Gyalidea Lettau ex Vezda
(ASTEROTHYRIACEAE)

After Vezda & Poelt (1991), and others

Rev. 4/96

Thallus crustose, inconspicuous to superficial, smooth or ± sparingly cracked, to lacking, sometimes ± gelatinous when moist, effuse; prothallus absent. Photobiont Cystococcus- or Leptosira-like.

Apothecia sessile to semi-immersed, gyalectoid, urceolate to flat, pale cream, olive-brown, black-brown, rarely pink, distinctly translucent when wet; disc concave to plane, matt or shining, smooth. True exciple well developed, elevated, often over-arching disc, entire to crenulate-radially striate, generally darker than the disk, persistent to rudimentary, nude or covered by thalline tissue; pachydermatous, the hyphae septate, branched, desnely conglutinate, colorless or pale. Hymenium colorless or pallid, 120-150 um tall, I+ yellow or red-brown. Paraphyses abundant, septate, mostly simple, straight, suberect, or branched and anastomosing; 0.8-1.5 um wide, rarely thickened at the apices, bound with the asci in a gelatinous matrix; apices gelatinous. Asci subspherical, cylindrical or clavate, thin walled except for a slightly thickened, well definied apical apparatus, ± with a small ocular chamber; ascoplasm I+ yellowish-reddish brown; tholus K- [according to Awasthi; this may be a lapsus for "I-"]. Spores (4-)8, ellipsoid to fusiform, colorless, often with a thin perispore, (1-)3-septate to muriform, the septa ± constricted.

Pycnidia black, immersed in thallus; conidia bacilliform. No substances. On soil, moss, decaying plant material, or rock, often in specialized habitats, e.g. on mica-schist, pebble in or near streams, mine spoil heaps; also on leaves or bark; mostly in damp places.

1. Spores transversely 3-(4)-septate, occasionally submuriform with one of the middle cells longitudinally divided. Apothecia discs pale tan to yellowish, flesh colored, dark gray, or olive brown, (0.2-)0.5-0.8(-1.2) mm wide. Hymenium 70-120 um high; spores 12-18(-24) x 5-6 um; excipulum pale gray to brownish. Thallus crusose, thin, continuous, granular, light grayish. Apothecia abundant, scattered; pseudothalline margin prominent, concolorous with thallus; proper margin yellowish, darkening to black; disc concave becoming plane. Paraphyses simple, seprate. Hypothecium hyaline. Asci I+ red, with the hymenium shrinking in the IKI. On bare soil, moist basalt or soft, siliceous rocks in damp ravines, often on vertical, shaded surfaces. Oregon and Western Canada (also in Mexico--var. mexicana, with spores submuriform, 30-35 x 9-15 um). ..... G. hyalinescens (synonym G. dodgei) var. hyalinescens

1. Spores muriform. 2

> **2. Epihymenium pale green-brown; true exciple dark brown. Apothecia discs dark brown or brown-black,** to 0.6 mm wide, with entire or coarsely divided, often pale, whitish, swollen margin. Hymenium 90-130 um, lateral excipulum dark brown. Spores muriform. On calcareous or siliceous substrates, sometimes amongst heavy-metal-rich rocks. 3
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> **2. Epihymenium colorless; true exciple pale pink- or yellowsih brown to cream. Apothecia discs cream to pinkish or yellowish brown,** 0.3-0.7 mm diam. Apothecia

superficial; disc concave; true exciple well developed, elevated, smooth, concolorous; hymenium 90-120 um, colorless. Asci 70-100 x 15-25 um. Spores (12.5-)18.5-24.2 x (7.6-)8.3-9.1 um [(20-)29-34(-36) x (8-)12-14 um according to James, 1992], ellipsoid, muriform. On siliceous rock at edge of stream, Queen Charlotte Islands, British Columbia. In Britain it was found on limestone. ..... G. roseola (Arnold) Lettau ex Vezda

3. Spores (6-)8/ascus, 22-30 x 9-12 um. Hymenium dark brown above (?). On siliceous rocks, Louisiana. ..... G. lecideopsis var. kurdestanica (Steiner) Vezda

3. Spores 1-6/ascus, 30-60 um long. Hymenium hyaline to tan above. On siliceous (or calcareous, according to Thomson) rocks, Alaska. ..... G. lecideopis var. eucarpa (Serv.) Vezda (synonym: var. convarians (Nyl.) Vezda)

ADD:

Spores 13-22 x 4-4.5 um, 4-6-celled, ellipsoid to fusiform; hypothecium hyaline. Thallus thin, granulose, greenish gray. Apothecia to 0.25 mm, concave, brownish red to blackish, the margin concolorous or darker. Massachusetts, on soil. ..... "B." rubidofusca (Willey) Zahlbr. (= probably a Gyalidea species acc. to Printzen)

Literature

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