment adnate.	<b>Ring or ring-zone</b> present, pale above ring, <b>often bands of scales below; often tightly clustered in large clumps.</b>	Not significant.	Spore print rust-brown	On living wood, (submerged) roots, woodchip. Saprotrophic.	About 25

GENUS (English name)	CAP	GILLS / PORES	STEM	SMELL	SPORE PRINT and any other COMMENTS	SUBSTRATE and HABITAT	Approx no. of UK species
<b>PLUTEUS</b> (Shield)	Mainly brown, also yellow, white, orange; smooth, wrinkled, roughened, scaly. Small to medium	Gills at first white, later <b>pink</b> (as in <i>Entoloma</i> ), <b>crowded</b> , with dark edge in a few. <b>Gill attachment free.</b>	No ring or bulb (though base can be clavate); concolorous with cap or brownish, yellow in one, smooth or streaky.	Not significant.	Spore print pink.	On <b>fallen wood, woodchips, woody debris</b> ; deciduous, occasionally conifer. Saprotrophic. ( <i>Entoloma</i> mostly on soil)	About 25
<b>PSATHYRELLA</b> (Brittlestem) including <i>Homophron</i>	Some shade of brown, often hygrophanous, <b>sometimes fading to white or pinkish</b> ; smooth, scaly, with white veil remnants. Small to medium.	Gills at first ± white, later turning <b>dark grey-brown, black</b> ; <b>edge sometimes pink or red – significant</b> . Gill attachment adnexed / adnate.	V. rarely with ring; no bulb but <b>base sometimes rooting or with mycelial fuzz</b> , diagnostic; <b>white and brittle</b> , mainly smooth, occasionally scaly or flocculose.	Not significant.	Spore print dark purplish brown. Some similar to Inkcaps but none deliquesce.	On fallen wood, woody debris, soil, less often dung or burnt ground. Woodland or grassland. Saprotrophic.	About 70
<b>RUSSULA</b> (Brittlegill)	<b>Colour amazingly varied</b> eg red, yellow, green, white, violet, all shades in between, even, patchy, two-tone; smooth, matt, shiny, <b>cuticle peeling or not.</b>	Gills <b>varied</b> : white, cream, orange-ochre though if coloured often pale at first, sometimes blackening with age; crowded, distant; flexible, brittle. Gill attachment adnate to subdecurrent.	No ring or bulb; white, cream, with flushes of colour or not, eg red, yellow, violet; staining yellow, pink then dark grey – diagnostic; smooth, firm or crumbly; FE crystal / Guaiac / KOH tests on stem useful.	Absent in some but significant in others, eg fruity, fragrant, pelargonium, roses, cheesy, of crab.	<b>Spore print ranging from white, cream to orange-ochre. Fruitbodies with crumbly texture.</b>	Soil in mixed woodland. Mycorrhizal with trees: <b>noting host tree critical.</b>	About 160
<b>TRICHOLOMA</b> (Knight)	Colour varied eg grey, brown, white, cream, yellow; smooth, matt, shiny, scaly, dry, sticky. Medium.	Gills white, cream, yellowish; sometimes staining with blackish dots, Gill attachment ± emarginate.	No ring (one exception) or bulb; often concolorous, also yellow, white, brown, grey; smooth, dry or sticky; base occasionally red or blue.	<b>Significant</b> : predominantly mealy, rancid, but also eg honey, soap, gassy, fly spray, spicy.	Spore print white	Soil in mixed woodland. Mycorrhizal with trees: <b>noting host tree critical.</b> (A few with Rock Rose.)	About 50

