

Gomphillus Nyl.
(GOMPHILLACEAE)

After Esslinger, 1975, James & Brightman, 1992, and Buck, 1998

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Thallus crustose, thin, semi-transparent and subgelatinous when wet, effuse or \pm delimited. Photobiont chlorococcoid. Apothecia sessile and pseudostipitate or stipitate, top-shaped, black-brown above, pale to colorless below. Thalline exciple absent. True exciple well developed, sometimes extended below into a stalk-like extension, pale brown at edge, pale within, of thin, anastomosing hyphae in a gelatinous matrix, not carbonized. Epihymenium red-brown, non-granular. Paraphyses numerous, anastomosing, under 1 μ m wide, the apices not swollen. Asci narrowly cylindrical, with a tholus, I-, the discharge rostrate. Spores 8, very long, thread-like, multiseptate, colorless. Conidia pycnidia or hyphophores. Pycnidia with wall black above, pale below; conidia minute, ellipsoid. Hyphophore conidia elongate, branched, multiseptate. No substances, or traces of atranorin and terpenoids. On bryophytes and sometimes lichens; oceanic.

1. Hyphophores present; apothecia, at least when mature, stipitate, appearing pruinose; widespread in the Southeast and the Ozarks. G. americanus

1. Hyphophores absent; apothecia narrowed below and thus pseudostipitate, not truly stipitate, not pruinose; rare and local in Macon County, North Carolina. G. calycioides

G. americanus Essl.

Thallus crustose, thin and membranous, white to pale greenish white or grayish green., shiny. Apothecia sessile when young. Mature apothecia dark brown or blackening, paler below, appearing pruinose, sessile but often appearing very short stipitate because of the pale, slightly narrowed base, becoming compound with age, (300-)380-800 μ m tall, 250-500 μ m diam., capitate, mostly one- or two-headed, occasionally polycephalic. Postmature apothecia disintegrating or dissolving and becoming distinctly stipitate, the tip 1-3.5 mm long and 110-230 μ m diam., slightly wider at the base and tapering upward, mostly pellucid-whitish, sometimes darkening slightly. Apothecia in section \pm hyaline throughout except brown in basal part of exciple; paraphyses less than 1 μ m wide, laxly anastomosing; asci cylindric, 220-340 μ m long, 7-10 μ m wide. Spores seldom seen (usually immature), linear, hyaline, \pm spiral within the ascus, 180-240 x (1.5-)2-2.5(-3) μ m, transversely pluriseptate, the cells mostly 8-9 μ m long. Hyphophores stipitate; stipes (0.8-)1-1.2(-2.0) mm tall, mostly single, occasionally branched, white; apical plate peltate, red- to gray-brown, c. 0.3-0.45 mm diam., essentially entire when young but at maturity becoming deeply divided to c. 1/2 its radius into 8-38 arms; conidial mass beige to pale brown when dry, white when moist, completely encircling the stipe, strongly and rapidly hygroscopic, when dry the arms of the apical plate extending well beyond the subtending conidia, when moist the conidial mass expanding to almost full diameter of the apical plate; conidia densely packed, filiform, irregularly branched, c. 1.5-2 μ m wide, multisepate, each cell c. 3-4 μ m long. Pycnidia not seen. Traces of atranorin and terpenoids. On mosses (typically Leucodon, but also Entodon), and hepatics, seemingly killing the bryophytes, sometimes spreading onto bark, on branches and trunks of trees (especially Juniperus, but sometimes on

Quercus or other trees). North Carolina to Florida and around the southern end of the Appalachians to Mississippi, north to Arkansas and Missouri.

G. calycioides (Duby) Nyl.

Thallus thin, shiny, gray to pale green, typically growing over bryophytes and seemingly killing them. Apothecia sessile, turbinate and thus pseudostipitate, black, not pruinose, in section \pm hyaline above, brown in extensive basal area of exciple; paraphyses very slender, less than 1 μ m wide, laxly anastomosing; asci cylindric, 290-380 μ m, 9-11 μ m wide; ascospores linear, hyaline, straight or laxly twisted within the ascus, c. 200 μ m long, c. 2.5-3 μ m wide, transversely plriseptate, the cells mostly 3-4 μ m long. Hypophores none. Pycnidia not seen in North American material, reportedly black above, pale below; conidia ellipsoid, 2-4 x 0.5-0.7 μ m. Over bryophytes in moist hardwood forests at c. 1600 m, North Carolina.

Literature

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