= Mycena acicula =

Mycena acicula , commonly known as the orange bonnet , or the coral spring Mycena , is a species of fungus in the Mycenaceae family . It is found in Asia , the Caribbean , North America and Europe . The fruit bodies , or mushrooms , of the fungus grow on dead twigs and other woody debris of forest floors , especially along streams and other wet places . They have small orange @-@ red caps , up to 1 cm (0 @.@ 4 in) in diameter , held by slender yellowish stems up to 6 cm (2 @.@ 4 in) long . The gills are pale yellow with a whitish edge . Several other Mycena species look similar , but may be distinguished by differences in size and / or microscopic characteristics . M. acicula is considered inedible because of its small size .

= = Taxonomy = =

First named Agaricus acicula by the German scientist Jacob Christian Schäffer in 1774 , the species was also referred to as Agaricus miniatus by another German , naturalist August Batsch . It was given its current name in 1871 by Paul Kummer . Rolf Singer transferred the species to the genera Hemimycena and Marasmiellus , but the binomials resulting from these transfers are now considered synonyms . The fungus is classified in the section Aciculae of the genus Mycena .

The specific epithet acicula is derived from the Latin word meaning " small needle " . The mushroom is commonly known as the " orange bonnet " , or the " coral spring Mycena " .

= = Description = =

The cap is initially convex , but as it matures , it expands to a bell @-@ shape , typically reaching 0 @.@ 3 to 1 cm (0 @.@ 1 to 0 @.@ 4 in) in diameter . The cap sometimes has a small abrupt umbo (a central bump) , and the cap margin is pressed closely against the stem when young , often flaring or curving slightly inward . As the cap expands , a narrow sterile (i.e. , without any reproductive cells typical of the hymenium) band which frequently becomes lobed or irregularly @-@ jagged often forms at the extreme margin . The cap surface is smooth , faintly translucent @-@ striate when moist , at first pruinose but soon naked . The color is red when young , soon becoming yellowish toward the margin , and slowly fading to bright orange @-@ yellow . The flesh is thin , brittle , yellow , and has no distinctive odor or taste .

The gills are adnate (with gills broadly attached to the stem , slightly above the bottom of the gill , with most of the gill fused to the stem) or slightly rounded next to the stem . The individual gills are close to subdistant , with between 10 ? 14 reaching the stem , and two or three tiers of lamellulae (short gills that do not reach the stem) . The gills are moderately broad , pale orange to whitish , often yellowish at the base and whitish along the edges . The stem is 1 to 6 cm (0 @.@ 4 to 2 @.@ 4 in) long , and up to 1 mm thick ; flexuous (winding from side to side) , brittle , with the base covered with sharp , straight , and stiff white hairs . The surface is densely white @-@ pruinose initially , but soon becomes naked with a subsequent color shift to orange @-@ yellow or lemon yellow . This species has been described as " a delight to behold " , but " one usually has to get down on hands and knees to find it ! "

The fruit bodies of Mycena acicula are considered inedible , as they are too small and insubstantial to be considered for consumption .

= = = Microscopic characteristics = = =

The spores are roughly spindle @-@ shaped (i.e. , tapering at each end) , with dimensions of 9 ? 11 by 3 @.@ 5 ? 4 @.@ 5 µm . They are nonamyloid , meaning they do not take up iodine when stained with Melzer 's reagent . The spore @-@ bearing cells , the basidia , are club @-@ shaped , four @-@ spored and measure 20 ? 22 by 5 ? 6 µm . The cheilocystidium and pleurocystidia (cystidia found on the edge and face , respectively , of a gill) are similar , club @-@ shaped to spindle @-@ shaped or egg @-@ shaped , and have apices that are often covered with a resinous

secretion . The hyphae that comprise the cap cuticle are up to 3 @.@ 5 µm wide , clamped , and covered with cylindrical excrescences that measure 2 ? 9 by 1 ? 3 µm . The hyphae of the cortical layer of the stem are up to 4 @.@ 5 µm wide , clamped , and densely covered with simple to somewhat branched , cylindrical to inflated excrescences that are up to 20 by 5 µm . These latter excrescences are embedded in gelatinous matter .

= = = Similar species = = =

Mycena adonis , M. floridula , and M. leptophylla are larger species belonging to the section Adonidae of the genus Mycena . In that section , among other differences , the hyphae of the cortical layer (the outer layer of tissue) of the stem are smooth . M. oregonensis is similar in appearance to M. acicula , but the cap is yellower , the gills are broadly adnate or decurrent with a short tooth , the gill edge is orange to bright yellow , and the stem is dry , not sticky . The hyphae of the cortical layer of the stem are smooth and not embedded in gelatinous matter , and in European collections the basidia are two @-@ spored and do not have clamps . M. strobilinoides , a North American and European species , looks similar with its orange cap , but may be distinguished microscopically by the cheilocystidia which are densely covered by excrescences ; it also has a larger cap , up to 2 cm (0 @.@ 8 in) . M. aurantiidisca can be distinguished by the reddish @-@ orange cap which tends to become paler at the margin . Mycena specialist Alexander H. Smith further noted of M. acicula that it could readily be mistaken for a Hygrophorus .

= = Habitat and distribution = =

The fruit bodies of Mycena acicula grow singly , in groups , or somewhat clustered on debris in wet places , especially along streams or the borders of swamps . The appearance of the fruit bodies is not significantly influenced by the effect of rainfall , perhaps because " such minute fungi are largely determined by the microenvironment prevailing under dense vegetation , etc . , which is no doubt less affected by recent rain than more exposed situations . " The fungus is widely distributed throughout the eastern United States and Canada and occurs in Washington , Oregon , and California along the Pacific Coast . It has also been reported from Trinidad , Britain , Norway , Spain , Korea , and the Ussuri River Valley in the northeast of China .