

= *Phallus ravenelii* =

Phallus ravenelii , commonly known as Ravenel 's stinkhorn , is a fungus found in eastern North America . Its mushrooms commonly grow in large clusters and are noted for their foul odor and phallic shape when mature . It is saprobic , and as such it is encountered in a wide variety of habitats rich in wood debris , from forests to mulched gardens or sawdust piles in urban areas . It appears from August to October . The fruit body emerges from a pink or lavender @-@ colored egg to form a tall , cylindrical , hollow and spongy white stalk with a bell @-@ shaped cap . The remains of the egg persist as a white to pink or lilac volva at the base of the stalk . The cap is covered in a foul @-@ smelling olive @-@ green spore slime , which attracts insects that help to spread the spores . Sometimes , the cap has a " veil " attached ? a thin membrane that hangs underneath . The lack of a roughly ridged and pitted cap differentiates it from the closely related *Phallus impudicus* . The fungus is named after Henry William Ravenel , a botanist who first discovered it in 1846 , though it remained undescribed until 1873 . It is considered to be an edible mushroom while in its egg form .

= = Taxonomy = =

The species was first described officially in the scientific literature by English mycologist Miles Berkeley in an 1873 publication . Berkeley obtained the specimens from Moses Ashley Curtis , which had in turn been sent to him by Ravenel from collections he made at the Santee River in South Carolina in 1846 . Although the specimen had been sent with Ravenel 's extensive collection notes , Berkeley 's description was brief , and he neglected to mention the veil . American Curtis Gates Lloyd later disparaged the quality of Berkeley 's description , and noted " he was so busy that he could not take the time to consider the details , and his " description " tells nothing of the leading characters of the species . " Charles Horton Peck , upon encountering the fungus in North America , could not identify it using Berkeley 's description , and instead had to contact Ravenel to obtain his original collection notes before he could confirm its identity . Peck later wrote a full description of the species . In 1898 , Edward Angus Burt placed the taxon in the genus *Dictyophora* , based on the presence of the veil . Otto Kuntze transferred the taxon to the genus *Aedycia* (now equivalent with *Mutinus*) , resulting in the synonym *Aedycia ravenelii* . The mushroom is commonly known as the eastern stinkhorn or Ravenel 's stinkhorn .

= = Description = =

The mushroom begins its development in the form of pink- , lilac- , or purple @-@ tinged " eggs " that resemble a puffball . The egg expands rapidly to form a phallus @-@ shaped structure with a yellowish @-@ white stalk and thimble @-@ like cap . The cap ranges from 1 @. 5 to 4 cm (0 @. 6 to 1 @. 6 in) in width and 3 to 4 @. 5 cm (1 @. 2 to 1 @. 8 in) in height ; the entire fruit body can reach heights of 20 cm (7 @. 9 in) . The cap texture is finely granular and it is attached to a white open circlet at the top where it meets the stalk . In some specimens , this opening is relatively large with a broad margin , and gives the mushroom a truncated appearance . Microscopically , the cap surfaces comprises minute cells and cavities , with a spongy structure similar to that of the stem , but with smaller perforations than the stem . The lower margin of the cap is free from attachment to the stalk , and there is sometimes a membranous veil suspended like a collar around the stem under the cap ; the veil can be of varying lengths . This veil can be seen in dissected eggs where it is present as a distinct , thin membranous tissue between the stalk and the cap before expansion . In this form , the veil is continuous from its attachment with the " primordial tissue " at the base of the stalk and volva below to the tip of the stem at the point where it joins the cap . The veil produced in *P. ravenelii* is distinct from the flaring , net @-@ like indusium produced by *Phallus* species like *P. indusiatus* . Gleba covers the head and is olive @-@ green to dark brown in color , slimy in texture , and foul smelling . The spores measure 3 to 4 @. 5 µm by 1 to 2 µm , are colorless , elliptical in shape , and smooth in texture . They are thin @-@ walled and covered

with a thin , hyaline (transparent) , sticky coating .

The stalk is hollow and measures 10 to 15 cm (3 @. @ 9 to 5 @. @ 9 in) tall and 1 @. @ 5 to 3 cm (0 @. @ 6 to 1 @. @ 2 in) thick . It can range in color from slightly yellowish to white . At the stalk 's base there is usually a white to pink volva (a sac @-@ like cup) . When immature , the fruit body is encapsulated within the volva present as a peridium (skin @-@ like tissue layer) , which ruptures as the mushroom emerges . The volva attaches to the substrate with whitish or pinkish rhizomorphs (thick , cord @-@ like strands of mycelia) . Rhizomorphs and mycelia that are exposed to air eventually turn whitish in color ; those freshly exposed from their substrate usually quickly turn bluish @-@ purple . The fungus produces watery and fleshy sclerotia that range in thickness from 1 to 10 mm with a length of up to 30 mm . The sclerotia are irregularly convoluted and lobed , and become hard and horny upon drying . Sclerotia have a color reaction similar to that noted for rhizomorphs , and , after long exposure to air , will gradually turn a uniform dark reddish @-@ brown . *Phallus ravenelli* is considered edible if in the egg form , and has a " mild " taste . The foul odor of mature mushrooms would dissuade most from collecting for the table .

= = Similar species = =

Phallus ravenelli is often confused with *P. impudicus* and *P. hadriani* . *P. impudicus* has a highly reticulate (a net @-@ like pattern of grooves and ridges) cap under the gleba . *P. hadriani* also has a pitted cap , and occurs less frequently than *P. ravenelli* . The widespread species *Itajahya galericulata* has a roughly spherical cap of several overlapping spongy tissue layers with gleba sandwiched in @-@ between . *Phallus rugulosus* is tall , thin , pale orange , and tapers towards the smooth cap . The cap is blackish @-@ olive in color , while the volva is oval and white . It is found in the eastern and southern United States and China . *P. granuloso-denticulatus* is a rare Brazilian species with a superficial resemblance to *P. ravenelli* . Apart from its distribution , it is distinguished from *P. ravenelli* by its smaller fruit bodies up to 9 cm (3 @. @ 5 in) tall , a clogged cap margin , and somewhat larger spores that measure 3 @. @ 8 ? 5 by 2 ? 3 μ m .

= = Distribution and habitat = =

Ravenel 's stinkhorn is widespread in eastern North America , from Quebec in the north , south to Florida and west to Iowa and Ohio . West of the Mississippi , the common stinkhorn (*Phallus impudicus*) becomes more dominant . In the early 1900s , Lloyd called it the most common phalloid in the United States . The fungus is also found in Costa Rica .

As a saprobic mushroom , or decomposer of organic material , Ravenel 's stinkhorn can be found in almost any habitat that includes decaying wood . They are most often found growing in groups , though occasionally singly , on wood chips , rotten tree stumps or sawdust . They are common in urban flowerbeds , parks and lawns , as well as in meadows , cultivated areas and woods . The foul odor of the gleba attracts insects that walk and feed on the spore @-@ bearing surface , and later disseminate the sticky spores to other locales .