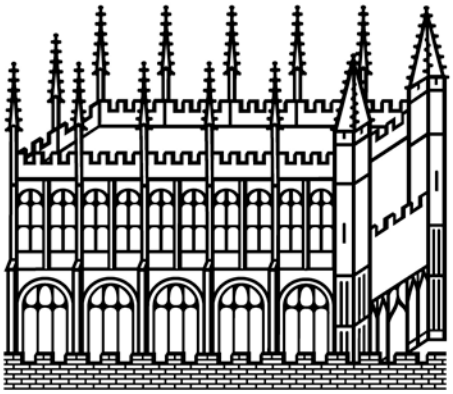
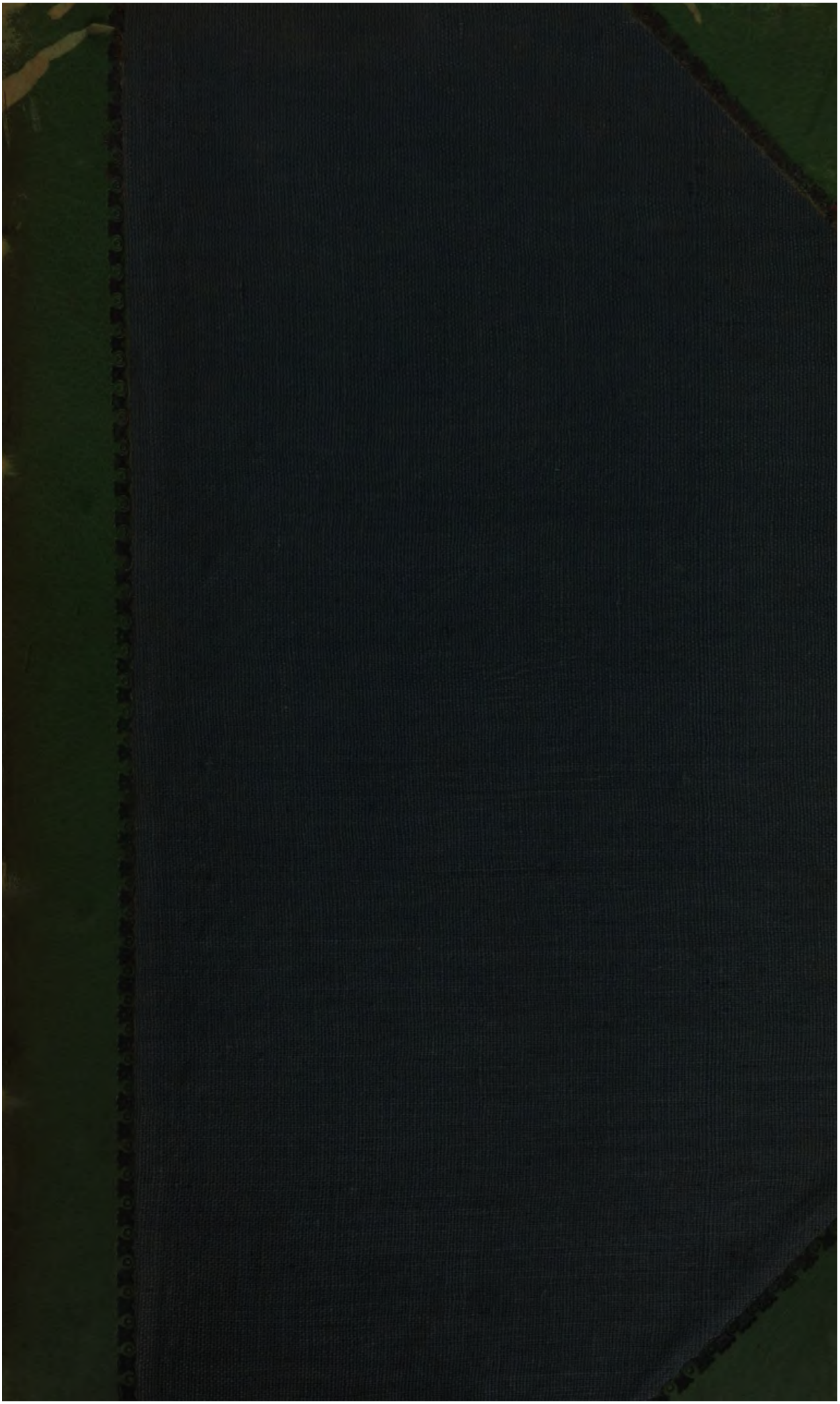
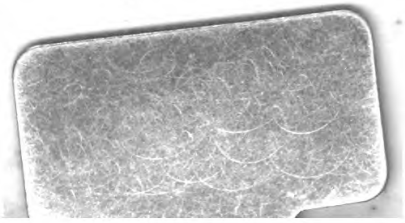






SPARASSIS CRÍSPA.

Curled Sparassis, or Pallid Helvella.

Family, Hymenomycetes. *Order,* Clavariei.

Plant pale ruddy yellow, fleshy, forming a rounded mass, attaining a diameter of 18 inches. *Laminæ* flattened, covered with the fructifying surface.

The specimen figured was gathered at Didlington, Brandon, and shows somewhat less than one-half the original plant, and is also slightly reduced. The original drawing from which our plate was taken was obligingly lent us to copy by the Rev. M. J. Berkeley.

IN the family to which this Mushroom belongs we have one nearly allied to that of our old friend the Morel. Here, as in the Morels, the fruit-bearing part is pileus-shaped, disposed on the upper surface, and barren underneath. The Sparassis family have the hymenium even, not honey-combed as in the Morels; all the members of the family are wholesome.

The Pallid Helvella grows 4 or 5 inches high, its stem is hollow, swollen, and marked with deep irregular branching grooves; the head is spreading, lobed, and of irregular form, at first expanding, and then hanging the stem down; in youth it is white, and sometimes continues so, but oftener it assumes a yellowish or flesh-coloured tint, darker on the under than the upper surface.

This Mushroom is an inhabitant of woods and shady places; Mr. Greville found it frequently in such localities in the neighbourhood of Edinburgh, and Mr. Berkeley describes it as "common."

In flavour it resembles its relative the Morel, and its odour is equally agreeable. As an ingredient in gravies it is very valuable, and forms an excellent dish stewed or fricasseed like the common Mushroom.

F. Waller, Imp.rl 18, Hatton Gar

Sparassis crispa.—Curled Sparassis.

(reduced)

AGÁRICUS (CLITÓCYBE) GIGÁNTÈUS.

Great Woodland Mushroom.

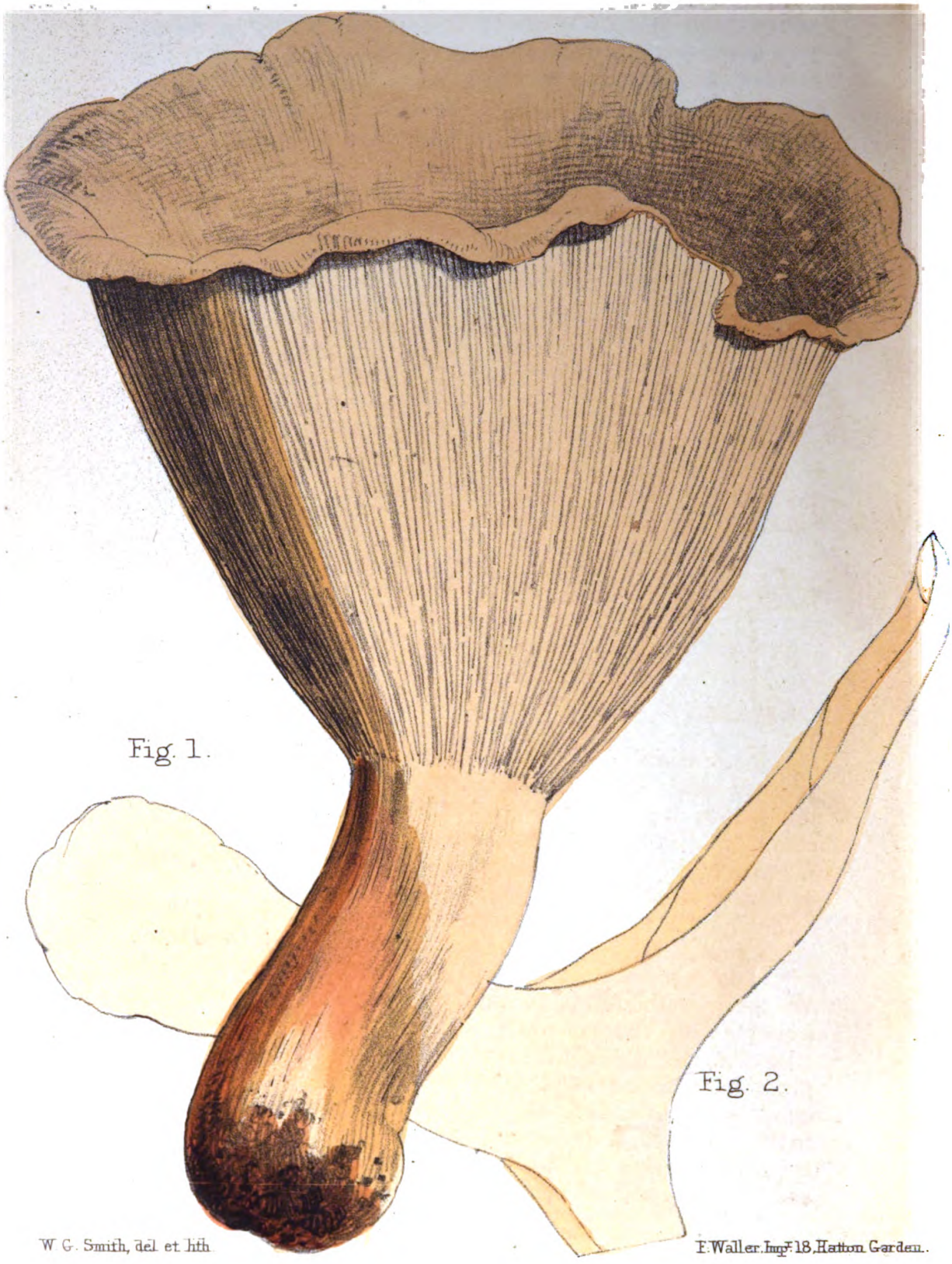
Family, Hymenomycetes. *Order,* Agaricini.

Pileus pale brown, rather thin and slightly downy, funnel-shaped. *Gills* very crowded, white, at length yellowish, rather decurrent. *Stem* solid, and slightly striate.

In woods, attaining very large dimensions. The specimen figured is half the size of original, and was forwarded to us by Miss L. E. Lott, of Barton Hall, Kingskerswell, near Newton Abbot, Devon, with a quantity of other Fungi, some of great rarity and interest.

THE Giant Agaric attains an immense size, sometimes measuring a foot across. It has a thin fleshy pileus, of a yellowish white or ochraceous tint, and covered with delicate down; in age it gets scaly, becomes depressed in the centre in an early stage, and in maturity is quite funnel-shaped, so as to be capable of containing a considerable quantity of water after a heavy rain. The gills run down the stem for a short distance, they are closely crowded together, and of the same colour as the pileus. The stem is short in proportion to the size of the whole plant, paler than the pileus, solid, hard, and of equal thickness in every part.

This Mushroom is of rare occurrence; it forms rings of great magnitude. Its favourite home is in sunny woodlands, where it raises its lordly head in September and October. We have gathered it in wood borders about Edinburgh, especially in the romantic valley which lies between the Blackford and Braid hills; there, by the side of the "wimpling burn," and shaded by young Birch trees, the buff chalice-like heads of the giant Mushroom add their quota to the beauty of the scene. Laden with these and other fungus spoils, we left the weird glen late on an October day, and meeting an old gardener, in harmonious keeping with



Agaricus (clitocybe) giganteus.—Great Woodland Mushroom.

(one half real size.)

served up with white sauce. It has a slightly acid flavour, and if fried in butter and covered with a sauce containing pepper, salt, chopped herbs, and a little anchovy, it makes a very tasty dish. In whatever style it is cooked it requires more liquid than other Sap-balls from its substance being firmer.

BOLÈTUS SCÀBER.

Rugged-stemmed Tube Mushroom.

Family, Hymenomycetes. *Order,* Polyporei.

Pileus brown, cushion-shaped, becoming slightly cracked. *Tubes* free, long, livid white. *Stem* thickened at the base, dotted, and rough. Whole plant inclined to be viscid, and changing to a cineraceous hue when cut or bruised.

Common in woods—abundant near London. The specimen figured was gathered in Weller Park, near Ollerton, Notts, in July.

NOT in every case is the Scaly Sap-ball worthy of its name, for the pileus does not always become rough, but contents itself with general downiness; its usual colour is a brownish grey, but occasionally it varies to orange. From the margin a thick veil is extended to the stem, enclosing the hymenium till the spores are verging on maturity, then the veil rolls back, and a crowd of round minute tubes are exposed; they are white at first, but become of a dingy yellowish hue ere long. The stem is more slender than in most Sap-balls, and is rough with dark scales of fibrous texture, it is solid, and tapers upwards. The spores are somewhat rusty in colour.

This species is frequently found in woods. The young plants are low and stunted in appearance, the stem in that stage being thick, almost bulbous, but presently it shoots up to the height of half a foot, becoming slender as it rises higher, and then the round or dome-shaped head expands to its full size of from 4 to 6 inches in width. Fields bordering on the rich woods of Kent furnish abundance of this Sap-ball, and in other counties it is equally abundant.

For the table young specimens should, as usual, be selected, and the tubes be removed with a silver spoon, the rest cut into pieces and stewed in veal or chicken broth, and

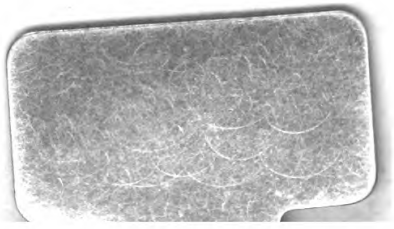
Fig. 2.

Fig. 1.

W G Smith del et lith.

F.Waller, 18, Hatton Garden.

Boletus scaber. — Rugged-stemmed Tube Mushroom.



A SELECTION

OF THE

EATABLE FUNGUSES

OF GREAT BRITAIN.

EDITED BY

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PREFACE.

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THERE are many other Fungi besides those that are figured in this work that are considered edible by some, while they are regarded by others as suspicious. The species, therefore, that are included in this work have been selected with every consideration of caution, and none have been admitted except what are known to be not only not deleterious but eatable and nutritious.

Any merit this work possesses is due to the pen of Miss Margaret Plues and to the pencil of Mr. W. G. Smith. The former has furnished all the information on the economic uses of the species, and the latter has made the original drawings, and transferred them to the stones. The introduction to the study of the Fungi was also written by Miss Plues; and the manner in which both have executed their several parts of the work will doubtless meet with general approval.

SYSTEMATIC ARRANGEMENT OF PLATES.

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INTRODUCTION

TO THE STUDY OF FUNGI.

THE simplest form of a Fungus is a fruitful cell, but the majority have two distinct parts, each with its separate functions. 1st, The *Spawn*, consisting of a stratum of matted and coagulated threads and spores, and answering to the stem and leaves of the flowering plant; 2nd, The *Fructifying Part*, composed either of column and head, as in most of the Agarics and other Fungi popularly known, or stemless and mis-shapen, and answering to the flower-stalk, blossom, and ripened fruit of the phænogamous plant. This part is accounted the Fungus itself in all the larger species, the Spawn being very insignificant in comparison. The fruit of Fungi consists of spores, which are borne on the summit of the cells in one division of the Fungus family ; and within the cells, thus converted into *Asci*, in the other division. The first division are called *Sporiferous Fungi ;* the second, *Sporidiferous Fungi.*

SPORIFEROUS FUNGI are divided into four groups, each of which is again divided into several orders.

The first group, HYMENOMYCETES, is characterised by the fruit-bearing part or *hymenium* being exposed, its orders are :—

1. *Agaricini*, with the hymenium spread on gills.
2. *Polyporei*, with the hymenium disposed within tubes.
3. *Hydnei*, with the hymenium spread over spines.
4. *Auriculini*, with the hymenium on an even surface.
5. *Clavati*, the hymenium upon clubs.
6. *Tremellini*, with the hymenium mingling with the substance.

The second group, GASTEROMYCETES, is characterised by the fruit-bearing part being enclosed in a single or double envelope, its orders are :—

1. *Hypogæi*, globular Fungi of subterraneous habit.
2. *Phalloidei*, with the whole plant enclosed in youth, but leaving the wrapper in maturity.
3 *Trichogastres*, the substance turning to dust, but the bag or peridium permanent, investing the whole plant.

4. *Myxogastres*, with both peridium and substance turning to dust.

5. *Nidulariacei*, peridium in the form of a bird's nest.

The third group, CONIOMYCETES, contains only microscopic plants, all of which become dust-like in maturity.

The fourth group, HYPHOMYCETES, also is composed of microscopic plants, threads being their most characteristic feature.

The most important family in the first division is that of the *Agaricini*. Here the fruit-bearing part consists of a *stem* (*stipes*), *fig.* 1 (1); a *cap* (*pileus*), *fig.* 1 (2); *gills* containing the spores, *fig.* 1 (3), which, in a succeeding genus, are placed in pores, *fig.* 1 (4); a *ring* (*annulus*), *fig.* 1 (5); and a *wrapper* (*volva*), in which the whole plant is swaddled in infancy, *fig.* 1 (6); the volva is only present in some of the sub-genera. The spores are situated upon cells disposed over the surface of the *trama*, *fig.* 2 (2), which is spread along the gills, these cells being oval and very closely packed. The spores are generally placed in quartettes at the point of the cells, *fig.* 2 (1).

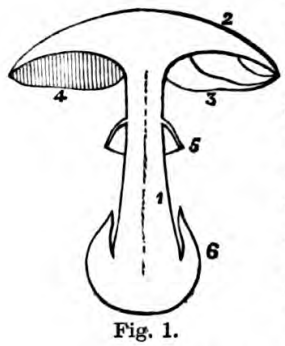


Fig. 1.

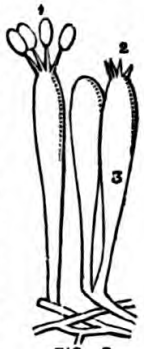


FIG 2

There is great variety of form in the numerous species of Agarics, although the general figure is in the style of column and capital. The *Gills* in particular are liable to assume many different shapes, and these are very important points in distinguishing sub-genera. When the margin of the gill is bowed out it is called *ventricose*, *fig.* 3 (C); when it comes to an end before reaching the stem it is called *remote*,

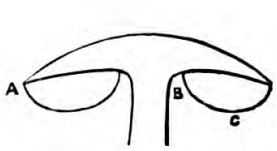


FIG 3

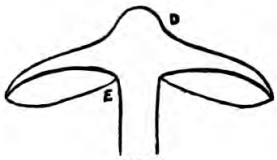


FIG 4

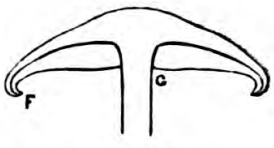


FIG 5

fig. 3 (B); when it approaches the stem without touching it, it is called *free*, *fig.* 4 (E); when it joins it, it is called *adnate*, *fig.* 5 (G); when it is hollow at the junction it is called *emarginate*, *fig.* 6 (H); when the gills adhere for some distance down the stem they are called *decurrent*, *fig.* 7; and when the margin is arched, *arcuate*, *fig.* 8.

The *Pileus* has also several varieties of form *with edges patent*, as in

fig. 3 (A); *umbonate,* as in *fig.* 4 (D); *involute,* as in *fig.* 5 (F); *infundibuliform,* as in *fig.* 7 (I); *umbilicate,* as in *fig.* 8 (K).

The *Stem* is subject to variation both in form and texture, being tough or brittle, hollow or solid, straight, twisted, or deformed.

FIG 6

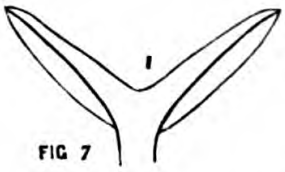


FIG 7

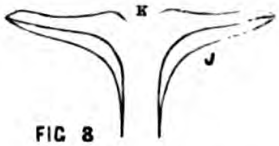


FIG 8

The *Ring* varies in texture, being now thin as a spider's web, now composed of a membrane-like cloth; it is attached to the margin of the pileus before the ripening of the spores, then it breaks away, and remains attached by the inner edge to the stem, where it forms a frill or ring.

In some Fungi there is a *Veil* as well as a ring, which envelopes the whole pileus as well as the enfolded gills.

The *Volva* or wrapper is a thick covering, attached to the base of the Fungus, and covering it entirely before the growth of the stem. It is only present in some species, and it often perishes as soon as its function is fulfilled, and it is no longer needed by the rising plant.

The AGARIC order (*Agaricini*) are fleshy, and the *Trama* bearing the spores is formed of threads (*fig.* 2). It is divided into series and sub-genera.

The first series LEUCOSPOREI is distinguished by white spores, it contains nine sub-genera.

1. *Amanita,* characterised by a thick veil enwrapping and leaving portions of its substance upon the pileus.
2. *Lepiota,* where the veil is one with the pileus.
3. *Armillaria,* with the veil partial.
4. *Tricholoma,* characterised by a fleshy stem, and veil either adhering like wool to the margin of the pileus, or absent altogether.
5. *Clitocybe,* with elastic stem, the coating fibrous, and the gills decurrent.
6. *Collybia,* with leathery stem, and pileus involute, as in *fig.* 5.
7. *Mycena,* with leathery stem and bell-shaped pileus.
8. *Omphalia,* with gills extremely decurrent.
9. *Pleuropus,* with distorted stem, or no stem at all.

The second series, HYPORHODII is distinguished by salmon-coloured spores, and contains seven sub-genera.

1. *Volvaria,* with distinct volva.
2. *Pluteus,* without veil.
3. *Entoloma,* with gills partly adnate.
4. *Clitopilus,* with gills decurrent.
5. *Leptonia,* with involute pileus, and free gills.
6. *Nolanea,* with leathery stem, and patent pileus, as in *fig.* 3 (A).
7. *Eccilia,* with umbilicate pileus and adnate gills.

The third series, DERMINI, has rusty spores, and contains six sub-genera.

1. *Pholiota*, with a ring.
2. *Hebeloma*, with fleshy stem, and ring often absent.
3. *Flammula*, with gills adnate or decurrent.
4. *Naucoria*, with pileus involute.
5. *Galera*, with pileus bell-shaped.
6. *Crepidotus*, with eccentric pileus.

The fourth series, PRATELLÆ, has purplish brown spores, and contains four sub-genera.

1. *Psalliota*. Veil forming a ring.
2. *Hypholoma*. Veil very thin.
3. *Psilocybe*. Veil not forming a ring.
4. *Psathyra*. Veil none; pileus bell-shaped.

The fifth series, COPRINARIUS, has black spores, and contains two sub-genera.

1. *Panæolus*. Veil interwoven; pileus fleshy.
2. *Psathyrella*. Veil simple; pileus membranaceous.

All these belong to the family of true Agarics, and there are several groups which used to be included, and which belong to the order of Agaricini, though not to the family of Agaric; they are now given by Mr. Berkeley as allied genera.

The genus *Coprinus* is distinguished by its deliquescence, the substance of the gills and spores, and the very pileus and stem, melt away into inky liquid. The spores are black.

Bolbitius has this quality in less degree, and its spores are coloured.

In *Cortinarius* the gills are persistent, and the spores rusty. It includes sub-genera:—

1. *Phlegmacium*, the pileus turning viscid when moist.
2. *Myxacium*, veil and stem viscid and polished.
3. *Inoloma*, pileus silky and stem bulbous.
4. *Dermocyba*, pileus thin, downy; stem not bulbous.
5. *Telamonia*, pileus moist; stem sheathed with the veil.
6. *Hygrocybe*, veil distinct from the stem.

In *Paxillus* the gills are persistent, and the trama absent.

In *Gomphidius* the pileus is top-shaped, and the gills branched.

In *Hygrophorus* the substance is waxy.

In *Lactarius* the gills are furnished with cells containing milk.

In *Russula* the gills are rigid, and there is no veil.

In *Cantharellus* the gills are thick and swollen.

In *Nyctalis* the gills are subgelatinous.

In *Marasmius* the gills are thick and tough.

In *Lentinus* they are leathery.

In *Panus* the gills are tough and dry.

In *Xerotus* they are tough and forked.

In *Schizophyllum* they are leathery, and split.

In *Lenzites* they are firm and branching.

This genus concludes the old family of Agaricus, and the present order of Agaricini.

The POLYPOREI bear their spores in tubes or pores instead of upon gills, see *fig.* 1 (4). Its genera are:—

1. *Boletus*, with tubes separable from one another and from the flesh.
2. *Polyporus*, with tubes scarcely separable.
3. *Trametes*, with pores entire.
4. *Merulius*, with waxy hymenium disposed in toothed folds.

5. *Porothelium*, hymenium in papillæ.
6. *Fistulina*, with tubes distinct.

The HYDNEI bear their spores upon awl-shaped processes crowded together beneath the pileus.

The AURICULARINI bear their spores upon an even surface.

The CLAVATI bear their spores in the substance of its club-shaped branches.

SPORIDIFEROUS FUNGI are divided into two groups, the ascus being the prominent distinction in the one, ASCOMYCETES, and the thread-like cells in the other, PHYSOMYCETES.

The first group contains some families of size and importance, as the Morel, Peziza, and Truffle.

The second group, ASCOMYCETES, is the first in the second division of the Sporidiferous Fungi, where the spores are contained in bags or *Asci*. It contains six orders—the four latter ones being composed of microscopic species only the two first require description.

1. ELVELLACEI, with the hymenium more or less exposed, contains the following genera :—

1. *Morchella*, with hymenium disposed over a pitted head.
2. *Gyromitra*. The head ribbed.
3. *Helvella*. Hymenium even.
4. *Verpa*. Hymenium ridged.
5. *Mitrula*. Head club-shaped.
6. *Spathularia*. Head spathulate.
7. *Leotia*. Head with revolute margin.
8. *Vibrissea*. Head on slender stem.
9. *Geoglossum*. Club-shaped.
10. *Peziza*. Club-shaped.

2. TUBERACEI, subterranean Fungi, with waved hymenium, it contains eleven genera, of which the first is the only important one :—

Tuber. Peridium warty.

Dr. Badham and others give us such attractive accounts of the gastronomic charms of Fungi, the quantity of nourishment contained in them, and the desirability of our better appreciation of their excellencies, that we set about making ourselves acquainted with them with hearty good will. If they bring in a revenue of £4000 a-year to the city of Rome, why should they do less for Dublin, Edinburgh, Liverpool, Manchester, or Birmingham? Why should they not do ten times as much for London?

So important as an article of diet is the Fungus tribe in France, Germany, and Italy, that M. Roques styles the despised Toadstools "the manna of the poor." In their composition they more nearly resemble flesh than any other vegetable. Dr. Marcet proves that, like animals, they absorb a large quantity of oxygen, and give out in return

carbonic acid, hydrogen, or azotic gas. Chemical analysis demonstrates the presence in their structure of the several components of which animal matter is formed, many containing sugar, gum, resin, fungic acid, various salts, albumen, adipocire, and ozmazome, "which last is that principle that gives flavour to meat gravy," according to Dr Badham.

Fungi are applicable to other than culinary uses, though their most important use is the gastronomic one. To obviate the difficulty arising from the prejudice against the wholesomeness of any Mushroom, Mr. Berkeley recommends a good quantity of bread to be eaten with them. He is of opinion that Mushrooms are only indigestible when eaten alone or in imprudent quantity. Of course this remark applies equally to any sort of Mushroom, though it is made with reference to the one in familiar use.

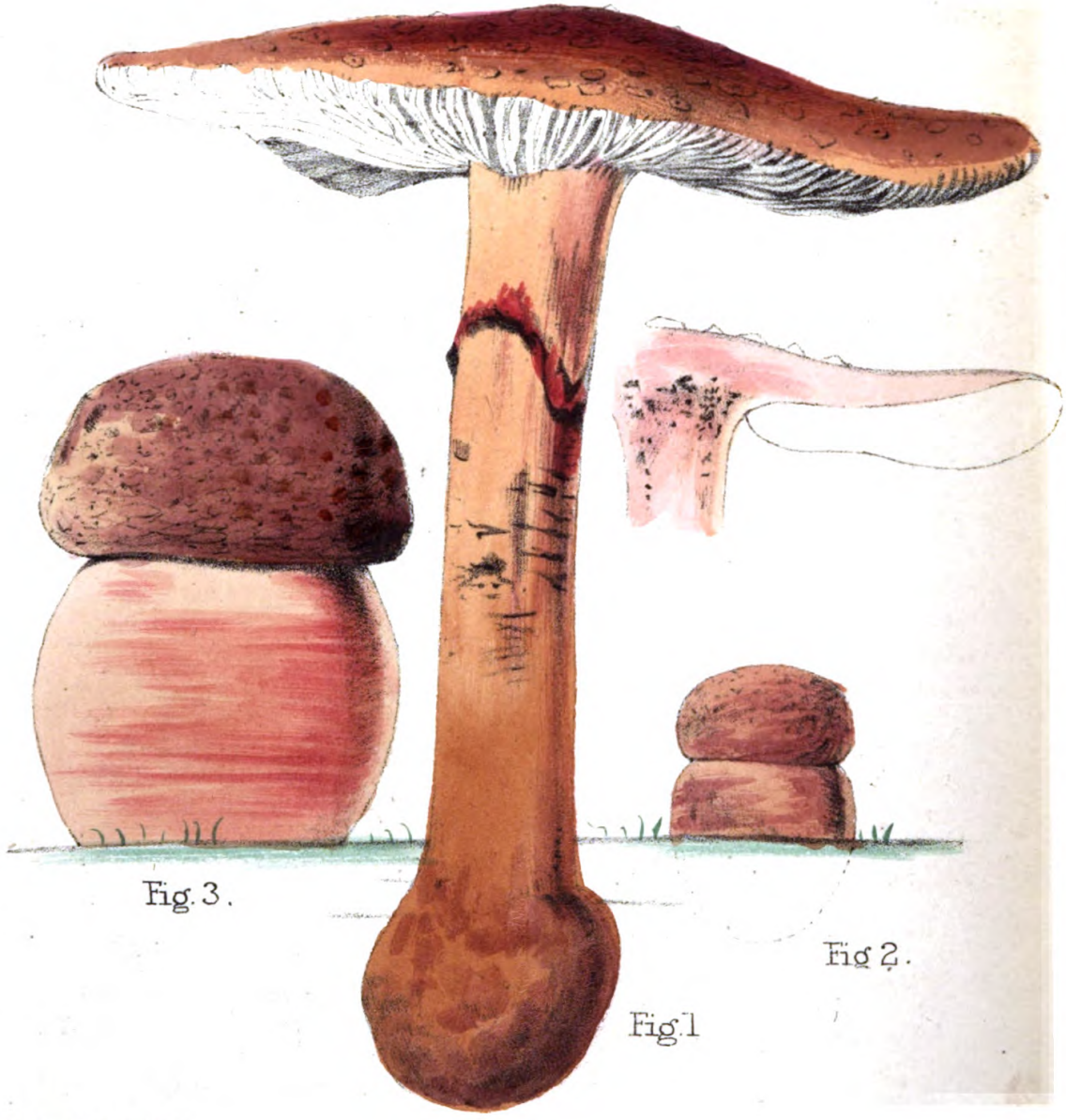
As an indirect but very important article of diet the tiny Fungus known as *Yeast* stands pre-eminent. It is composed of globular cells which produce other cells with incredible speed, and the interchange of fluids on either side of the membrane is the cause of the fermentation. *German Yeast* is formed of the dried globules. The *Polyporus betulinus* makes very superior razor strops, its substance containing minute crystals; the *Polyporus squamosus* is also good for this purpose, if cut from the tree in autumn, then flattened in a press, rubbed carefully with pumice, cut into slices, and each slice fastened to a wooden stretcher. The *Polyporus fomentarius* forms the *Amadou* of commerce, formerly used only as "German tinder," but now applied by, at any rate, one medical practitioner in sheets to protect the backs of bed-ridden patients. Gleditsch relates that the poorer inhabitants of Franconia stitch it together and make garments of it. *Polyporius ignarius* is used as snuff in the north of Asia; *Polyporus officinalis* was formerly used as medicine, but is so employed no longer; *Polyporus sulphureus* furnishes a useful dye. *Coprinus atramentarius* may be made into ink; *Amanita muscarius* furnishes poison for vermin, and is an ingredient in some intoxicating liquors. Wood impregnated with the metallic-green spawn of a *Peziza* is of great value in the delicate inlaid-work known as Tunbridgeware. A small Fungus belonging to the *Ascomycetes* class, and known as *Ergot of Rye* furnishes a powerful and useful medicine, though in the hands of the ignorant it is an extremely dangerous poison.

Mr. Berkeley suggests that decayed Fungi would form good manure; such being the case, it would be well worth the trouble to let the labourers' children collect them, and throw them into a heap like dead leaves for leaf-mould—thus even the poisonous species might be utilised.

But to enable us to turn Fungi to the best profit we must learn to discern the good from the evil, and for this we must cultivate patience and close observation. General rules will not suffice us. The test of a silver spoon will not ensure safety. Odour is a good guide, those smelling offensively must be avoided, those with savoury or aromatic perfume are generally innocuous, but this test cannot always be trusted, for there are some poisonous and deleterious species which have no smell at all. Colour stands for nothing, for the snowy whiteness which in some is the garb of innocence, serves others, as Dr. Badham says, as the mask for guilt. We shall do well to regard all milky Fungi with suspicion, and avoid bringing them into our culinary experiments; also, we had better eschew those with a biting or acrid smell or flavour.

We labour under a general impression that all Fungi are poisonous except our common Mushroom—this is very far from being the fact. Many species now despised form valuable articles of food, and the greater number of the rejected ones are innocuous, or only deleterious in a slight degree.

To assist the public in recognising the edible species we shall now make it our object to give careful coloured drawings, and full descriptions of those most desirable as subjects of culinary art, and also such hints upon the dressing of the same for the table as shall be suitable for the full utility of the rescued plants.



W.G. Smith. del et lith.

Agaricus (*Amanita*) rubescens.—Red-fleshed Mushroom.

AMANÌTA RUBÉSCENS. *Pers.*

Red-fleshed Mushroom.

Order, Agaricini. *Family*, Hymenomycetes.

SYNONYMES.—*Agaricus pustulatus*, Schœff. t. 91. *A. myodes*, Schœff. t. 261. *A. verrucosus*, Fl. Lond. t. 312. *A. muscarius*, var. 7; With. Arr. iv. 174. *Agaricus* (*amanita*) *rubescens*, Berkeley Brit. Fung. 90. *Golmelle; Golmelle vraie*, French.

The whole plant springs from a distinct *volva* or wrapper at the base, which, after being ruptured, partly adheres to the *pileus* or top in scattered fragments or warts. *Pileus* at first hemispherical, at last nearly plane, fleshy, not melting. *Gills* with sharp edges, and white spores or seeds, at first hidden by a membrane, which, at maturity, becomes ruptured at the outermost edges, and, falling away, forms a ring or *annulus* round the stem. The spores may be readily obtained by placing the pileus, gills lowermost, on a sheet of paper, when they will drop out; this applies to all other Fungi. *Stipe* or stem tapering upwards, bulbous at the base, with remains of ruptured volva. The whole plant becomes rich brown red when bruised or broken; and when eaten raw it has a stinging flavour like pepper.

Name from the tendency of the substance to turn red when bruised.

CLOTHY wrapper envelopes this Fungus in infancy, but this quickly disappears. Portions of the veil continue to adhere to the pileus until it is full grown, when they generally vanish. These cover the brown top with thick white patches, like flock on paper, and give the young Fungus a very marked appearance. In woods we find it frequently, its flecked heads appearing from beneath Oak, Pine, or Chestnut leaves which have lain for months beneath the parent tree. The young plants are like brown balls, speckled and dotted, but presently they rise from the ground, the stem lengthens day by day, and the pileus expands. Then the veil breaks from

the margin of the pileus, loosing itself inch by inch, its heavy woolly folds falling back, marked with lines where it has been pressed against the gills. This process occurs when the pileus is half expanded; it spreads more widely until it becomes almost horizontal. The stem is thick and bulky, and the general form one of great solidity. When the spores are ripe they fall quickly; the stem has by that time become hollow, and the Fungus decays.

This Fungus is well reported of by foreign writers. Corda describes it as one of the most valuable Mushrooms of the Lorraine; and Roques gives it an equally high character. It is a good Mushroom for ketchup; and, as it grows freely, and attains a considerable size, it is very suitable for that purpose, quantity being a great desideratum in ketchup-making; while, cooked in the same way as the ordinary Mushroom, it forms a dish highly relished by epicures, and we ourselves have partaken of it as freely as of the common Mushroom.

It is very common in the autumn, and sometimes in the spring and summer, in woods all over the country. It may be found plentifully in the woods at Highgate and Hampstead, Weybridge Heath, and Epping Forest. The specimen figured was gathered in Ollerton Wood, Notts.

These surely are the "rose-fleshed" Mushrooms described by one of the leading poets of the day—

> "By the rose-fleshed Mushrooms undivulged
> Last evening—nay, in to-day's first dew,
> Yon sudden coral-nipple bulged,
> Where a freaked, fawn-coloured, flaky crew
> Of Toadstools peep indulged."

REFERENCES TO THE PLATE.

Fig. 1, Aminita rubescens and section of ditto. *Fig.* 2 and 3, young plant in early stages of growth.

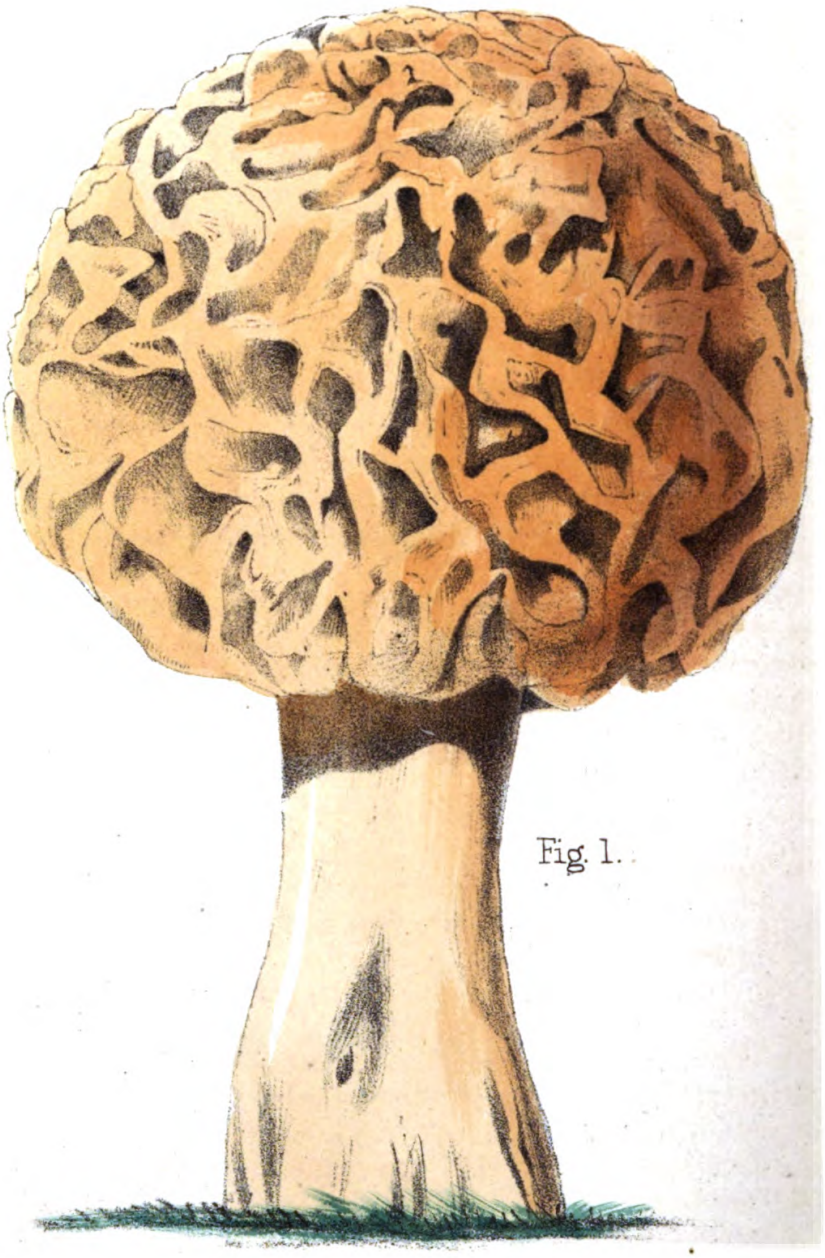


Fig. 1.

W.G. Smith. del. et lith.

Morchella esculenta. — Edible Morel.

MORCHÈLLA ESCULENTA. *Linn.*

Edible Morel.

Order, Elvellacei. ***Family***, Ascomycetes.

SYNONYMES.—*Phallus esculentus*, Linn. Fl. Suec. 1262. *Helvella esculenta*, Sow. t. 57. *Morchella continua*, Tratt. Fung. Aust. t. 6. n. 11. *Jew's Ears*, in Yorkshire.

Pileus hollow, conical, irregular, folded, pitted, thin, and firm. *Stem* hollow, but more or less solid at the base, smooth outside, sometimes chambered or perforated.

The Edible Morel is very variable in shape and size, now appearing oval, now bell-shaped, now all on one side. The flesh is ribbed and rutted, and the pileus looks as if spread over coarse honeycomb, only the hollows are very irregular in form and size, which never occurs in the geometrical structure of the ingenious bees. The colour of the pileus varies from grey to greenish brown. It is found in April and May, preferring grassy places on the borders of fields, and the raised banks of streams in hilly countries.

FROM the complaint that Dr. Badham makes, that in England this Fungus is only known as an article procurable at the Italian warehouses, we augur that he has not been brought up among the thrifty housewives of Yorkshire. In the kitchens of that county, at any rate of the northern and western divisions of it, a string of Morels pendant from the ceiling is as familiar an object as a bunch of Sage twigs, or bundles of Thyme; and the heads of the household complain of the cook's neglect if she omits the Morel flavour in certain sauces. As children we knew the plant at sight, and brought it home whenever we encountered it in our walks; and the poor knew it also, for ever and anon the women who gathered Cowslips for the wine-brewing would bring a few in the corner of their basket, and plead for an extra shilling for the "Jew's Ears," as they were pleased to call the Morel.

In Germany the excellence of the Morel was well appreciated, and, finding that it flourished the most luxuriantly

on wood ashes, it became a regular system to burn down a portion of the forest annually to secure a crop of Morels. This custom was stopped by an edict of the Government, and thus legislation was turned against the Fungi.

M. Roques gives some receipts for the dressing of the Morel, which our readers may find serviceable:—

"1st. Having washed and cleansed them from the earth which is apt to collect between the plants, dry thoroughly in a napkin, and put them into a saucepan with pepper, salt, and parsley, adding or not a piece of ham; stew for an hour, pouring in occasionally a little broth to prevent burning. When sufficiently done, bind with the yolks of two or three eggs, and serve on buttered toast."

"2nd. *Morelles à l'Italienne.*—Having washed and dried, divide them across; put them on the fire with some parsley, scallion, chervil, burnet, tarragon, chives, a little salt, and two spoonfuls of fine oil. Stew till the juice runs out; then thicken with a little flour; serve with bread crumbs, and a squeeze of lemon."

"3rd. *Stuffed Morels.*—Choose the freshest and whitest Morels, open the stalk at the bottom, wash and wipe them well, fill with veal stuffing, anchovy, or any rich *farce* you please, securing the ends, and dressing between thin slices of bacon. Serve with a sauce like the last."

The specimen figured was gathered in Morel Wood, Luton, Bedfordshire, where it is common. We are also indebted to Mrs. Gulson, of East Cliff, Teignmouth, for two very fine specimens, gathered in a hedge at Kingsteignton.

Fig. 1.

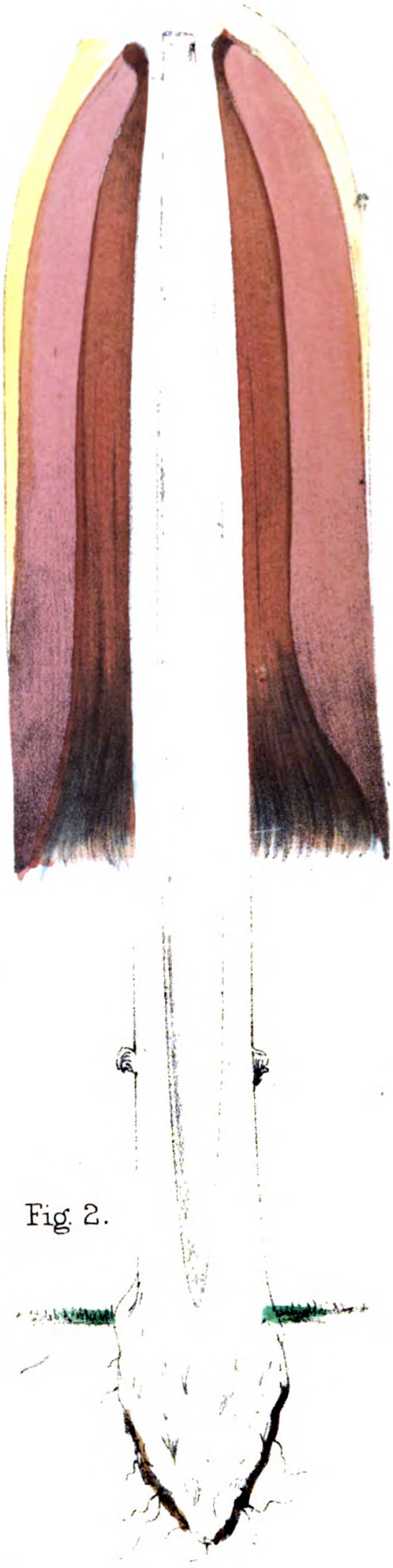


Fig. 2.

W. G. Smith. del et lith.

Coprinus Comatus.— Maned Mushroom.

COPRÌNUS COMÀTUS. *Fries.*

Maned Agaric.

Order, Agaricini. *Family*, Hymenomycetes.

SYNONYMES.—*Agaricus comatus*, Grev. Fl. Ed. 393. *A. porcellaneus*, Schœff. t. 46 and 47. *A. typhoides*, Bull. t. 16. 582. f. 2. *A. fimetarius*, Bolt. t. 44. *A. cylindricus*, Schœff. t. 8.

Pileus at first conical, ultimately expanded and flat, more or less scaly, soon split. *Gills* free at first, white or pinkish, then black, soon melting. *Spores* black. *Ring* moveable, then disappearing. *Stem* white, hollow, and bulbous at the base.

HAVING the patches of the pileus split into narrow fibres this Mushroom is called "Maned." The Maned Mushrooms grow in dense clusters, each young plant, like an attenuated egg, white and smooth. Presently some exceed the others in rapidity of growth, and their heads get above the ground, the stem elongates rapidly, the ring falls loosely round the stem, the margin of the pileus enlarges, and the oval head assumes a bell shape; then a faint tint of brown spreads universally, or in blotches, over the upper part of the pileus, and the whiteness of the gills changes to a dull pink. A few more hours and the even edge of the pileus has split in a dozen places, the sections curl back, the black spores cover the surface of the gills, which begin to ooze with inky fluid, and in a brief space of time the tall stem bows and breaks; but it is not a shapely head that sinks earthward from the broken shaft. Already it is melted out of all form, and by to-morrow's dawn a black stain on the ground will be all that remains of the precocious plants that have outstripped their fellows. But the history of one is the history of all the group; the more backward ones may linger a few hours longer, but they must quickly end in a black stain likewise.

The Maned Mushroom is frequently found in waste and

grassy places, lawns, meadows, and hedgebanks during spring, summer, and autumn.

If gathered when young this is one of the most delicious of all the edible Fungi. Dr. Badham recommends it for ketchup.

REFERENCES TO THE PLATE.

Fig. 1, Coprinus comatus. *Fig.* 2, section of ditto.

Fig. 2.

Fig. 1.

W.G. Smith del et lith.

Russula lepida.—Mild Mushroom.

RÚSSULA LÉPIDA. *Fries.*

Mild Mushroom.

Order, Agaricini. *Family*, Hymenomycetes.

Pileus fleshy, dry, top soon cracking into small warts. Margin not striate. *Gills* thick, pale and forked, or branching. *Stem* thick and solid, white, tinged with pink.

This is a pretty as well as useful Mushroom; its rosy colour, varying from red brown to full crimson, or shading off to flesh colour, has a cheerful and varying effect. It is convex in youth, but becomes depressed in age. The flesh is very firm, and tastes well when stewed with gravy, or fried in butter.

VERY great care must be taken not to confound this with another Russula, much resembling this in colour, though exceeding it in size, and, perhaps, in general beauty. It is well to warn our readers against the brilliantly-coloured emetic Russula, its tints varying from crimson to pale pink, or even white, darkest in the centre, and paling to the margin. Its large size, glossy surface, shining as if varnished, and its preference for wet situations, are safe marks by which to distinguish the emetic from the wholesome species.

The Mild Mushroom grows under trees in Kentish woods and elsewhere, and is not often found in other counties. It frequents dry grassy situations, sheltered by trees. It is such Fungi as this which drew from Bishop Mant the description—

> "For mostly in the forest dank,
> Or 'mid the meadow's herbage rank,
> When Flora's lovelier tribes give place,
> The Mushroom's scorn'd but curious race
> Bestud the moist autumnal earth—
> A quick but perishable birth,
> Prompt to alter, fade, decay!
> Though much you fail not to admire
> Their parts, their structure, their attire,
> The pillar stem, the table head,
> As with a silken carpet spread,
> Inlaid with many a brilliant dye
> Of Nature's high-wrought tapestry!
> Of autumn's waning strength they speak,
> And tell how Nature, worn and weak,
> Prepares her sceptre to resign,
> And in inactive languor pine!"

The specimen figured was gathered in Caen Wood, Hampstead.

REFERENCES TO THE PLATE.

Fig. 1, Russula lepida. *Fig.* 2, section of ditto.

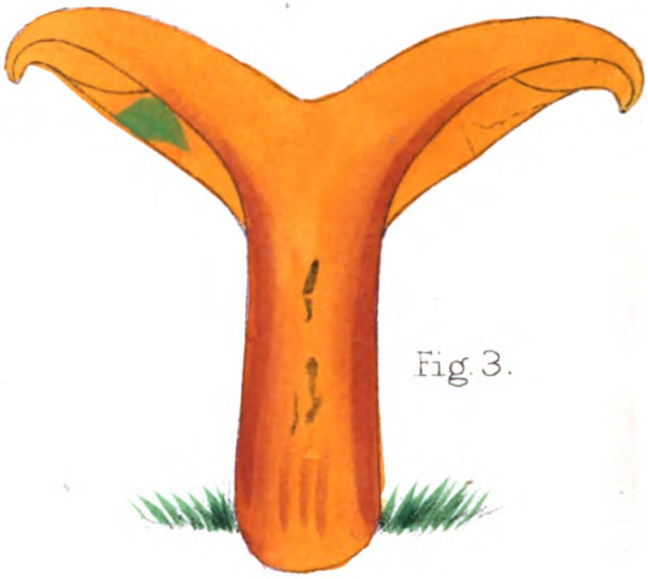


Fig. 3.

W. C. Smith, del et lith.

Fig. 1.

Fig. 2.

Lactarius deliciosus.—Orange Milk Mushroom.

F. Waller, Lith. 18, Hatton Garden.

LACTÀRIUS DELICIÒSUS. *Fries.*

Orange-milk Mushroom.

Family, Hymenomycetes. ***Order,*** Agaricini.

SYNONYMES.—*Agaricus deliciosus*, Linn. Fl. Suec. 1211.

Whole plant milky; milk at first reddish, ultimately green. *Pileus* depressed and fleshy, and more or less marked with rings, which, with the *stem* and *gills*, is of a dull orange colour. Whole plant where bruised turns dull green.

In Fir woods and open places near Fir trees; not uncommon in the neighbourhood of Weybridge; somewhat rare near London, but may be found at Hampstead, where the species figured was gathered.

NO member of the edible group of Fungi is more attractive in appearance, as well as valuable to the gastronomist, than the Orange-milked Agaric. It is of large size, its pileus measuring 5 inches across, of a rich orange colour; it is further adorned with concentric circles of a fuller hue, the central point raised in youth, and deeply coloured, though becoming depressed in age; and the tall well-proportioned stem, coloured with the prevailing orange, is generally spotted with red. Wherever the delicate substance of the Fungus receives a wound, red juice, like pale blood, oozes forth; when decay commences the red milk becomes greenish, and the same hue gradually creeps over the whole plant.

We must search for this species in Fir woods, on elevated sites, especially on the south or south-west of the overshadowing Firs. We have found it in the neighbourhood of Hawkhurst, Kent, famous throughout the kingdom for its trees, especially its Silver and Scotch Firs—in many instances the remains of the ancient forests. It appears in September, and, if the weather is favourable, flourishes into November.

Mrs. Hussey gives a receipt for dressing this truly delicious Fungus:—

"Take sound young specimens; cut them to a uniform size; place them in

a pie-dish, with salt, pepper, and a little butter; tie a paper over the dish, and bake gently for three-quarters of an hour. Serve them in the same hot dish, and you will have something better than stewed kidneys."

The flesh of this Agaric is firm, juicy, and nutritious. Mr. Sowerby says of it:—"I had one dressed; it was very luscious-eating, full of rich gravy, with a little of the flavour of mussels;" and Sir James Smith adds his testimony—"The Agaricus deliciosus really deserves its name, being the most delicious Mushroom known."

Dr. Badham cautions us against mistaking a poisonous ally for this delicious Agaric, and carefully explains the difference between the nutritious and noxious species:—"The milk of the Lactarius deliciosus is *red*, and subsequently turns *green*, while that of the Lactarius torminosus (the poisonous one), is *white* and *unchangeable*." The Milk Fungi are suspicious as a group; this is the only one we can at all recommend.

The generic name *Lactarius*, milky, refers to the juiciness of this Fungus; and *deliciosus*, to its excellent flavour.

Fig.3.

W. G. Smith, del et lith.

Fig.1

Fig. 2.

Cortinarius violaceus.—Purple Cobweb Mushroom.

F Waller lith. 18. Hatton Garden.

INOLÒMA VIOLÀCEA. *Fries.*

Violet Mushroom.

Family, Hymenomycetes. ***Order,*** Agaricini.

SYNONYMES.—*Agaricus violaceus*, Linn. Fl. Suec. 448. *A. hercynicus*, Pers. Syn. 278. *Cortinarius* (*Inoloma*) *violaceus*, Berkeley Brit. Fung. 187.

Pileus fleshy at first, cushion-shaped, violet shaded, with a coppery gloss. *Stem* bulbous, downy at the base. *Gills* distant. Whole plant pale purple within. *Veil* spider's-web-like. *Spores* rusty ochre.

Not uncommon in woods and open places near woods, and may be found at Highgate and Hampstead. The specimen figured was gathered near Barnet, in Hertfordshire.

HIS rare and beautiful Fungus is called by Paulet "Le Violet Evêque." It grows in woods, under Pine and Fir trees, contrasting its episcopal purple with the velvety moss and tender grass. The bulbous base is furnished with white fibry down, by which it adheres to the dead leaves and moss, among which it springs; and thus it secures its position, and plants its rising column firmly, though destitute of true roots. The rich colour and velvety texture of the pileus, the pure white of the flesh, but slightly tinged with lilac, and the erect growth of the plant, make it an object of great beauty. It is but rarely found, but where it grows at all it grows in tolerable abundance. It has a slender veil, as of interwoven spiders' threads, extending from the stem to the margin of the pileus in youth.

The Violet Agaric is perfectly wholesome, and may be stewed in gravy, or dressed like sweetbread, with a white sauce.

Its generic name is derived from *Ion*, purple, and *loma*, a fringe. *Violacea*, violet, also refers to the prevailing colour of the plant.

No Fungus suits better the description of the Toadstool, given by Oliver Wendall Holmes—

"There's a thing that grows by the fainting flower,
And springs in the shade of the lady's bower;
The Lily shrinks, and the Rose turns pale,
When they feel its breath in the summer gale,
And the Tulip curls its leaves in pride,
And the blue-eyed Violet starts aside;
But the Lily may flaunt, and the Tulip stare,
For what does the honest Toadstool care?

"The toad twines his arms round her slender stem,
In the shade of her velvet diadem;
But she turns away in her maiden shame,
And will not breathe on his kindling flame:
He sings at her feet through the live-long night,
And creeps to his cave at the break of light;
And whenever he comes to the air above
His throat is swelling with baffled love!"

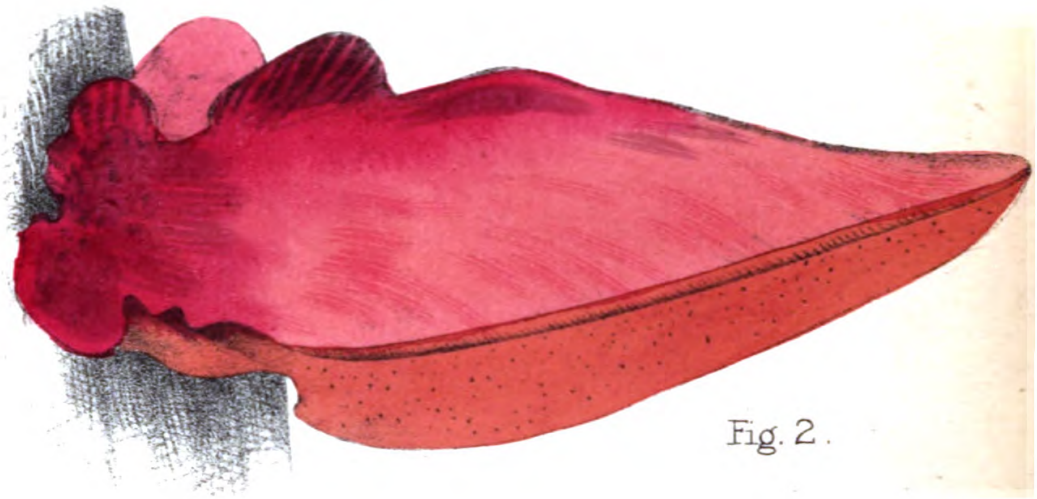


Fig. 2.

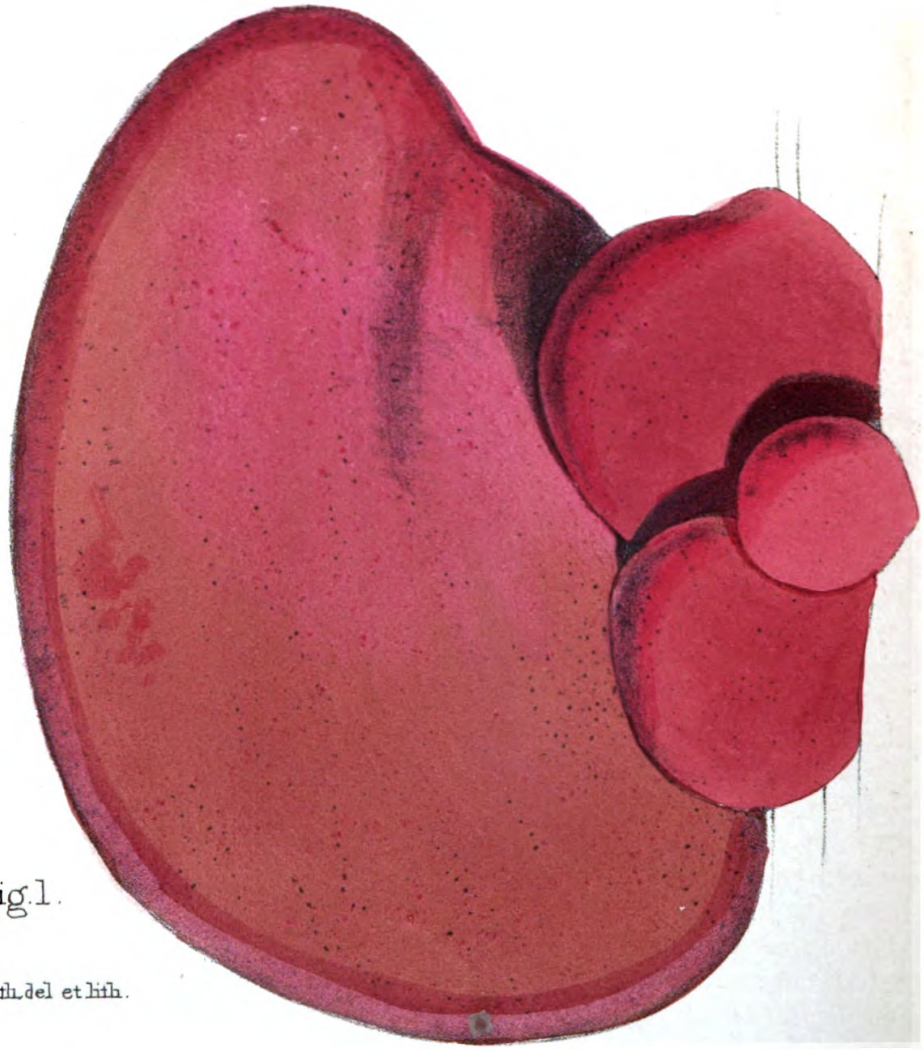


Fig. 1.

W. G. Smith, del et lith.

Fistulina hepatica.—Liver Fungus.

F. Waller, Lith. 18, Hatton Garden

FISTULÌNA HEPATICA. *Fries.*

Liver Fungus.

Family, Hymenomycetes. *Order*, Polyporei.

SYNONYMES.—*Boletus hepaticus*, Schœff. t. 116-120. *Fistulina buglossoides*, Bull. t. 74, 464, 497.

Pileus undivided, unstalked; under surface porous and livid, upper surface dull red. Whole plant exuding a rich juice when cut.

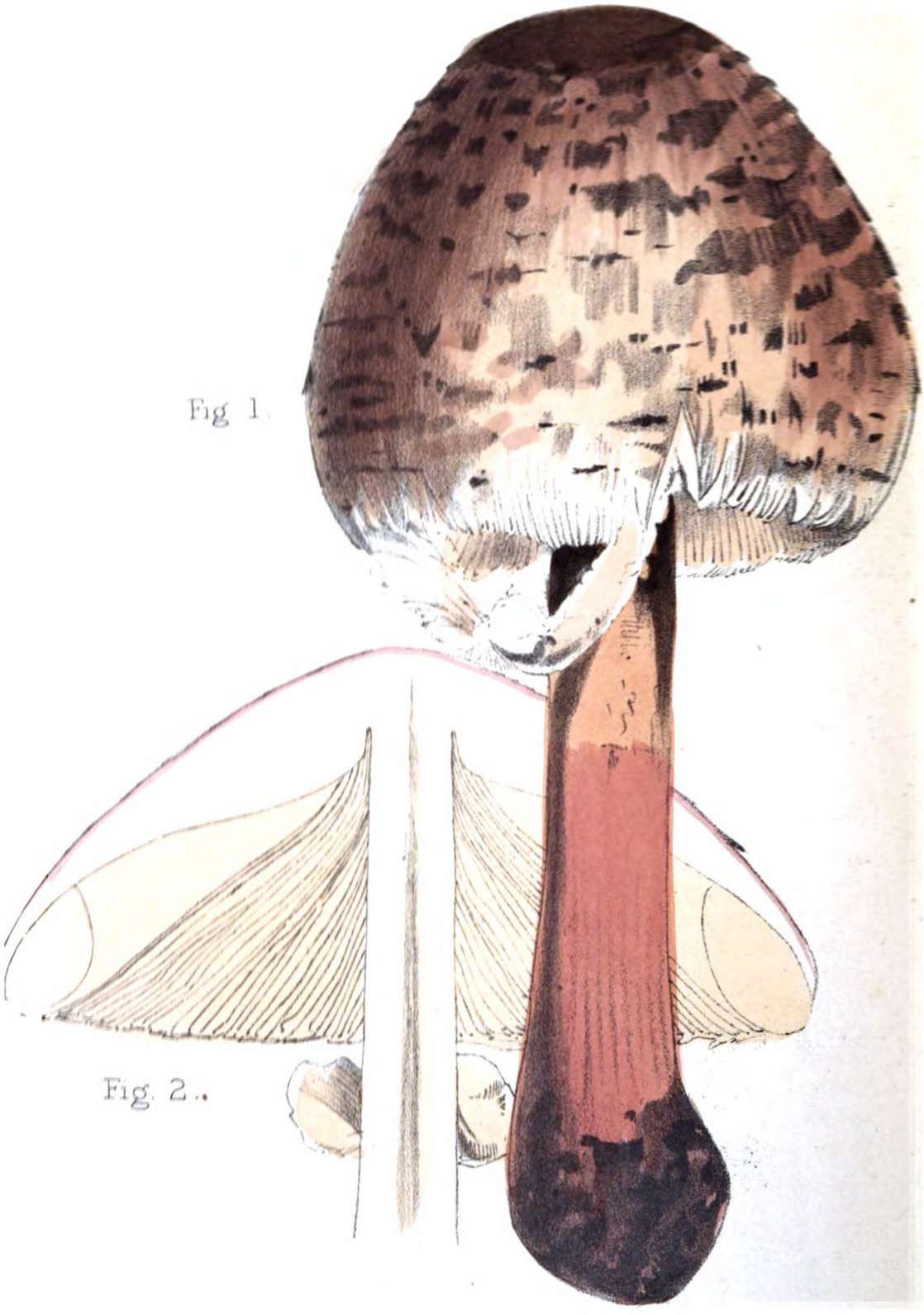
On trunks of Oaks; extremely common in some Oak woods, and may be found at Highgate, Hampstead, and Epping Forest. The specimen figured was gathered in Sherwood Forest.

F rare occurrence in Britain, this Fungus is accounted still more rare because of its short life. Its favourite habitat is upon the boles of old Oaks, and it may be found in many a lordly park. We can testify to its presence within recent years in Stoneleigh Park, Warwickshire, and Longleat Park, Wilts. A rosy pimple, protruding from the rutted bark, any time during the summer months, may herald the development of this "natural beefsteak." If we watch this vermilion-coloured pimple we shall soon see its size increase, its form change to a tongue-shape, and its hue to that of beetroot; a few more days and the broadening pileus has lost its resemblance to a tongue, and become very broad in comparison to the length, and the beetroot tint is changed for deep blood colour. In the early stage the hymenium has been white, the pores closed by tiny rosettes, which give the under surface a rough and pimpled texture, carrying out the resemblance to the ox-tongue. Later the tubers lengthen, and become tinged with ochre; as they open the buffish spores ooze out, and, too viscid to fall from each other, they hang in elegant chains and fringes from beneath the unshapely mass of pileus and flesh, until the atmosphere has dried them into powder. A fortnight serves for the full development of the Fungus; a week for its decay. In its mature form it closely resembles a beefsteak.

The best way to cook it is to slice and macerate it, add pepper and salt, and a little lemon, and minced eschalots; then strain and boil the liquid, which makes most excellent beef gravy. Mrs. Hussey does not recommend the solid part for eating, though she says it may be made palateable and nutritious when mixed with minced veal. Where it grows at all it grows abundantly, and for this reason it was called by Schœffer "The Poor Man's Fungus." It resembles meat more closely than any other of the tribe. Dr. Badham says that, if gathered young, its substance may be stewed and eaten; and even in that stage it so abounds in juice as to be well able to furnish its own sauce.

Sometimes it attains a very large size, but the width across does not often exceed 8 or 10 inches, by 3 or 4 in length. In France they scald, then stew it with herbs, pepper and salt, or grill it. In Vienna, Miss Cooke tells us, they employ it in salad as we use beetroot, adding a dressing of lemon juice or cream. The gravy can be bottled and preserved by pouring the liquid into the bottle to the shoulder, and then filling to the top with spiced spirits of wine—*not* to be shaken.

The generic name, *Fistulina*, a small tube, refers to the form of the Fungus. *Hepatica*, liver-like, alludes to the colour assumed by the mature Fungus.



W. G. Smith, del et lith.

Agaricus procerus.—Parasol Mushroom.

F Waller, Lith 18, Hatton Garden.

LEPIÒTA PROCÈRA. *Scopoli.*

Parasol Mushroom.

Family, Hymenomycetes. *Order,* Agaricini.

SYNONYMES.—*Agaricus procerus*, Hook. Engl. Flora, v. *A. colubrinus*, Bull. t. 78. 583. *A. annulatus*, Bolt. Fung. t. 23.

Pileus fleshy, scaly, at first egg-shaped, then expanded. *Gills* not touching stem. *Stem* long, scaly, bulbous, and hollow. *Ring* not adhering.

In pastures and open places near woods; not uncommon. The specimen figured was gathered at Hampstead.

NO more stately species than this can be found among the Fungus tribe. Generally growing in great abundance, you ever find this Mushroom in every various stage of growth. Mature specimens lift their tabular heads proudly from the tall slender column, while half-expanded ones shelter beneath their shade, or rounded infants crouch at their base, the heads scarcely larger than the swollen base of the stem. Groups of this Fungus are familiar to us, rising under the Firs of Kent. In infancy the pileus is brown, glossy, and entire; but the plant grows so fast that it splits its baby-coat into shreds, and those shreds adhere, in the form of shaggy scales, to the pileus for all its life. A universal veil wrapped the whole Fungus in still earlier youth, but it had no volva, and the only part of the veil that remains is the ring; and this sometimes disappears before maturity is reached. A cottony web grows from the bulbous base of the stem, adhering closely to the dead leaves and moss, among which the plant springs; and thus it is able to hold its upright position without the aid of roots. The stem is scaly and speckled. The scales on the pileus, and the very distinct umbo (or elevation in the centre), are of a full brown colour; the umbo is formed of the end of the stem, and the stem cannot be withdrawn without making an orifice. The pileus

measures about 4 inches across; the height is from 8 to 10 inches. It smells of fresh meal.

Mrs. Hussey recommends the A. procerus to be taken just before the veil breaks away from beneath the gills; the veil should be removed, but the plants *not* washed. A bit of butter, with some pepper and salt, should be placed in each saucer-like Fungus, and the whole laid in a china stew-pan, and simmered for half an hour, or less. They will form their own gravy, and their flavour closely resembles that of meat.

M. Roques gives another receipt, which we transcribe:—

"As it is very light and delicate, it is necessary to steep it in fine oil after seasoning it with a clove of garlic, pepper, and salt; in a few seconds it is cooked. It is also eaten as in fricassée of fowl cooked on the gridiron; or in a pan with butter, fine herbs, pepper, salt, and slices of bread."

The generic name is derived from the Greek words *Lepis*, a scale, and *ous*, *otis*, an ear, referring to the shape and scaliness of the pileus. *Procera*, tall, alludes to the length of the stem.

This species is excellent for ketchup. Dr. Badham speaks highly of this Fungus. He says—"In Italy it is in equal request with the Amanita Cesarea; in France it is also in high esteem—'Servie sur toutes les tables, elle est bonne à toute sauce;' and, were its excellent qualities better known here, they would not fail to secure it a general reception into our best kitchens, and a frequent place among our side-dishes at table." He quotes for it the name "Fungo Parasole."

Its season is summer and early autumn.

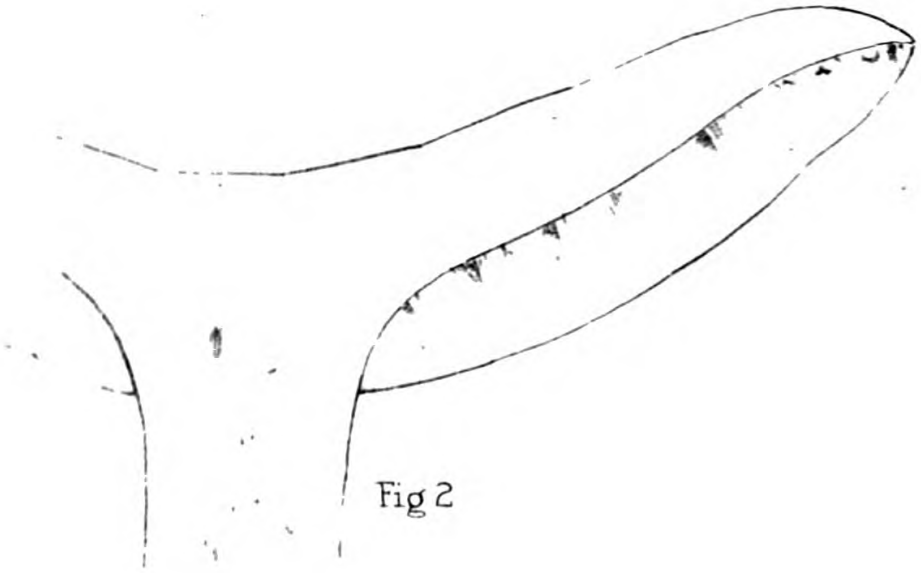


Fig 2

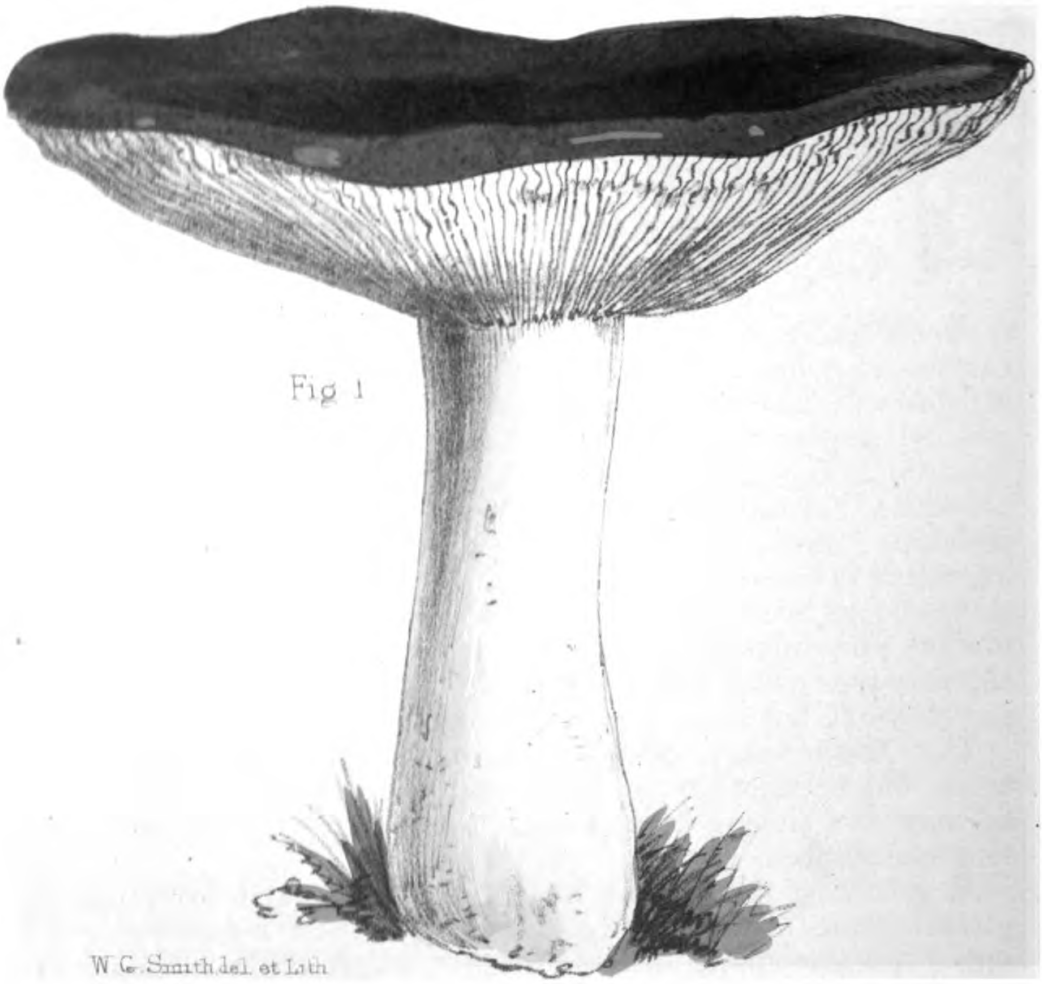


Fig 1

W.G. Smith del. et Lith

Russula heterophylla — Variable Mushroom.

F Waller, Lith. 18, Hatton Garden.

RÚSSULA HETEROPHÝLLA. *Fries*

Variable Mushroom.

Family, Hymenomycetes. ***Order,*** Agaricini.

Pileus at first convex, ultimately depressed, covered with a thin skin, variable in colour, generally greenish grey, and disappearing with age. *Stem* nearly equal, white. *Flesh* mild, firm, and white. *Gills* nearly free, white, much crowded, and forked.

Common in woods all round London. Our specimen was gathered in Epping Forest.

THE Russulæ are a family containing twenty-four members, only four of which are edible; two of these are of a reddish colour, and two of a greenish. On account of the prevailing tint the green ones are called Verdettes.

The Smooth Verdette is dome-shaped in youth, and its colour is very variable, generally partaking of the characteristic green, but sometimes varying to ochre, or even to lilac. It is a firm compact Mushroom. The stem is thick and strong, naked and solid, and if it tapers it is towards the base. The gills are numerous, thick, tapering to the stem; both they and the stem are white, but turning cream colour in age. The pileus is polished, convex in youth, but becoming plane and then depressed in the centre; the outer skin or epidermis is very thin, various in colour, and generally plane, but sometimes marked with intersecting ribs like the veins of a leaf. The cap measures about 4 inches across. The Smooth Verdette has no smell, but it has a mild sweet taste.

This Mushroom grows freely in woods, generally under Oaks, but occasionally under Elms; you oftenest find its colonies on a sloping ground where the trees have remained long undisturbed.

In gathering this species for the table the most careful attention must be paid to the distinction between it and the only poisonous species *Russula furcatus*, which resembles it,

The Smooth Verdette is inodorous and *sweet like a nut to the taste;* the R. furcatus is *very bitter* when mature. In the Smooth Verdette the gills are *crowded* and very *rarely forked;* in the deleterious green Russula they are *distant* and *all forked.* Only one of the noxious Russulæ has the green tint —the one just named.

This Verdette is so much esteemed about Paris that it is thought equal in flavour to the Amanita Cæsarea. It is very light of digestion; so much so, that Mrs. Hussey tells us it has been eaten without bad results by a consumptive patient with whom hardly any kind of meat could agree. It should be cooked quickly after gathering, as it very soon becomes the prey of insects. If it is not convenient to cook these Mushrooms as soon as they are brought in, they should at any rate be put into a dish with some butter and heated through; they can then be fried lightly whenever they are wanted. They only require a very short time in cooking.

CAUTION.

The deleterious green species, *Russula furcata*, becomes *bitter* as it matures. Its pileus is then depressed in the centre, shining, the margin thin and even; the stem taut, stout, and strong; the gills thick, few, forked, and adhering a little way down the stalk.

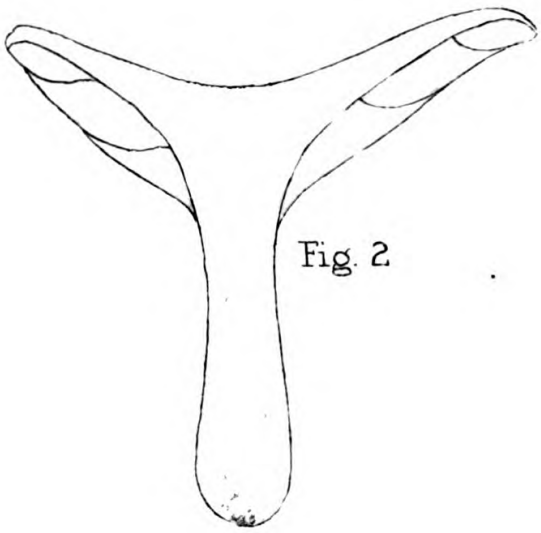


Fig. 2

Fig. 1

W G. Smith del et Lith.

Agaricus (Clitocybe) dealbatus—White topped Mushroom

F.Waller, Lith. 18, Hatton Garden.

AGÁRICUS (CLITÓCYBE) DEALBÀTUS. *P.*

White-topped Mushroom.

Family, Hymenomycetes. *Order*, Agaricini.

Pileus, *gills*, and *stem* white. Pileus fleshy, at first convex, then depressed, margin irregular and waved; Gills adnate, thin, and crowded; Stem fibrous, and nearly equal.

Fir plantations, Mushroom-beds, &c. Not uncommon. The specimen figured was gathered on Whipsnade Heath, Bedfordshire.

N Agaric more variable in form than this does not exist. When first it springs, in the early autumn, the young button-like plants are as neat and symmetrical as possible, little round or oval shields, supported on slender colourless stems; but very soon the centre becomes depressed, the margin stretches and bulges. Presently the edge bends down in one part, and curls up in another, so as to form lobes of every kind; or all the edges turn up, and convert the pileus into the form of a funnel. The plants grow alone, or in clusters, sometimes pressed so close together as to thrust one another out of shape, or to seem confluent with one another. They are covered with minute silkiness, are dry and thin, of small size, seldom exceeding $2\frac{1}{2}$ inches in breadth, but growing in considerable quantity; the pure white tint of the young plants is soon exchanged for a greyish or cream colour. Occasionally they grow in rings. Fir plantations are their favourite home.

Mr. Cooke, in his "Plain and Easy Account of British Fungi," strongly recommends this Mushroom. The best mode of cooking them is stewing. Great care must be taken to select the youngest plants, as the old ones turn tough and leathery when heated. Young specimens become tender quickly, are of a firmer texture than our well-known and fully-appreciated common Mushroom, and of a flavour by no means inferior.

As this species grows in rings, when favourably situated, we may apply to it the allusion of the poet, Allan Cunningham—

"Oh! lead me forth o'er dales and meads,
E'en as a child the mother leads,
Where twin nuts cluster thick, and springs
The Thistle with ten thousand stings;
The ring where last the fairies danced,
The place where dank Will latest glanced,
The stream that steals its way along
To glory, consecrate by song;
And, while we saunter, let thy speech
God's glory and His goodness preach"

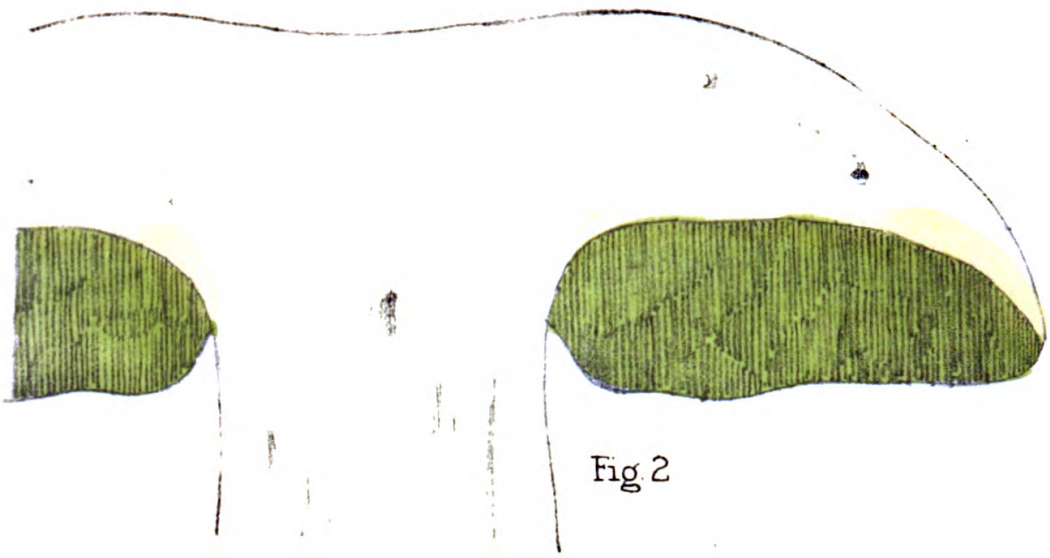


Fig 2

Fig 1

W. G. Smith del et lith.

Boletus edulis —— Edible Pore Mushroom.

F Waller, Lith. 18, Hatton Garden.

BOLÈTUS ÉDULIS. *Bull.*

Edible Pore Mushroom.

Family, Hymenomycetes. *Order*, Polyporei.

Pileus fleshy, not changing to blue when cut, cushion-shaped, smooth, and brown. *Tubes* at first pale yellow, ultimately becoming yellowish green, half-free, small, and long. *Stem* pale brown, reticulated with network, particularly near the top, often attaining a large size.

Not uncommon in the woods near London. The specimen drawn was gathered at Hampstead.

HANDSOME Fungus, often attaining a considerable size, much exceeding that of any other of the genus. The pileus is brown, convex at first, but becoming plane in maturity, and sprinkled with fine powder. The flesh is pure white. Neither it nor any other part of the plant turns blue when wounded, as is the case with the deleterious species. The tubes vary in colour at different stages of maturity: at first they are white, then lemon colour, then of a full dull yellow; they turn olive colour when bruised. The stem is thick and solid, white in youth, but turning brownish in maturity; it is covered towards the summit with a fine network of pinkish veins. The spores are olive green, and after they are shed the Sap-ball sinks quietly to decay.

This species is pretty frequently present in woods, especially under Oak trees in the south of England. It appears during the summer months or early in autumn, and a succession of plants follow one another till checked by the frosts.

To recommend the Edible Sap-ball as merely wholesome is to inflict upon it the injury of half praise. Ancient and modern gastronomists unite in pronouncing it "excellent" and "delicious." It was well appreciated by the ancient Romans, though the Amanita Cæsarea was accounted more fashionable by them, and Pliny describes it as an article of diet. It is sold under the name of "Porcius" during the winter in every market of modern Italy. In Lorraine it is called the "Polish Mushroom," because the use of it was there introduced by the Poles. In Russia it is preserved by

drying until the annual fasts, when, simply boiled, it becomes an article of welcome variety.

There are but few edible species in the Boletus group, and, though M. Vittadini asserts that all are wholesome if dried first and then cooked by stewing, we would rather not venture to eat them. The Lurid Boletus has an especially evil look. The Germans record their suspicions regarding it by the popular name they have bestowed upon it—"Satanspilz;" and we should object to eat it were it ever so dry or ever so well stewed. In seeking, therefore, to obtain the luxury of a dish of the Edible Boletus, we must be on the watch for the points of distinction between the wholesome and deleterious species. *The latter turn blue when wounded.* None of the edible species turn blue. The delicious Edible Boletus is distinguishable from the undesirable Chestnut one (B. castaneus), by the stem; that of the latter being covered with cottony fibre, and that of the former with smooth netted veins. The specimens should be gathered in the immature stage, when the tubes are lemon colour.

To cook the Edible Boleti you must first scoop out the tubes with a silver spoon or knife; cut them in pieces, and lay them in a dish, with butter, pepper, and salt; cover the dish close, and bake for one hour.

Persoon gives a more elaborate receipt:—

"They may be cooked with white sauce, with or without chicken, in fricassee broiled or baked with butter, salad oil, pepper, salt, chopped herbs and bread crumbs; to which some add ham or a mince of anchovy. They make excellent fritters. Some roast them with onions (basting with butter); but as these take longer to cook than the Boletus, this must not be put down till the onions have begun to soften."

Paulet gives a receipt for Boletus soup made in Hungary:—

"Having dried some Boletuses in an oven, soak them in tepid water, thickening with toasted bread till the whole be of the consistence of a purée; then rub through a sieve, throw in some stewed Boletuses, boil together, and serve with the usual condiments."

CAUTION.

The Boletus which has the worst character for its poisonous qualities is the *B. luridus*. In this species the pileus is brown, and generally covered with white or grey bloom, which disappears in age, and leaves the pileus smooth or sticky. The stem is stout, inclining to bulbous at the base, of a dull pale vermilion colour, dotted or lined with a darker shade. The tubes are also dull vermilion at the mouth, but if the Fungus be cut in half the upper part of the tubes is seen to be of a yellow colour. It changes to blue when bruised. B. satanas is a very nearly allied species, the pileus becoming pale after maturity, and the red stem being without markings. Both are handsome and accounted poisonous.

Fig. 2

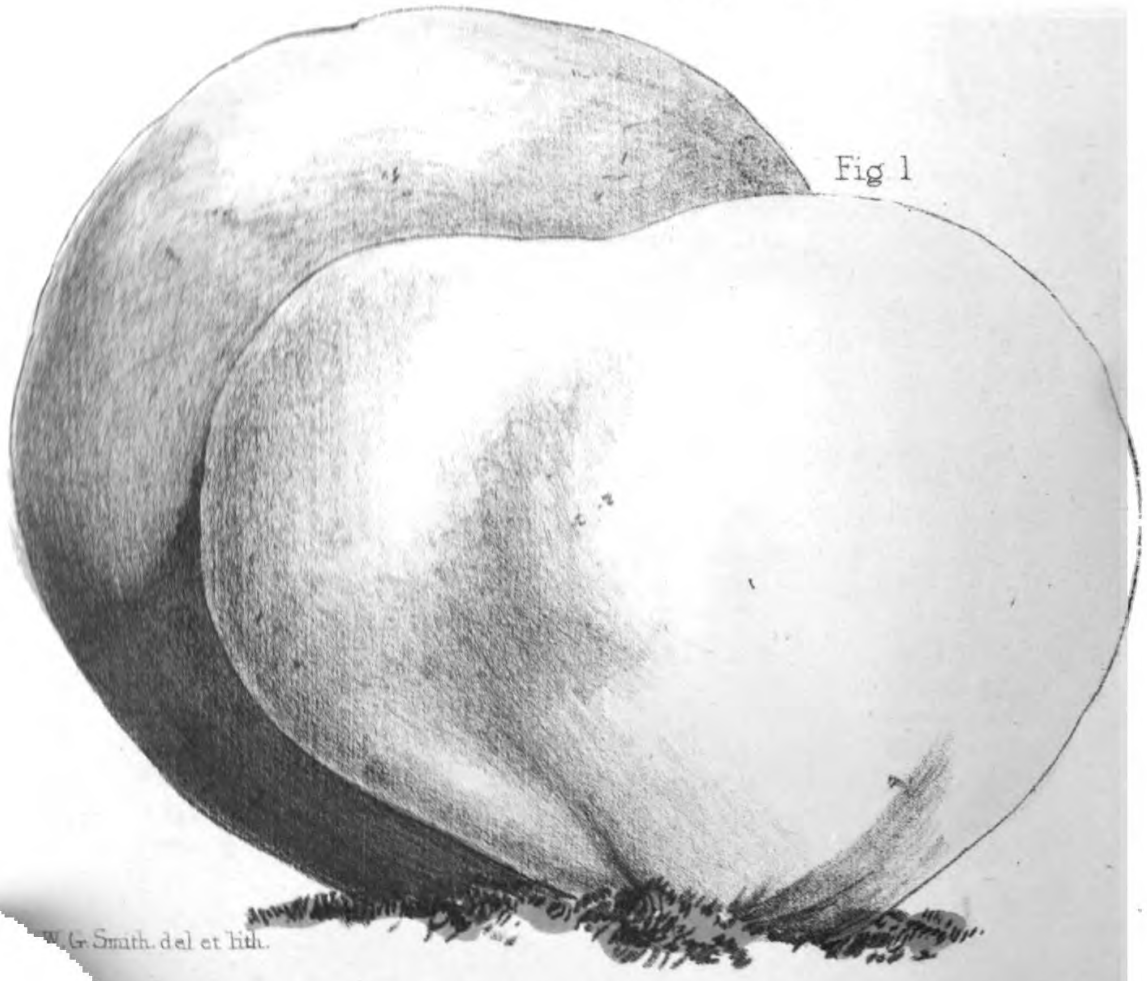


Fig 1

W. G. Smith. del et lith.

Lycoperdon giganteum —— Giant Puff ball.

F. Waller, Lith. 18, Hatton Garden.

LYCOPÉRDON GIGÁNTEUM. *Batsch.*

Giant Puff-ball.

Family, Gasteromycetes. *Order*, Trichogastres.

At first white and pulpy, then brown, and filled with a dusty mass of threads and spores. *General wrapper* membranaceous. *Bark* remaining, woolly, the threads disappearing.

Not everywhere common, but to be found in many meadows and pastures near London. The specimen figured was gathered in a meadow at Boughton, Nottinghamshire.

O English people of every age this Fungus is a familiar object. It grows freely in our summer pastures, the round white powdery heads often deceiving us into the belief that we have found some fine Mushrooms. Upon ascertaining our mistake, and seeing that the plant we have so eagerly seized is globular, and has no indication of the pinkish gills, which we recognise our edible Mushroom by, we throw it away in disgust, little suspecting that we have found quite as wholesome and palateable an article of food as the one we are embittered by being baulked of. Many, probably all the British Puff-balls, are wholesome. The Giant species is especially to be recommended—first, because its size makes it so easy of recognition; and, second, because the said size ensures you having enough of a good thing. Sometimes it is as large as a child's head, but only a few plants in a group attain so great a development; generally they vary in bulk in similar degrees to what Oranges do.

Mrs. Hussey gives an excellent receipt for Puff-ball omelette:—

"Slice them half an inch thick; have ready some chopped herbs, pepper and salt; dip the slices of Puff-ball into yolk of egg, and sprinkle the herbs upon them; fry in fresh butter, and eat immediately. They are lighter, and more wholesome, than egg omelettes, and resemble brain fritters."

The Puff-balls must be gathered young. If, on opening them, the substance is pulpy and white, it is in the right stage for dressing; but if it be marked with yellowish stains,

it is already too far advanced towards maturity, and must be rejected. They must be cooked quickly after gathering.

Mr. Cooke gives a vivid account of the enjoyment afforded by one of these Puff-balls:—

"A gardener brought us a large Puff-ball, equal in size to a half-quartern loaf, and which was still in its young and pulpy state, of a beautiful creamy whiteness when cut. It had been found developing itself in a garden at Highgate, and to the finder its virtues were unknown. We had this specimen cut in slices of about half an inch in thickness, the outer skin peeled off, and each slice dipped in an egg, which had been previously beaten up, then sprinkled with bread-crumbs, and fried in butter, with salt and pepper. The result was exceedingly satisfactory; and finding this immense Fungus more than our family could consume while it remained fresh, we invited our friends to partake, and they were as delighted as ourselves with the new breakfast-relish, to them, and to us, the first, but we hope not the last, experiment on a fried Puff-ball."

Vittadini recommends that, where the giant specimen is conveniently situated, you should only take one slice at a time, cutting it off horizontally, and using great care not to disturb the position of the Fungus. This ensures the continuance of growth, and prevents decay, and thus, he says, "you may have a fine fritter every day for a week."

The Giant Puff-ball has other uses besides its edible ones. Old wives used to bind up cuts with a thin slice of it, thus ensuring their speedy healing. Still older wives, or wives of an earlier date, living before the days of lucifer matches, regarded it as a natural tinder-box, and used the dry threads and spores, which ooze like smoke from the summit when the surrounding case bursts, as tinder, to catch and hold the sparks thrown from their flint and steel. Gerarde records another use for them. He says:—

"In divers parts of England, where people doth dwell farre from neighbours, they carry them kindled with fire, which lasteth long."

The poet alludes to their ancient customs, as well as to the improved modern one:—

"We'll make a feast, in our mossy dell,
Of infant Puff-ball and rare Morel,
And many a favoured guest shall sup
On Lily-dew from a siller cup.
The aged Puff-balls shall help us to cheat
The dainty bees of their luscious meat;
While others shall burn to give us light,
And scare from our dell the dreary night."

The fumes of this Fungus, when burned beneath a bee-hive, intoxicate the bees, and cause them to fall insensible to the bottom of the hive. While they remain thus the honey may be removed without injury to the bees; thus the Puff-ball may save man from the iniquity of becoming a murderer as well as robber.

Fig. 2.

Fig. 1.

W.G. Smith, del et lith.

F. Waller, Lith. 18 Hanson Garden.

Boletus æstivalis.—Summer Pore Mushroom.

BOLÊTUS ÆSTIVÀLIS.

Summer Pore Mushroom.

Family, Hymenomycetes. *Order,* Polyporei.

Pileus cushion-shaped, fleshy, downy, brown, soon split and rent. *Tubes* at first white, then pale yellow, small and long.

In woods, and open places near woods, appearing in May, and sometimes attaining a very large size. It grows in all the woods near London. The specimen figured was gathered in Darenth Wood, Kent, in the month of June.

THIS is one of the largest members of the Sap-ball family—fine specimens measure from 20 to 24 inches in circumference, the stem being stout in proportion, often upwards of 2 inches in diameter. The cap varies in tint from pale tan to grey; it is silky, and covered with delicate powder, like the bloom on a Plum, and in maturity it becomes granulated. The stem is very stout and strong, of a dull white tint, and somewhat tapering upwards. The tubes are long and very small, dingy white, like the stem. This Boletus is one of the earliest in its appearance; it has been found in perfection as early as May, but its more general season is late in June, and during July. It grows in pastures generally under Oak or Beech trees in Kent and Hampshire. When it appears surrounded by the abundant offspring of its deleterious ally, the B. luridus, you have only to break in pieces one of each kind, and you see the distinction between the innocent and noxious species. No sooner have you broken a deleterious Boletus than a blue tint appears upon the fracture, just as if you passed a brush filled with prussian blue over the part. This effect takes place more quickly in young specimens—indeed, Vittadini asserts that it does not take place at all in worm-eaten ones. He probably means by this, that the wounds caused by insects do not become blue. We have certainly seen specimens half devoured, and yet not discoloured, which, when

we have further mutilated them, have assumed the blue tint at every fracture. The effect of this transformation in colour is very striking, and at once conveys the impression that an evil influence is at work, reminding us of Shelley's very unfavourable sketch of the Fungus tribe—

> "And plants at whose name the verse feels loath,
> Filled the place with a monstrous undergrowth—
> Prickly and pulpous, and blistering, and blue,
> Livid, and starred with a lurid dew.
>
> "And Agarics and Fungi, with Mildew and Mould,
> Started like mist from the wet ground cold;
> Pale, fleshy, as if the decaying dead
> With the spirit of growth had been animated.
>
> "Their mass rotted off them flake by flake,
> Till the thick stalk stuck like a murderer's stake,
> Where rays of loose flesh yet tremble on high,
> Infecting the winds that wander by."

But very different from such harmful and disagreeable species is our much-valued Boletus æstivalis. It selects airy pastures, overshadowed by trees of the highest repute—the famous Oaks of old England, or the noble Beech or Elm. Mrs. Hussey assures us that it not only one of the largest but the most delicious of the Boleti, and she brings M. Paulet's evidence to strengthen her own. It is, unfortunately, a rare species, and has been found by but few persons, Mr. Berkeley and Mrs. Hussey among the number; but, as it has been well remarked, that Great Britain is richer in edible Fungi than in students, there is much ground for hope that, as observers multiply, not only this, but many another delicious species will be discovered in many a locality where their presence has not been suspected hitherto. All who have had the opportunity of observing it are agreed in the assertion that its flesh does not turn blue when cut.

Before cooking this Boletus the tubes must be scooped out with a silver knife or spoon; it must then be cut in pieces, placed in a pan, with butter, salt, and pepper, covered close, and baked or stewed for an hour.

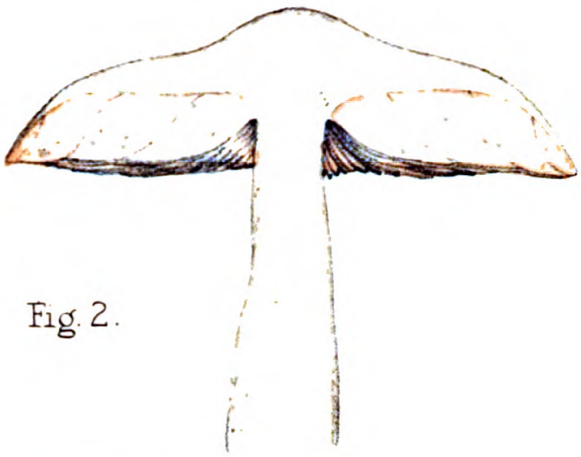


Fig. 2.

Fig. 1.

W. G. Smith. del. et lith.

F. Waller. Lith. 18. Hatton Garden.

Agaricus (collybia) Fusipes. — Spindle Stemmed Mushroom.

AGARICUS (COLLÝBIA) FÚSIPES.

Spindle-stemmed Mushroom.

Family, Hymenomycetes. *Order*, Agaricini.

Pileus somewhat fleshy, brown. *Gills* adnexed, pale, delicately spotted. *Stem* pale brown, ventricose, somewhat channelled and split, extremely attenuated, and black at the bottom; in young specimens the stem is irregularly twisted and bent.

On stumps exceedingly common, appearing very early in the season. The above description refers to the young plants of June and July. Later in the year the whole Fungus gets nearly black, when it is unfit for use. The specimens figured were gathered in Darenth Wood, Kent, in the month of June.

FREQUENT species, growing in dense clusters on the stumps and boles of trees during summer, generally appearing after thunderstorms. The pileus is smooth, even, viscid in wet weather, the colour varying from buff to a rich umber, often marked with red or dark patches; in form it is dome-shaped in youth, and the edges incurved, but it soon becomes expanded, and often split or otherwise deformed. From the density of the cluster but a few specimens are able to attain the full natural size of from 3 to 4 inches across; the remainder are either unequally developed, extending on the one side, and dwarfed on the other, or continue quite minute, as in infancy. The gills and flesh are white at first, then the gills assume a yellowish or buff tint; they are easily separable from the stem—indeed they part from it frequently in age, and are often spotted. The stem is spindle-shaped, tapering to the base and the summit, and swollen in the centre, often so much so as to burst and exhibit the cavity within; it is of the same colour as the pileus; it roots itself in the decaying bark, and varies extremely in its length. Old Oak trees are its usual habitat.

A group of this Mushroom forms a very agreeable object

in the woodland landscape, its warm tint contrasting well with the sombre colour of the bark on which it grows, and the surrounding green, added to which effect of contrast the eccentric form of the group, the elongated stems, twisting in every direction, gives a charm of another kind. It is very frequently that we find the Oak stumps adorned by a colony of these Mushrooms.

The excellence of the Spindle-stemmed Mushroom, when employed in a dried state to enrich the flavour of gravies, contradicts the general rule that Fungi growing on wood are always unwholesome and unpalateable. We have Dr. Badham's authority for the statement that it is good and wholesome stewed, or fried in butter, or fricasseed. Persoon declares it to have the same flavour as the "Champignon de Couche," only "un peu plus prononcé." Dr. Badham recommends it highly as a pickle, and we would suggest that the smaller members of the cluster should be so used, treating them as the well-known and esteemed "buttons" of the one thoroughly accepted English Mushroom; while the larger members may be stewed, or dried for future gravies, in the manner chiefly recommended by Mrs. Hussey.

The peculiarity of the stem makes this species easy of identification.

Fig. 2.

Fig. 1.

W.G. Smith del et lith.

F.Waller, Lith. 18 Hanson Garden.

Russula alutacea.—Yellow gilled Mushroom.

RÚSSULA ALUTÀCEA.

Yellow-gilled Mushroom.

Family, Hymenomycetes. *Order,* Agaricini.

Pileus usually pink or crimson, sometimes nearly white, fleshy, and somewhat irregularly expanded, here and there depressed. *Stem* firm and solid, white, or delicately stained with very pale red. *Gills* thick, and always a rich but subdued yellow colour. A more or less large species.

Very common in all the woods round London, and appearing early in the season. The specimen figured was gathered in Bishop's Wood, Hampstead, in June.

IN this species the pileus is very variable in colour—pink, red, or shading to olive; it is viscid in moist weather, the margin thin and plane in youth, but afterwards becoming striate. The flesh is white; and the stem is stout, solid, varying from white to red. The gills are thick, equal, and rather distant; their colour is always a full buff, and, the spores being of the same colour, the tint of the gills does not change when they fall. This is the distinguishing mark of the species—the unvarying buff gills render its identification easy. A full-grown specimen measures about 3 inches across.

On the esculent properties of this Fungus authorities are at variance. Vittadini recommends it as "dainty food, possessed of a most agreeable flavour." Our own fungologist, Mr. Berkeley, usually most cautious in allowing the wholesomeness of any but the best-attested species, pronounces this "esculent." Mr. Cooke assures us that "the flesh is soft and savoury, and may be eaten without fear of unpleasant consequences." All these authorities designate it one of the "Mild Russulæ."

On the other hand, Dr. Badham, who discovers gastronomic excellencies in many species about the edible properties of which Mr. Berkeley is studiously silent, classes this species among the "Acrid Russulæ;" and he identifies the English species with a variety of the Italian one described

by Vittadini, and allowed by him to be "endowed with a very caustic taste, smelling of pepper, and to be avoided;" and he asserts that it is always acrid when eaten raw, and, therefore, charges his readers to avoid it. At the same time he acknowledges that he has never tried this species in a cooked state, and that the process of dressing may probably remove the acrid qualities. Still the counsel with which he concludes his dissertation is by no means unwise—"I would advise no one to try this species, especially when there are so many others, the good qualities of which are known."

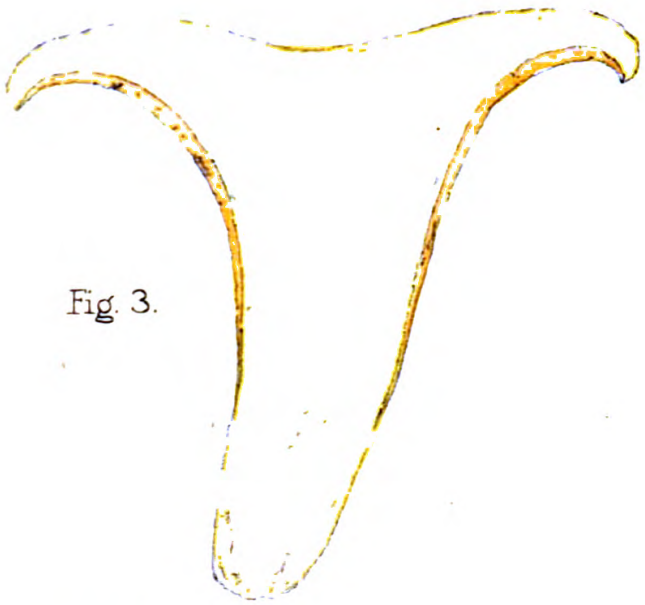


Fig. 3.

Fig. 1.

Fig. 2.

W. G. Smith del et lith.

F. Waller, Lith. 18 Hatton Gard

Cantharellus Cibarius. — Chantarelle.

CANTHARÈLLUS CIBÀRIUS.

Chantarelle.

Family, Hymenomycetes. ***Order,*** Agaricini.

Pileus very fleshy and solid, generally very irregular, and top-shaped. ***Stem*** tapering downwards. ***Gills*** reduced to small thick swollen veins. The whole plant brilliant yellow.

Common in summer and autumn in woods near London. The specimen figured was gathered in a small plantation near Carshalton, Surrey. There is a variety of this species, generally frequenting pastures, with a very thin stem, and generally with paler gills; not uncommon.

IN the genus Cantharellus we lose the familiar form of gills which characterises all the Agaric group, and find them in the shape of veins, shortened and thickened. The pileus of the Common Chantarelle is irregular in form; in youth it is dome-like, the margin rolled in, the whole plant resembling any staid little Agaric; but as it advances towards maturity the margin stretches, sometimes turning up, or becoming lobed, while the centre often becomes depressed, or the whole pileus assumes a misshapen and eccentric form. The colour is orange, inclining to ruddy, varying in tint as in a ripe Apricot, which fruit the Chantarelle resembles both in colouring and odour. The texture is smooth and bright, not downy, as in the deleterious C. aurantiacus. The veins are wide apart, much swollen, and often wrinkled; they are of the same apricot colour as the pileus. The stem is short, thick, solid in youth, but becoming hollow in maturity, of the same substance as the pileus, the veins continuing a short way down it.

This Fungus grows in great abundance where it grows at all. It affects airy woods, in high situations. We have found it in quantities in the plantations about Virginia Water, in Berkshire, early in August, and later in the same season, in still greater abundance, in the woods at Callander, in Perthshire. It is easy of recognition; for its rich apricot hue, and eccentric manner of growth, attract observation; and it selects such romantic habitats, that we generally find it when our minds are especially awake to the beauties of nature, *en petit*, as well as *en grand.*

There is no disparity among the opinions of connoisseurs on the gastronomic excellencies of this Chantarelle. Persoon tells us that in some places the inhabitants make it their principal food. Mr. Berkeley recommends it as of "agreeable

taste, though pungent;" and Mrs. Hussey declares—"I have found it perfectly wholesome, and very pleasant."

Great care must be taken in collecting specimens for the table; light and soft plants must be thrown aside, as they become leathery in cooking, and crisp heavy ones chosen. Any that are eaten partially by slugs or grubs must be rejected, this being a general rule with all edible Fungi. Vittadini tells us that the Chantarelle, "being rather dry and tough by nature," should be cooked with plenty of sauce. It requires to be stewed slowly, and for a considerable length of time, and is the better for being soaked in milk all night. If, the moment the Chantarelles are brought into the kitchen, they are scalded in milk, and left in it to soak until the next day, they will be very tender, and can be treated in any of the ways recommended by the authorities we are about to quote.

Mrs. Hussey proposes that they should be stewed in brown veal gravy, or served with white sauce, as a fricassee, or dressed with aspic gravy, in which case they must previously be scalded in water, not in milk, as the latter would destroy the transparency of the aspic gravy. We take the following receipt from her directions:—

"Cut the Mushrooms across, and remove the stems; put them into a closely-covered saucepan, with a little fresh butter, and sweat them; take them out, wipe, and stew in gravy, or fricassee till tender, at the lowest possible temperature; a great heat always destroys the flavour."

The next receipt we borrow from Mr. Cooke:—

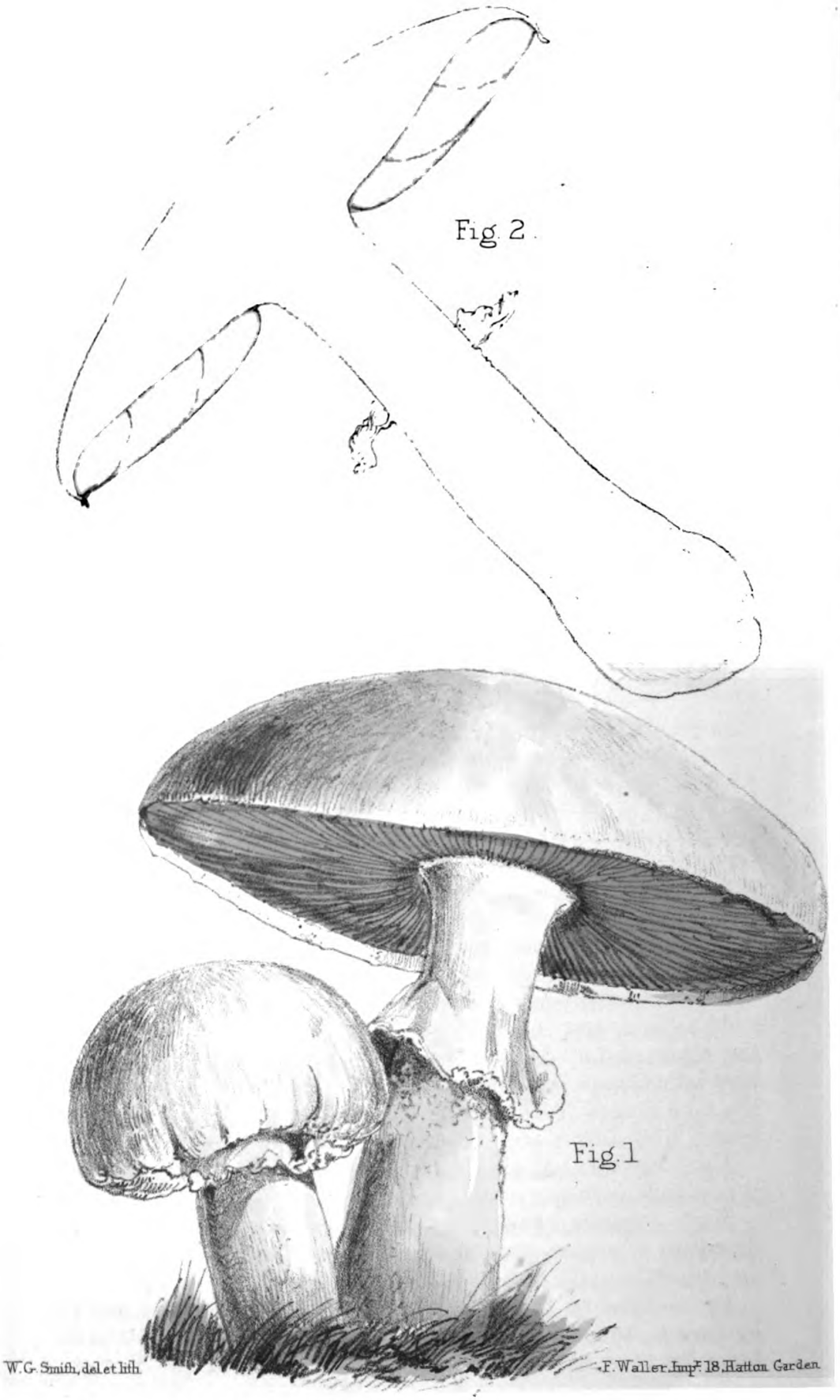
"Pick and wash the Chantarelles, put them into boiling water, then stew in fresh butter, with a little olive oil, chopped tarragon, pepper, salt, and lemon-peel. When they are cooked allow them to simmer gently over a slow fire for fifteen or twenty minutes, moistening them from time to time with a little beef gravy or cream. When about to be served thicken the stew with yolk of egg."

A more simple dish may be formed by merely frying the Chantarelles in butter or oil, and laying them on toasted bread, adding pepper and salt, according to taste; or they may be minced, and stewed simply, or with minced meat.

The Italians merely dry them for winter use, or pickle them in brine, but they do not attain any excellence in cooking them.

CAUTION.

Cantharellus aurantiacus is unwholesome. It is orange or apricot-coloured, but the pileus is covered with down; the veins or folds are thin, crowded, and of a darker colour than the rest of the plant; and the stem is frequently tinged with black towards the base. It grows among rank grass and decaying herbage, affecting less wholesome habitats than the edible species, though, like it, preferring lofty positions. It is more common, and grows in great abundance.



Agaricus (Psalliota) campestris.—Meadow Mushroom.

AGARICUS (PSALLIOTA) CAMPESTRIS.

Meadow Mushroom.

Family, Hymenomycetes. *Order,* Agaricini.

Pileus fleshy, variable, smooth, covered with woolly hairs, or scaly. *Flesh* white, slightly inclined to change colour. *Stem* equal, stuffed, nearly white, sometimes bulbous. *Gills* distant from stem; when fresh flesh colour, then intense brown.

Generally common in meadows, pastures, &c. The specimen figured was gathered at Boughton, Nottinghamshire.

THE humble but welcome form of the well-known Mushroom is familiar to every observer. In youth it appears like white knobs arising from among the grass in pastures, and when the globular head is well out of the earth a short stem becomes visble. The pileus then assumes a dome-like form, the lower edges connected with the stem by a veil, which splits off them as the dome expands, and hangs round the stem in an irregular ring. The pileus is dry, white or tinged with brown, cottony or sometimes scaly; in full age it is umbrella-shaped. The gills are flesh-coloured, closely placed, and free; the spores are purplish brown, and turn the gills of a dark colour when they are ripe. The stem is white, short, and solid.

There are several varieties of this Mushroom affecting different habitats, and requiring different treatment in preparation for the table.

Var. *Pratensis* has a slightly scaly pileus, the scales of a reddish hue, and the flesh pink, and thick in proportion to the other parts. It is often misshapen in form, affects the neat knob-shape but little, and, as Mrs. Hussey remarks, "has the appearance of being more coarsely fed." It is frequently found in meadows about London and other large towns.

Var. *Villaticus* attains a very large size, and is also scaly; it is a rare variety.

Var. *Silvicola* grows in woods; it has a smooth pileus, destitute of scales, and a bulbous stem; the gills are pallid, and taper equally to both ends.

From June to the end of September Mushrooms are to be found; those growing in pastures are accounted the best, but very good ones grow in great plenty among the "after-

grass" of the meadows. Old Gerarde gives the preference to these, he says:—

"The meadow Mushrooms are in kind the best,
It is ill trusting any of the rest."

In the Papal States this wholesome Mushroom of ours is almost the only one condemned to be destroyed—all which enter Rome are obliged to be thrown into the Tiber, and one of the worst execrations used by the lowest Italians is, "May you die of a Pratiola." But in other countries this Mnshroom is as much esteemed as with us.

There are numerous ways of cooking the common Mushroom, many of them well-known and generally approved. The young plants of the typical species are gathered and pickled as "buttons." The outer coating of the pileus is removed by rubbing them with a piece of clean flannel dipped in salt, then the stalk is cut even with the lower edge of the incurved pileus, and the "buttons" thus prepared are thrown for few minutes into scalding brine. When taken out of the brine they are laid on a cullender to drain, and then a sufficient quantity of vinegar is boiled with peppers and a good deal of mace. As soon as it is taken off the fire the buttons are plunged in it, and when the whole is quite cold they may be stored in wide-necked bottles. They are relished in the ordinary style of pickles, or as garnish for boiled chickens and all white meats. Mushrooms of more advanced growth, and consequently larger size, form an excellent breakfast dish, either simply fried in butter, or stewed with beef gravy or cream; or they form a very appetising addition to a rechauffé when cooked in the gravy.

Dr. Badham gives two receipts, which we copy from his book—

RECEIPT 1.—*A la Provençale.*

"Steep for two hours in oil, with some salt, pepper, and a little garlic: then toss up in a small stew-pan over a brisk fire, with parsley chopped and a little lemon juice."

RECEIPT 2.—*To Stuff Mushrooms.*

"Take large Mushrooms, full grown, but not black; remove the gills, and place in lieu of them the following stuffing:—bacon shredded, crumbs of bread, chopped herbs, and a little garlic or eschalots, salt, pepper, and a taste of spice. Broil in paper as a Maintenon cutlet, moistening with butter when necessary."

CAUTION.

There is a variety of this Mushroom called in some counties the "Hedge Mushroom," which, according to Dr. Badham, is liable to produce derangement of the stomach. It is much lighter for its bulk than the more wholesome varieties, its gills are darker and redder, and its spores have less of the purple tinge. The flesh is tougher and drier, and the stem is hollow. It has a disagreeable odour, and insipid taste.

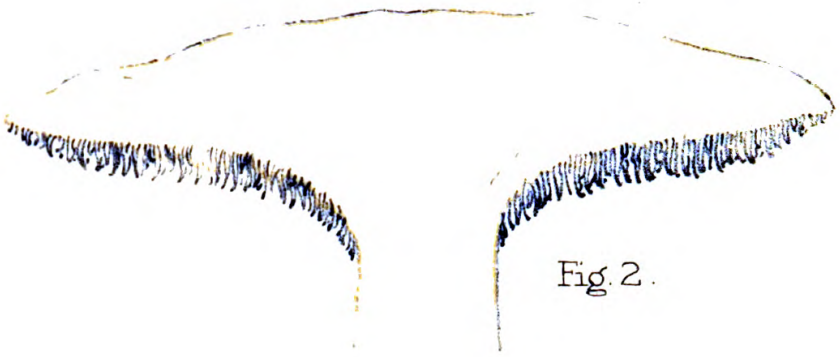


Fig. 2.

Fig. 3.

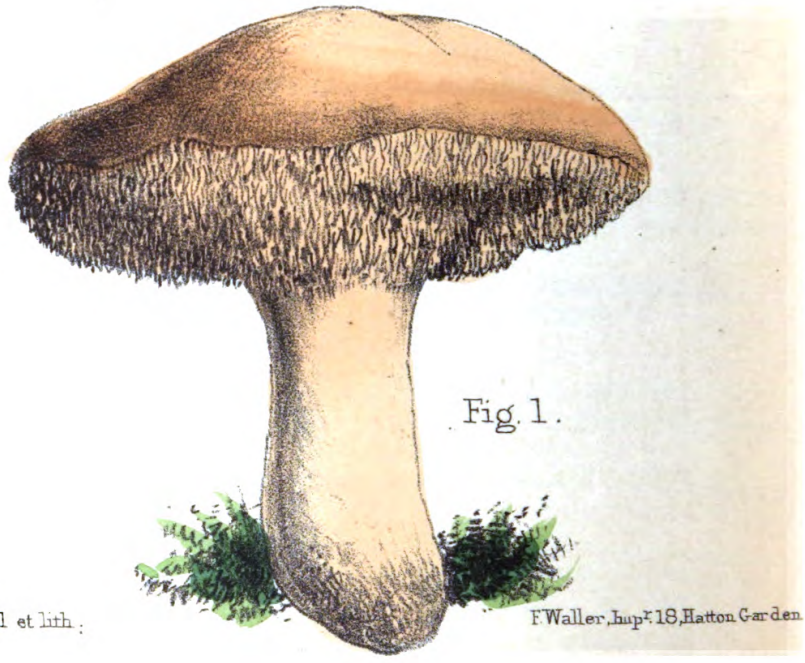


Fig. 1.

W. G. Smith. del. et lith.

F. Waller, lith.r 18, Hatton Garden.

Hydnum repandum — Spine-bearing Mushroom.

HYDNUM REPANDUM.

Spine-bearing Mushroom.

Family, Hymenomycetes. *Order,* Hydnei.

Pileus uneven, fleshy, pale cinnamon. *Spines* of various sizes, running down stem, paler than pileus. *Stem* solid, cream colour.

In woods not uncommon—very plentiful at Hampstead. The specimen figured came from High Wycombe, Bucks, sent us by Mr. James Britten.

ERE we have a Mushroom about which no one gifted with any power of observation can possibly make a mistake. The Hydnum group are characterised by having the fruit-bearing part disposed over the surface of awl-shaped teeth, which are crowded in abundance beneath the pileus, occupying the same position as the folds of the Agaric. The group is pretty extensive, but it contains very few stalked species, and of these, the only one at all common is the edible one, of which we now treat. The pileus is fleshy and apricot-coloured, it seldom preserves the regular dome-like shape, but spreads out in irregular lobes, and assumes quaint forms; it attains a considerable size, and the flesh is thick, white, and firm, and turns brown-red when bruised. The spines are conical in form, and of the same colour as the pileus. The stem is irregular in outline, pale apricot colour, and solid. The spores are round and white.

The Kentish woods furnish great numbers of this Mushroom in the early autumn, and we have found it in plenty in similar localities in Somersetshire, and the more fertile parts of Wiltshire.

The gastronomic qualities of the Hedgehog Mushroom are of high degree. Its flavour when stewed is excellent, and cooked with white sauce it has a decided flavour of oysters, no mean recommendation this year in particular when the actual flavour of oysters is hardly attainable.

The French call it Chevrotine or Chevrette, and the peasants name it Barbe de vache. Duchesne says of it,

"Les gens de la campagne mangeau ce Champignon cuit sur le gril, avec du beurre frais, du sel, du poivre, et des fines herbes."

Mrs. Hussey does not recommend the French mode of cooking our Hedgehog Mushroom, she prefers stewing in brown or white sauce. All authorities are agreed that it should be cooked slowly, and for a long time, and kept well supplied with liquid, being itself deficient in moisture. Its dry nature makes it easy to preserve, and it may be kept for a great length of time strung like the Mouceron.

From the directions of M. Roques we arrange a receipt for the concoction of an excellent stew.

RECEIPT.

"Cut the Mushrooms in pieces, and steep them for twenty minutes in warm water; then put them into a pan with butter, pepper, salt, parsley, and beef or other gravy, and simmer for an hour."

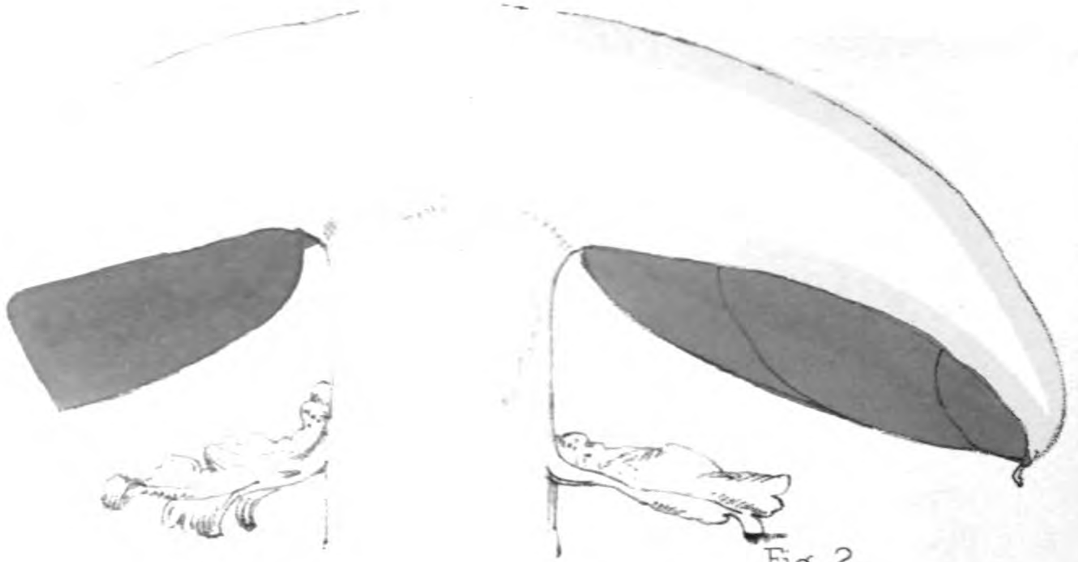


Fig. 2.

Fig. 1.

W. G. Smith, del et lith. F. Waller, Imp.r 18 Hatton Garden.

Agaricus (Psalliota) arvensis. — Horse Mushroom.

AGARICUS (PSALLIOTA) ARVENSIS.

Horse Mushroom.

Family, Hymenomycetes. ***Order,*** Agaricini.

Very near the Meadow Mushroom, *Plate* 17. *Pileus* fleshy, white, at first covered with woolly hairs, then expanded and smooth. *Stem* loosely stuffed, white. *Ring* large, thick, and split, eventually falling away. *Gills* at first white, then pale livid brown approaching flesh colour, whole plant turning brownish yellow when bruised.

Generally common in meadows, pastures, and roadsides. The specimen figured was gathered at Boughton, Notts.

NEARLY allied to the common Mushroom, so nearly indeed, that it is scarcely better entitled to rank as a separate species than the varieties Pratensis and Silvicola are; but as it is accounted distinct by many authors, and has many qualities of note, it well deserves a separate consideration. The Horse Mushroom has a dome-shaped pileus, bell-shaped in youth, and expanding in maturity, generally of a pure white colour and cottony texture, but losing its downy appearance in age; and a veil consisting of a double membrane, thick, woolly, falling from the edge of the pileus, and hanging loosely round the stem; the gills are free, pale pinkish brown, becoming darker as they get older; the stem is cylindrical, the cavity filled with cottony pith. The flesh turns yellow when bruised. Occasionally the pileus is tinged with brown. It attains a large size. Authorities are at variance as to the manner of its growth. Mr. Berkeley describes it as growing in rings, and Mrs. Hussey does not number it among those addicted to circular growth. When it does grow in rings they are of a very large size indeed, and as they are seldom perfect it is easy to overlook the relation which one group has to another.

Fields and woods are the habitats of this Mushroom; those growing in the former are the most wholesome. They

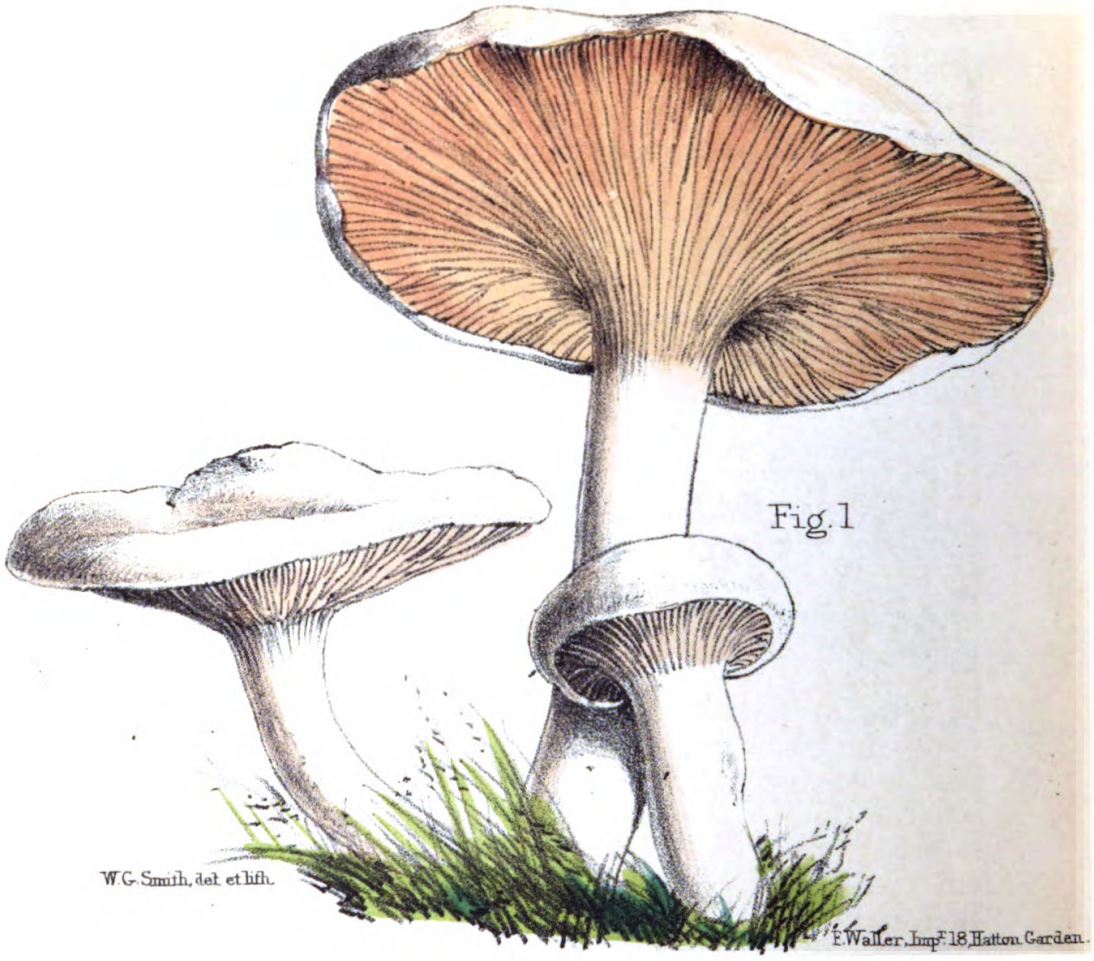
should not be taken in the button stage like the A. campestris, but are in perfection just as the veil has broken away from the pileus, and the bell-shape is merging into the dome. In this stage, and later if free from larvæ, the Mushroom is excellent fried or stewed, and for this purpose is sold in Covent Garden Market.

It is one of the best Mushrooms for making ketchup, its large size being a great desideratum in this matter. We transcribe Mrs. Hussey's receipt for its treatment.

KETCHUP.

Gather a quantity of Horse Mushrooms growing in pleasant places, taking care that all are *sound*, peel the caps if soiled, but do not break them. Cut off the stems. Lay the caps on an earthen cullender, placed over a bowl, and powder them freely with salt. After twenty-four hours press the pulp down on the cullender, and preserve all the liquor that runs off, and no more. Procure a quart of spirits of wine before the ketchup season comes, put it into a bottle with a glass stopper, and add any spices you like. When the liquor has been strained off the Mushroom pulp let it settle for twelve hours, then put it into half-pint bottles, filling them to the shoulder, and add the spiced spirit to the neck, cork them tightly, and do not shake them, for the spirit must remain floating on the top to exclude the air, and so prevent the formation of that fungus called "Mother." When you wish to use the ketchup shake the bottle thoroughly, and put as much of the contents as you like into the gravy or soup when about to take it off the fire. The ketchup should never be boiled in cookery, for the action of boiling destroys the Mushroom flavour."

Fig. 2.



Agaricus (Clitopilus) prunulus. — Plum Mushroom

AGARICUS (CLITOPILUS) PRUNULUS.

Plum Mushroom.

Family, Hymenomycetes. *Order,* Agaricini.

Pileus somewhat fleshy, dry, waved, ultimately depressed, white, or slightly stained with yellowish brown. *Gills* more or less running down stem, at first nearly white, then approaching flesh colour. *Stem* solid, smooth, and white.

Common in woods, frequent at Highgate and Hampstead. The specimen figured was sent us by Mrs. Gulson, of Eastcliff, Teignmouth.

ON this we have a Mushroom of small size, seldom attaining and never exceeding a width of 6 inches. The pileus is fleshy and compact, snow-white on the surface, or tinged with buff or grey, soft to the touch and delicately downy; at first the edges are turned in, but in time they expand, the top becomes defaced and assumes a somewhat funnel-shape. The flesh is firm, the gills white at first, very numerous, and closely packed, connected by a tooth to the end of the stem. There are a number of imperfect gills interposed between the perfect ones, thus increasing the crowding, and so pressing together in youth, that they become marked by each other's fibres, and wear the impression to maturity. The stem is white, firm, and solid, generally a little bent towards the foot. The spores are of a pinkish salmon colour, and when they fall they impart their own hue to the hitherto white gills.

The Mouceron is one of the few Mushrooms that appear in spring. Overshadowed by newly opening foliage it may be found in irregular rings on the borders of the Sheerwater woods in Wiltshire, or on open places within sight of the lake. As the red caps of the poisonous Fly Agaric are welcome in the autumnal landscape for their brilliant hue, so are the pure white heads of the Mouceron welcome as a contrast to the gorgeously-flowered herbage of the spring. In Kent, too, we have seen this Mushroom in plenty, clustering under the spreading Oaks in pastures bordering the noble woods still remaining from the ancient forests.

Whenever and wherever the Mouceron is found let it be welcomed for its utility still more than its beauty. It is highly esteemed in the Roman market, and throughout Italy is sold in strings in a dried state, being then called "Funghi di Genoa." Professor Balbi praises it highly, and recommends it to be cooked fresh, or dried as an ingredient for soups and gravies. Dr. Badham recommends it as a dish by itself, stewed or fricasseed, with the following sauce:—

"Bruise in a mortar some sweet almonds with a little water, then add salt, pepper, and some lemon-juice, rub the whole together till it is of the consistence of common mustard."

When the Mouceron is gathered for drying each plant must be cut in four pieces, exposed to the air for several days, and then threaded. A few of these pieces thrown into a pan of soup just before it is taken off the fire impart to it an excellent flavour, and they are equally valuable in gravies and minces.

No Mushroom is more in harmony with the idea of fairy rings and merry woodland sprites than this. Frequenting the precincts of the forests of long ago, it flourishes in the very localities where imagination might suppose the tiny people would linger; and what so suitable for their midnight fêtes as the alabaster tables covered with silky white damask which the caps of the Moucerons present?

But Miss Godwin assures us that—

"The fairies long since trooped away,
Then fled the ghosts in full array,
And now each muse departs;
Expelled from grove and sacred stream,
Where erst they dwelt in airy dream,
The poor things break their hearts."

Such being the case, we need have no compunction in eating their disused tables!

Fig. 2.

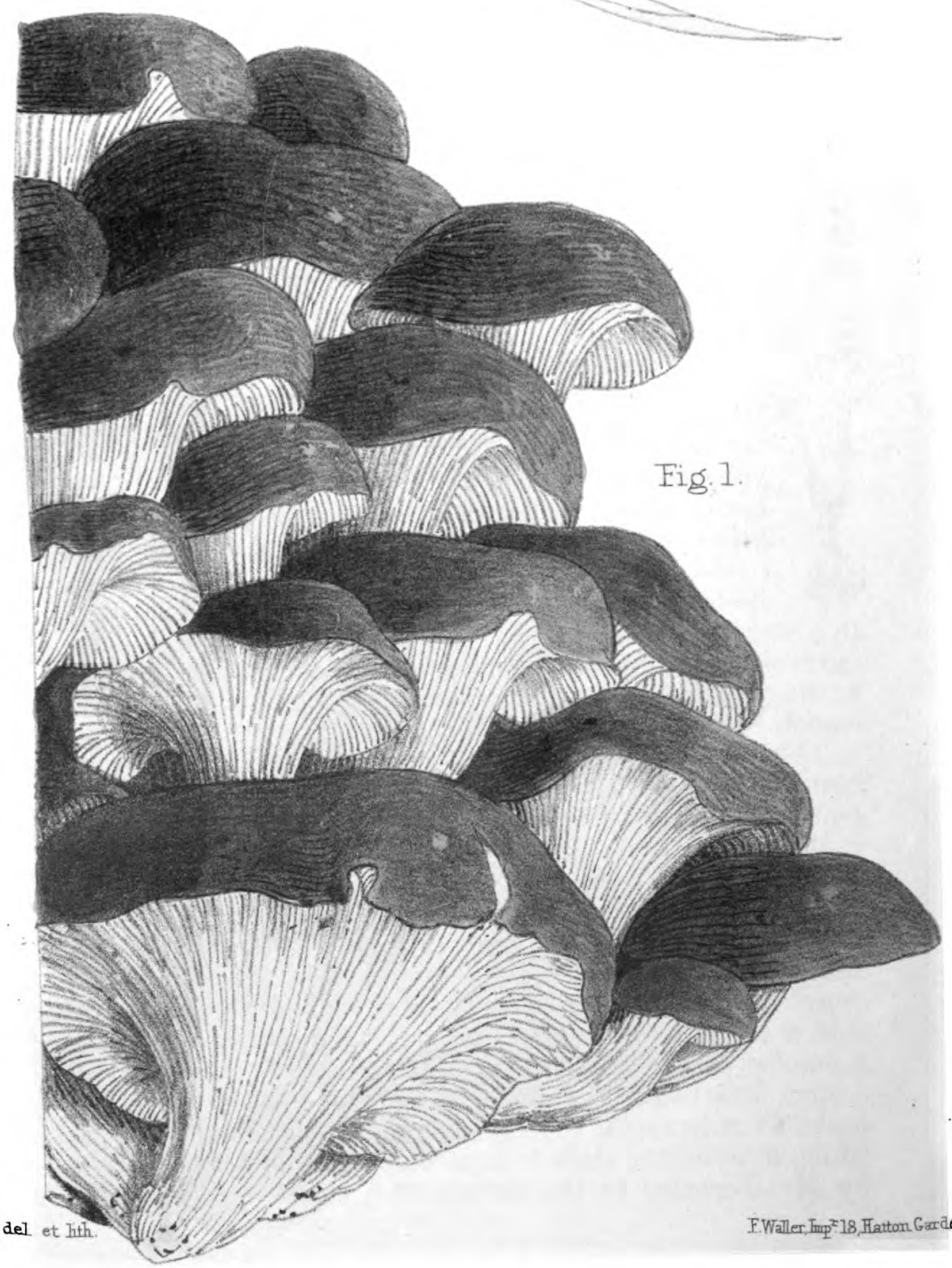


Fig. 1.

G. Smith, del. et lith.

F. Waller, Impr. 18, Hatton Garden.

Agaricus (pleurotus) ostreatus. —Oyster Mushroom.

AGÂRICUS (PLEURÒTUS) OSTREÀTUS.

Oyster Agaric.

Family, Hymenomycetes. *Order*, Agaricini.

Pileus fleshy, one-sided. *Stem* absent or very short. *Gills* very decurrent, livid white. *Spores* white. Grows thickly clustered one above another, on trees and stumps, summer and autumn, sometimes very early.

The specimen figured grew on an old Elm stump at Loughton, Essex, and was gathered at the beginning of July.

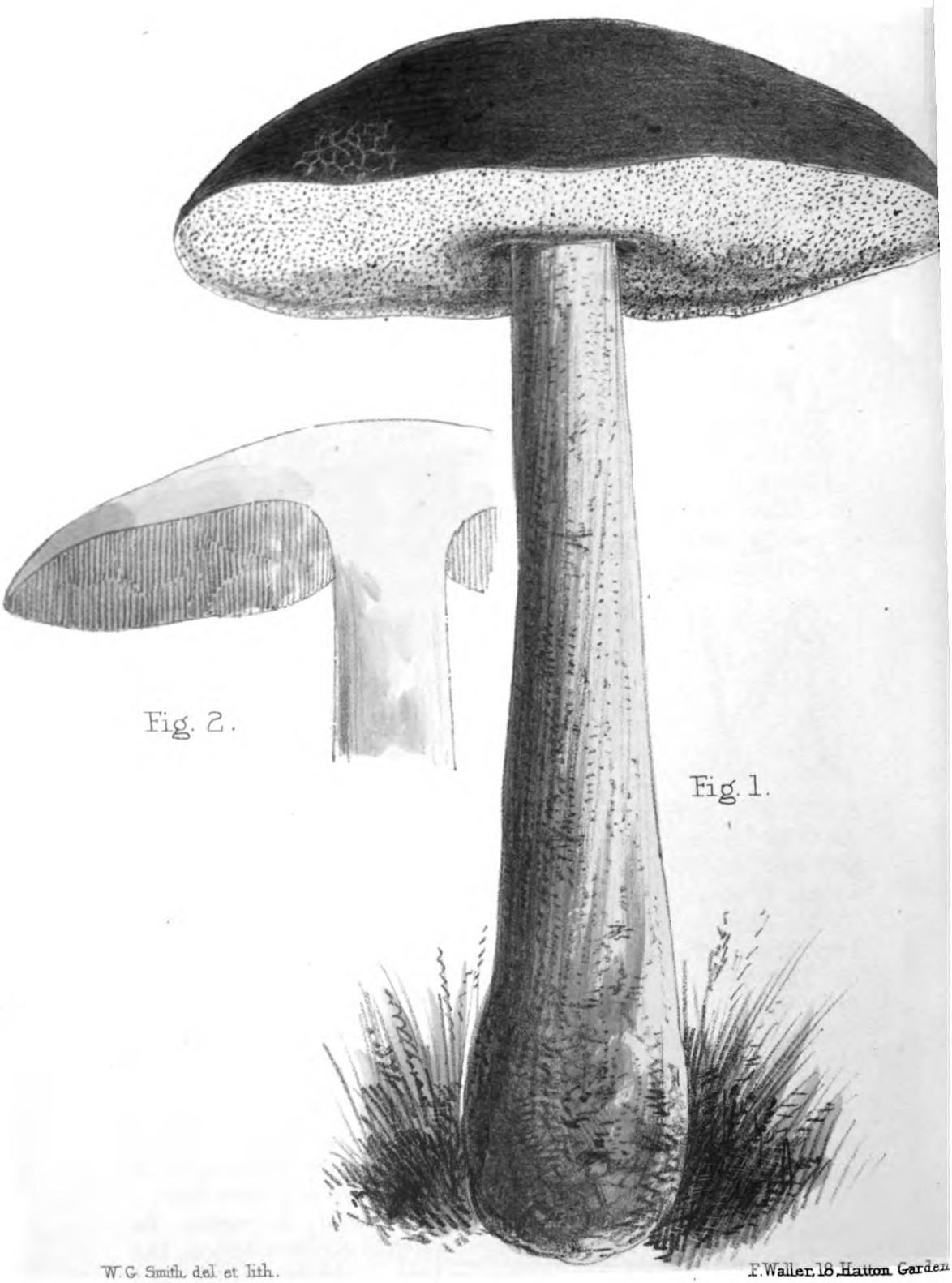
ON the Tree Oyster there is a peculiarity in its form and manner of growth. The stem, when present at all, grows from one side and not from the centre of the head; and the cap expands on the contrary side, and turns over so as to resemble the upper shell of an oyster, or more inflated bivalve. The pileus is soft, fleshy, pale grey or ochraceous in colour, dark grey in youth: the flesh is firm and fibrous. The gills are decurrent, branching and joining one another behind, and of a dingy white tint; the stem is short, firm, white, and smooth, but is often absent altogether.

This Mushroom always grows in clusters. It makes its home in the bark of dead trees. Vittadini cites the Poplar and Willow as its favourite habitats; Mr. Berkeley has found it chiefly on the Apple and Laburnum, and Dr. Badham on the Elm and the Ash. The cluster generally contains as many as ten plants, but Dr. Badham has found a solitary one: this, however, is a rare instance. When well grown the cluster forms a handsome object. The plants are not crowded so closely as to throw them out of shape, though this is sometimes the case; generally the cluster resembles a number of shells adhering to the tree by the hinge or by a stem attached to the hinge, and growing in an ascending style, so as to reveal the regularly placed broad white gills, which descend the stalk to some distance, and are compared by Mr. Berkeley to the flutings of a column—some reach

the bottom of the short stalk, and form there a raised network.

There is a variety of this Mushroom called by some authors *glandulosus*, the gills being covered by glands.

Mushrooms growing on trees have had a bad character from the time of old Gerarde to the present—he says, "Those that grow out of woode, foorthe from the rotten bodies of trees are unprofitable and nothing woorthe;" but as he proceeds to describe poisonous sorts which grow "near to serpent's dens and rootes of trees, that bring foorthe deadly fruit," we must make a full share of allowance for the superstition of his age. Certainly there are very few of those that appear as quaint excrescences on bark that are edible, but this Tree Oyster is an exception. It grows in the autumn and early winter. Mrs. Hussey describes its flavour as "sweet," and recommends that it be stewed slowly and for a considerable time, a treatment which the firmness of its flesh renders reasonable. An intelligent Herefordshire gardener has recently tested the excellence of this Mushroom, which he has found on an Elm in his master's grounds. He procured young plants in their tenderest stage, these he placed under a bell-glass in front of a very hot fire. As the Mushrooms became heated they gave forth their juice, and the dish being turned from time to time, in forty minutes they were thoroughly cooked. Then the gastronomic gardener added butter, pepper, and salt to his savoury mess, and declared that, with the addition of a good supply of bread, his dinner was as enjoyable, and, he believed, as nourishing as if he had had half a pound of fresh meat. The good man was shy in acknowledging to this novel use of his bell-glasses, and could at first only bring himself to speak of a Dutch oven, but as he warmed to his subject, he declared that nothing could so preserve the aroma of the Mushrooms as the bell-glass method of cookery. With Mushrooms of less firm structure fifteen or twenty minutes under the bell-glass before the fire is sufficient.



Boletus scaber. — Rugged-stemmed Tube Mushroom.

BOLÈTUS SCÀBER.

Rugged-stemmed Tube Mushroom.

Family, Hymenomycetes. *Order,* Polyporei.

Pileus brown, cushion-shaped, becoming slightly cracked. *Tubes* free, long, livid white. *Stem* thickened at the base, dotted, and rough. Whole plant inclined to be viscid, and changing to a cineraceous hue when cut or bruised.

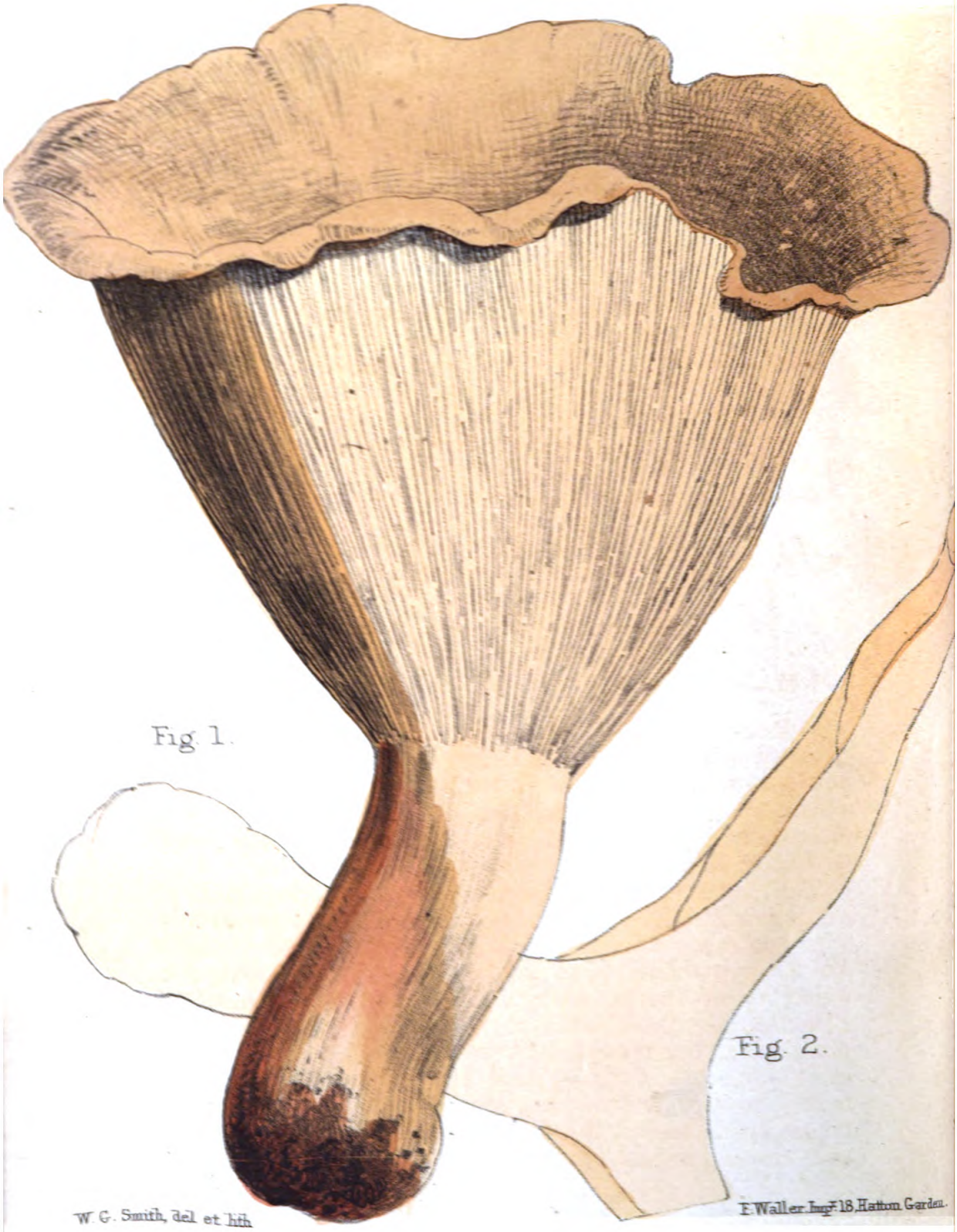
Common in woods—abundant near London. The specimen figured was gathered in Weller Park, near Ollerton, Notts, in July.

NOT in every case is the Scaly Sap-ball worthy of its name, for the pileus does not always become rough, but contents itself with general downiness; its usual colour is a brownish grey, but occasionally it varies to orange. From the margin a thick veil is extended to the stem, enclosing the hymenium till the spores are verging on maturity, then the veil rolls back, and a crowd of round minute tubes are exposed; they are white at first, but become of a dingy yellowish hue ere long. The stem is more slender than in most Sap-balls, and is rough with dark scales of fibrous texture, it is solid, and tapers upwards. The spores are somewhat rusty in colour.

This species is frequently found in woods. The young plants are low and stunted in appearance, the stem in that stage being thick, almost bulbous, but presently it shoots up to the height of half a foot, becoming slender as it rises higher, and then the round or dome-shaped head expands to its full size of from 4 to 6 inches in width. Fields bordering on the rich woods of Kent furnish abundance of this Sap-ball, and in other counties it is equally abundant.

For the table young specimens should, as usual, be selected, and the tubes be removed with a silver spoon, the rest cut into pieces and stewed in veal or chicken broth, and

served up with white sauce. It has a slightly acid flavour, and if fried in butter and covered with a sauce containing pepper, salt, chopped herbs, and a little anchovy, it makes a very tasty dish. In whatever style it is cooked it requires more liquid than other Sap-balls from its substance being firmer.



...s (clitocybe) giganteus.—Great Woodland Mushroom.

(one half real size.)

AGÁRICUS (CLITÓCYBE) GIGÁNTÊUS.

Great Woodland Mushroom.

Family, Hymenomycetes. *Order,* Agaricini.

Pileus pale brown, rather thin and slightly downy, funnel-shaped. *Gills* very crowded, white, at length yellowish, rather decurrent. *Stem* solid, and slightly striate.

In woods, attaining very large dimensions. The specimen figured is half the size of original, and was forwarded to us by Miss L. E. Lott, of Barton Hall, Kingskerswell, near Newton Abbot, Devon, with a quantity of other Fungi, some of great rarity and interest.

THE Giant Agaric attains an immense size, sometimes measuring a foot across. It has a thin fleshy pileus, of a yellowish white or ochraceous tint, and covered with delicate down; in age it gets scaly, becomes depressed in the centre in an early stage, and in maturity is quite funnel-shaped, so as to be capable of containing a considerable quantity of water after a heavy rain. The gills run down the stem for a short distance, they are closely crowded together, and of the same colour as the pileus. The stem is short in proportion to the size of the whole plant, paler than the pileus, solid, hard, and of equal thickness in every part.

This Mushroom is of rare occurrence; it forms rings of great magnitude. Its favourite home is in sunny woodlands, where it raises its lordly head in September and October. We have gathered it in wood borders about Edinburgh, especially in the romantic valley which lies between the Blackford and Braid hills; there, by the side of the "wimpling burn," and shaded by young Birch trees, the buff chalice-like heads of the giant Mushroom add their quota to the beauty of the scene. Laden with these and other fungus spoils, we left the weird glen late on an October day, and meeting an old gardener, in harmonious keeping with

the scene, he expressed great amazement that we should fash ourselves to gather "puddock stools."

The flavour of this magnificent Mushroom is sweet and very agreeable, it may be fried in butter, or stewed, or added to a hash or fricassee. It is good however cooked.

F.Waller, Imp.r 18, Hatton Garde

Sparassis crispa.—Curled Sparassis.

(reduced)

SPARASSIS CRÍSPA.

Curled Sparassis, or Pallid Helvella.

Family, Hymenomycetes. *Order*, Clavariei.

Plant pale ruddy yellow, fleshy, forming a rounded mass, attaining a diameter of 18 inches. *Laminæ* flattened, covered with the fructifying surface.

The specimen figured was gathered at Didlington, Brandon, and shows somewhat less than one-half the original plant, and is also slightly reduced. The original drawing from which our plate was taken was obligingly lent us to copy by the Rev. M. J. Berkeley.

IN the family to which this Mushroom belongs we have one nearly allied to that of our old friend the Morel. Here, as in the Morels, the fruit-bearing part is pileus-shaped, disposed on the upper surface, and barren underneath. The Sparassis family have the hymenium even, not honey-combed as in the Morels; all the members of the family are wholesome.

The Pallid Helvella grows 4 or 5 inches high, its stem is hollow, swollen, and marked with deep irregular branching grooves; the head is spreading, lobed, and of irregular form, at first expanding, and then hanging the stem down; in youth it is white, and sometimes continues so, but oftener it assumes a yellowish or flesh-coloured tint, darker on the under than the upper surface.

This Mushroom is an inhabitant of woods and shady places; Mr. Greville found it frequently in such localities in the neighbourhood of Edinburgh, and Mr. Berkeley describes it as "common."

In flavour it resembles its relative the Morel, and its odour is equally agreeable. As an ingredient in gravies it is very valuable, and forms an excellent dish stewed or fricasseed like the common Mushroom.