

= *Psilocybe hoogshagenii* =

Psilocybe hoogshagenii is species of psilocybin mushroom in the Strophariaceae family . The mushroom has a brownish conical or bell @-@ shaped cap up to 3 cm (1 @. @ 2 in) wide that has an extended papilla up to 4 mm long . The stem is slender (up to 3 mm thick) and 5 to 9 cm (2 @. @ 0 to 3 @. @ 5 in) long . The variety *P. hoogshagenii* var. *convexa* lacks the long papilla .

The species is found in Mexico , where it grows singly or in small groups in clayey soils in subtropical coffee plantations , and from Colombia and Brazil in South America . The mushroom contains the psychedelic compounds psilocybin and psilocin , and all parts will stain blue or bluish black when handled or injured . *P. hoogshagenii* is used for divinatory purposes by some indigenous groups in Mexico .

= = Taxonomy = =

The species was first described scientifically by French mycologist Roger Heim in 1958 . It was one of several species described and illustrated in the popular American weekly magazine *Life* (" Seeking the Magic Mushroom ") , in which R. Gordon Wasson recounted the psychedelic visions that he experienced during the divinatory rituals of the Mixtec people , thereby introducing psilocybin mushrooms to Western popular culture ; it was however , mislabeled as *Psilocybe zapotecorum* . Similarly , *Psilocybe* specialist Gastón Guzmán suggests that *P. zapotecorum* , as described by Rolf Singer in 1958 , is misidentified as it agrees well with the type of *P. hoogshagenii* . The species *Psilocybe caerulipes* var. *gastonii* , described by Singer in 1958 , is a synonym of *P. hoogshagenii* .

The species is named in honor of American anthropologist Searle Hoogshagen , who helped Heim and Wasson in their search for entheogenic mushrooms in Mexico . The mushroom is known locally by several common names . In Spanish , it is called los niños or los Chamaquitos (" the little boys ") , in Mazatec as pajaritos de monte (" little birds of the woods ") , in Nahuatl as cihuatsinsintle or teotlaquilnanácatl (" divine mushroom that describes or paints ") , and in Mixe as Atka : t (" judge ") or na.shwi.ñ mush (" mushrooms of the earth ") .

The variety *P. hoogshagenii* var. *convexa* was described by Guzmán in 1983 to account for mushrooms without an acute papilla that were otherwise roughly the same as the type variety . *Psilocybe semperviva* , described by Heim and Roger Cailleux in 1958 , was later determined by Guzmán to be synonymous with *P. hoogshagenii* var. *convexa* . The varietal epithet *convexa* refers to the convex shape of the cap .

= = Description = =

The cap ranges in shape from conical to bell @-@ shaped to convex , reaching diameters of 0 @. @ 7 ? 3 in (18 ? 76 mm) , although a range of 1 ? 2 @. @ 5 cm (0 @. @ 4 ? 1 @. @ 0 in) is most usual . It has a long , sharp papilla that is up to 4 mm (0 @. @ 16 in) . The cap surface is smooth , somewhat sticky when wet , and often has ridges extending halfway to the center of the cap . Its color is reddish brown to orangish brown to yellowish , and it is hygrophanous , fading when dry to a straw or fulvous color . The brownish gills have an adnate to adnexed attachment to the stem ; mature gills become purplish black because of the spores . The hollow stem measures 50 to 90 mm (2 @. @ 0 to 3 @. @ 5 in) long by 1 ? 3 mm thick . It is roughly equal in width throughout its length or slightly thicker at the base , and sometimes twisted . A thin rudimentary cortina @-@ like partial veil covers the gills of immature fruit bodies , but it is fragile and disappears soon after the cap expands . The flesh in the cap is whitish , but more yellow in the stem . Both the odor and taste of the mushroom are farinaceous (similar to freshly ground flour) . As is characteristic of psilocybin mushrooms , all parts of the fruit body bruise blue when handled or injured . *P. hoogshagenii* var. *convexa* lacks an acute papilla , although it occasionally has a small , rounded papilla . Its cap ranges in width from 0 @. @ 5 ? 1 @. @ 5 cm (0 @. @ 20 ? 0 @. @ 59 in) , and it is convex to roughly bell @-@ shaped . All other macroscopic and microscopic features are identical to the type variety .

The spore print is dark purplish brown . Spores are rhomboid or nearly so in face view , and more or less ellipsoid when viewed from the side . They are thick @-@ walled , with dimensions of 6 @.@ 5 ? 4 ? 5 @.@ 6 ?m , and feature a broad germ pore . The basidia (spore @-@ bearing cells) are usually four @-@ spored , hyaline (translucent) , roughly cylindrical or with a central constriction , and measure 12 ? 22 by 5 @.@ 5 ? 9 ?m . Pleurocystidia (cystidia on the gill face) are relatively abundant ; they are ventricose (swollen) , club @-@ shaped or irregularly shaped , measuring 16 ? 36 by 8 ? 12 ?m . The cheilocystidia (cystidia on the gill edge) are also abundant . They are 19 ? 35 by 4 @.@ 4 ? 6 @.@ 6 ?m , lageniform (flask @-@ shaped) , narrowing into a long neck with a width of 1 ? 3 ?m , and either acute or somewhat capitate (ending in a roughly globular tip) . Clamp connections are present in the hyphae .

= = Habitat and distribution = =

Fruit bodies of *Psilocybe hoogshagenii* grow solitarily or in small groups in humus or in muddy clay soils in subtropical coffee plantations . According to the natives of the San Agustin Loxicha region of Mexico , the fungus tends to fruit simultaneously in large flushes . In Mexico , fruiting occurs in June and July , whereas in Argentina , fruiting is in February . The mushroom has been reported from Mexico in the states of Puebla , Oaxaca , and Chiapas , where it grows at elevations of 1 @.@ 000 to 1 @.@ 800 m (3 @.@ 300 to 5 @.@ 900 ft) . In South America , the species is known from Brazil and Colombia . *P. hoogshagenii* var. *convexa* has been found in grasslands in Hidalgo , and Oaxaca , but is most common in Puebla . It fruits from June to August .

= = Uses = =

Psilocybe hoogshagenii mushrooms are used for entheogenic , or spiritual , purposes by some Chinantec @-@ speaking curanderos of the Ixtlán District in Oaxaca . The mushrooms are primarily used to diagnose and prognose illness , and , to a lesser extent , to divine the location of objects or animals that have been lost or stolen . Guzmán also indicates contemporary ceremonial usage by Mixe and Zapotec people . Paul Stamets , in his *Psilocybe Mushrooms of the World* , rates the psychoactive potency of the mushroom as " moderately active " , and reports psilocybin levels of 0 @.@ 6 % (milligrams per gram of dried mushroom) , and psilocin of 0 @.@ 1 % . In comparison , Stamets indicates that the commonly cultivated species *P. cubensis* contains 0 @.@ 63 % and 0 @.@ 60 % (psilocybin and psilocin) , while the widespread *P. semilanceata* has 0 @.@ 98 % and 0 @.@ 02 % . Chemical analysis of *P. hoogshagenii* specimens from Brazil yielded up to 0 @.@ 3 % psilocybin and 0 @.@ 3 % psilocin .