= Inocybe godeyi =

Inocybe godeyi is a species of Inocybaceae fungus found in Europe . The species produces mushrooms with cone @-@ shaped caps up to 5 cm (2 in) in diameter . The caps are cream , becoming browner , but they bruise red . The stem is up to 6 cm (2 in) long , and has a " bulb " at the base . The white flesh has a strong smell and an acrid taste . The mushrooms can be found on forest floors in autumn months ; the species forms an ectomycorrhizal relationship to surrounding trees , favouring beech . I. godeyi is known to be poisonous , containing muscarine compounds , and consumption of the mushrooms can lead to SLUDGE syndrome . The species is sometimes mistaken for the deadly I. erubescens .

First described by Claude Casimir Gillet , the species retains the name which it was first given , but has a number of taxonomic synonyms . Its specific name honours Louis @-@ Luc Godey . Within the genus Inocybe , it has been classified in a number of ways , but appears to form part of a clade (that is , a group sharing a common ancestor) with species including I. abietis , I. corydalina , I. agglutinata and I. pudica .

= = Taxonomy and phylogeny = =

Inocybe godeyi was first described , and given its current name , by French botanist and mycologist Claude Casimir Gillet in his 1874 work Les Hyménomycètes ou description de tous les champignons (fungi) qui croissent en France . The specific name honours the French mycologist Louis @-@ Luc Godey . British mycologist Mordecai Cubitt Cooke described a variety of the species , Inocybe godeyi var. rufescens , in a 1909 issue of the Transactions of the British Mycological Society . However , the name is now considered synonymous with Inocybe godeyi . A number of other names are recognised as synonymous . Gillet 's own Inocybe rubescens , described in an 1883 issue of Revue Mycologique , is no longer seen as a separate taxon . The same is true of Narcisse Théophile Patouillard 's 1884 description of I. rubescens as a variety of " Agaricus trinii " , Agaricus trinii var. rubescens . Other synonyms include Roger Heim 's 1931 Inocybe rickenii and Inocybe boltonii .

Within the genus Inocybe , I. godeyi has been classified in a number of ways . In 1986 , mycologist Thom Kuyper placed the species in the supersection Marginatae (subgenus Inocybe) , along with species including I. abietis , I. calospora and I. praetervisa . Rolf Singer considers Marginatae a section in subgenus Inocybe , but he placed I. godeyi in the section Geophyllinae (in the subgenus Inocibium) along with species including I. agglutinata and I. pudica . A 2002 phylogenetic study found that Singer 's Geophyllinae is probably monophyletic (that is , the taxa all come from a common , recent ancestor) and suggested that I. godeyi forms a clade with species including I. abietis , I. corydalina , I. agglutinata and I. pudica . All species in the clade were " smooth @-@ spored Inocybes with metuloid hymenial cystidia " , but there were other species that fit that description , such as I. lacera , that were shown not to be a part of the clade .

= = Description = =

Inocybe godeyi produces mushrooms each of which features a cap of 2 to 5 cm (0 @.@ 8 to 2 in) across . The cap is initially cone @-@ shaped , but expands outward , and flattens somewhat . In younger mushrooms , it is a cream colour , but as the fruit bodies mature , it changes to an ochre to tan colour ; however , the cap can sometimes become entirely red , the colour it turns when bruised . The cap surface of younger specimens is smooth and silky . The surface of older caps becomes increasingly fibrous , and cracks often develop , beginning at the cap margin and moving towards the centre . There is usually a small umbo . The stem attaches to the center of the cap , and measures 40 to 60 mm (2 to 2 in) by 3 to 8 mm (0 @.@ 1 to 0 @.@ 3 in) . Towards the base , the stem surface is covered in fine grains , and at the very base , there is an obviously defined " bulb " . In colour , the stem is an off @-@ white , becoming redder as the mushroom ages . The flesh is white , but gradually turns red when it is exposed . The gills begin as an off @-@ white , but become

gradually the colour of cinnamon . They are adnexed , which means that only part of the depth of the gills attaches to the stem , and crowded .

= = = Microscopic features = = =

Inocybe godeyi leaves a snuff @-@ brown spore print , while the individual spores themselves are smooth and almond @-@ shaped . The spores measure 9 to 11 @.@ 5 by 5 @.@ 5 to 7 micrometres . Each basidium bares four spores . Both the cheilocystidia (cystidia found on the edges of the gills) and the pleurocystidia (cystidia found on the faces of the gills) are spindle- or bottle @-@ shaped , with some kind of encrustation at the tip . They have thick cell walls .

= = = Similar species = = =

It is sometimes mistaken for the deadly Inocybe erubescens . The rarer I. erubescens , like I. godeyi , bruises red , though it is lighter in colour to begin with . The most distinguishing feature is that I. erubescens lacks a bulbous base .

= = Edibility = =

Inocybe godeyi flesh has a strong smell , which has been variously described as " unpleasant " , " earthy or mealy " , and " not distinctive " . The flesh has an acrid taste . The mushrooms are known to be poisonous , containing toxic compounds of muscarine . Consumption of the mushroom could lead to a number of physiological effects , including : salivation , lacrimation , urination , defecation , gastrointestinal problems and emesis (vomiting) ; this array of symptoms is also known by the acronym SLUDGE . Other potential effects include a drop in blood pressure , sweating and death due to respiratory failure .

= = Distribution and habitat = =

Inocybe godeyi can be found in Europe . It is found in deciduous woodland on the ground , particularly on chalky soil . The species is ectomycorrhizal , favouring beech . Mushrooms are encountered in the autumn months of August to November , solitarily or in " trooping groups " . While the mushrooms can be locally common , the species is typically uncommon .