

= Phallus impudicus =

Phallus impudicus , known colloquially as the common stinkhorn , is a widespread fungus recognizable for its foul odor and its phallic shape when mature , the latter feature giving rise to several names in 17th @-@ century England . It is a common mushroom in Europe and western North America , where it occurs in habitats rich in wood debris such as forests and mulched gardens . It appears from summer to late autumn . The fruiting structure is tall and white with a slimy , dark olive colored conical head . Known as the gleba , this material contains the spores , and is transported by insects which are attracted by the odor ? described as resembling carrion . Despite its foul smell , it is not poisonous and immature mushrooms are consumed in parts of France and Germany .

= = Taxonomy = =

Botanist John Gerard called it the " pricke mushroom " or " fungus virilis penis effigie " in his General Historie of Plants of 1597 , and John Parkinson referred to it as " Hollanders workingtoole " or " phallus hollandicus " in his Theatrum botanicum of 1640 . Linnaeus described it in his 1753 Species Plantarum , and it still bears its original binomial name . Its specific epithet , *impudicus* , is derived from the Latin for " shameless " or " immodest " .

= = Description = =

Sometimes called the witch 's egg , the immature stinkhorn is whitish or pinkish , egg @-@ shaped , and typically 4 to 6 cm (1 @.@ 6 to 2 @.@ 4 in) by 3 to 5 cm (1 @.@ 2 to 2 @.@ 0 in) .

On the outside is a thick whitish volva , also known as the peridium , covering the olive @-@ colored gelatinous gleba . It is the latter that contains the spores and later stinks and attracts the flies ; within this layer is a green layer which will become the ' head ' of the expanded fruit body ; and inside this is a white structure called the receptaculum (the stalk when expanded) , that is hard , but has an airy structure like a sponge . The eggs become fully grown stinkhorns very rapidly , over a day or two . The mature stinkhorn is 10 to 30 cm (3 @.@ 9 to 11 @.@ 8 in) tall and 4 to 5 cm (1 @.@ 6 to 2 @.@ 0 in) in diameter , topped with a conical cap 2 to 4 cm (0 @.@ 8 to 1 @.@ 6 in) high that is covered with the greenish @-@ brown slimy gleba . In older fungi the slime is eventually removed , exposing a bare yellowish pitted and ridged (reticulate) surface . This has a passing resemblance to the common morel (*Morchella esculenta*) , with which it is sometimes mistaken . The rate of growth of *Phallus impudicus* has been measured at 10 ? 15 cm (3 @.@ 9 ? 5 @.@ 9 in) per hour . The growing fruit body is able to exert up to 1 @.@ 33 kPa of pressure ? a force sufficient to push up through asphalt . The spores have an elliptical to oblong shape , with dimensions of 3 ? 5 to 1 @.@ 5 ? 2 @.@ 5 μ m .

In North America , *Phallus impudicus* can be distinguished from the very similar *P. hadriani* by the latter 's purplish @-@ tinted volva .

= = Spore dispersal = =

The dispersal of spores is different from most " typical " mushrooms that spread their spores through the air . Stinkhorns instead produce a sticky spore mass on their tip which has a sharp , sickly @-@ sweet odor of carrion to attract flies and other insects . Odorous chemicals in the gleba include methanethiol , hydrogen sulfide , linalool , trans @-@ ocimene , phenylacetaldehyde , dimethyl sulfide , and dimethyl trisulfide . The latter compound has been found to be emitted from fungating cancerous wounds . The mature fruiting bodies can be smelled from a considerable distance in the woods , and at close quarters most people find the cloying stink extremely repulsive . The flies land in the gleba and in doing so collect the spore mass on their legs and carry it to other locations . An Austrian study demonstrated that blow @-@ flies (species *Calliphora vicina* , *Lucilia caesar* , *Lucilia ampullacea* and *Dryomyza anilis*) also feed on the slime , and soon after leaving the

fruit body , they deposit liquid feces that contain a dense suspension of spores . The study also showed that beetles (*Oecoptoma thoracica* and *Meligethes viridescens*) are attracted to the fungus , but seem to have less of a role in spore dispersal as they tend to feed on the hyphal tissue of the fruiting body .

There is also a possible ecological association between the *P. impudicus* and badger (*Meles meles*) setts . Fruiting bodies are commonly clustered in a zone 24 to 39 metres (79 to 128 ft) from the entrances ; the setts typically harbor a regularly @-@ available supply of badger cadavers ? the mortality rate of cubs is high , and death is more likely to occur within the sett . The fruiting of large numbers of stinkhorns attracts a high population of blowflies (*Calliphora* and *Lucilla* breed on carrion) ; this ensures the rapid elimination of badger carcasses , removing a potential source of disease to the badger colony . The laxative effect of the gleba reduces the distance from the fruiting body to where the spores are deposited , ensuring the continued production of high densities of stinkhorns .

= = Distribution and habitat = =

The common stinkhorn can be found throughout much of Europe and North America , and it has also been collected in Asia (including China , Taiwan , and India) , Costa Rica , Iceland , Tanzania , and southeast Australia . In North America , it is most common west of the Mississippi River ; Ravenel 's stinkhorn (*Phallus ravenelii*) is more common to the east . The fungus is associated with rotting wood , and as such it is most commonly encountered in deciduous woods where it fruits from summer to late autumn , though it may also be found in conifer woods or even grassy areas such as parks and gardens . It may also form mycorrhizal associations with certain trees .

= = Uses = =

= = = Edibility = = =

At the egg stage , pieces of the inner layer (the receptaculum) can be cut out with a knife and eaten raw . They are crisp and crunchy with an attractive radishy taste . The fungus is enjoyed and eaten in France and parts of Germany , where it may be sold fresh or pickled and used in sausages . Similar species are consumed in China .

= = = Medicinal properties = = =

Venous thrombosis , the formation of a blood clot in a vein , is a common cause of death in breast cancer patients ; patients with recurrent disease are typically maintained on anticoagulants for their lifetimes . A research study has suggested that extracts from *P. impudicus* can reduce the risk of this condition by reducing the incidence of platelet aggregation , and may have potential as a supportive preventative nutrition . It was used in medieval times as a cure for gout and as a love potion .

= = = Folk uses = = =

In Northern Montenegro , peasants rub *Phallus impudicus* on the necks of bulls before bull fighting contests in an attempt to make them stronger . They are also fed to young bulls as they are thought to be a potent aphrodisiac .

= = In culture = =

Writing about life in Victorian Cambridge , Gwen Raverat (granddaughter of Charles Darwin) describes the ' sport ' of Stinkhorn hunting :

In our native woods there grows a kind of toadstool , called in the vernacular The Stinkhorn , though in Latin it bears a grosser name . The name is justified , for the fungus can be hunted by the scent alone ; and this was Aunt Etty 's great invention . Armed with a basket and a pointed stick , and wearing special hunting cloak and gloves , she would sniff her way round the wood , pausing here and there , her nostrils twitching , when she caught a whiff of her prey ; then at last , with a deadly pounce , she would fall upon her victim , and poke his putrid carcass into her basket . At the end of the day 's sport , the catch was brought back and burnt in the deepest secrecy on the drawing @-@ room fire , with the door locked ; because of the morals of the maids .

In Thomas Mann 's novel The Magic Mountain (Der Zauberberg) , the psychologist Dr. Krokowski gives a lecture on the phallus impudicus :

And Dr. Krokowski had spoken about one fungus , famous since classical antiquity for its form and the powers ascribed to it -- a morel , its Latin name ending in the adjective impudicus , its form reminiscent of love , and its odor , of death . For the stench given off by the impudicus was strikingly like that of a decaying corpse , the odor coming from greenish , viscous slime that carried its spores and dripped from the bell @-@ shaped cap . And even today , among the uneducated , this morel was thought to be an aphrodisiac .