

## GASSICURTIA

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*Gassicurtia* Fée, *Essai Crypt. Écorc.* 100 (1824)

Named by Fée after his friend and colleague Charles Louis Félix Cadet de Gassicourt (1789–1861).

Type: *G. coccinea* Fée

Thallus crustose, continuous to rimose and areolate, verrucose, granular, coralloid or squamulose, often containing red pigments. Prothallus absent or present as a thin dark brown or black marginal line. Isidia and granules present or absent. Upper surface, whitish, grey, yellow, yellow-brown or brown, corticate. Medulla and lower cortex present or absent. Ascomata apothecial, lecideine, adnate to sessile; disc black, concave or ±plane to weakly convex, pruinose or not; margin usually persistent. Excipulum usually broad and black (carbonaceous), often with red pigments. Epihymenium yellow, orange or brown; hymenium colourless or yellowish, not interspersed but occasionally with a few oil globules; hypothecium dark brown or black. Paraphyses simple or sparingly branched; apical cells slightly enlarged, hyaline or brown. Asci clavate, *Bacidia*-type, usually with 8 spores, occasionally 12- or 16-spored; apex wall layers thickened; apex amyloid, with a distinct non-amyloid conical axial mass. Ascospores *Buellia*-type, yellow-brown to olive-brown or brown, 1–3-septate; walls uniformly thickened, rarely with weak median or apical wall thickenings, ellipsoidal, 7–17 × 3–6 µm; internal wall thickenings appearing after the septum is inserted (type-A ontogeny); torus present or not; outer wall weakly to strongly ornamented. Conidiomata pycnidial, immersed in the thallus; conidiophores of type V (*sensu* Vobis, 1980), acrogenous. Conidia fusiform, 5–10 × 0.8–1.0 µm.

*Gassicurtia* is a pantropical-subtropical genus of c. 15 species, two of which occur in tropical Australia.

### References

Marbach, B. (2000), Corticole und lignicole Arten der Flechtengattung *Buellia sensu lato* in den Subtropen und Tropen, *Biblioth. Lichenol.* 74: 1–384.

Vobis, G. (1980), Bau und Entwicklung der Flechten-Pycnidien und ihrer Conidien, *Biblioth. Lichenol.* 14: 1–141.

### Key

Thallus granular or isidiose; disc epruinose; lichexanthone and barbatic acid present..... **1. *G. catasema***  
Thallus verruculose; disc grey-pruinose; thiophanic acid, arthothelin and 3-*O*-methylthiophanic acid present....  
..... **2. *G. subpulchella***

### 1. *Gassicurtia catasema* (Tuck.) Marbach, *Biblioth. Lichenol.* 74: 218 (2000)

*Lecidea catasema* Tuck., *Proc. Amer. Acad. Arts. Sci.* 6: 283 (1864); *Buellia catasema* (Tuck.) Tuck., *Syn. North Amer. Lichens* 2: 161 (1888). T: Guayamal, Cuba, *C.F. Wright, Lich. Cub.* No. 242: holo: FH; iso: UPS *n.v.*

For further synonymy, see Marbach (2000).

Illustration: B. Marbach, *op. cit.* 221, fig. 100.

Thallus granular to granular-isidiose, 2–5 cm wide; granules 0.08–0.15 mm wide; prothallus absent or black. Upper surface white, yellow-white to yellow-grey or yellow-brown; upper cortex 15–20 µm thick. Apothecia 0.3–0.6 mm wide, sessile, surrounded by granules; margin thin to moderately thick; disc epruinose, plane. Excipulum 25–35 µm thick, black, K+

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yellow to orange. Epihymenium 5–10  $\mu\text{m}$  thick, olive-green to olive-brown, lacking crystals, K<sup>-</sup>, C<sup>-</sup>; hymenium 50–70  $\mu\text{m}$  thick, pale yellow (K<sup>+</sup> more intense yellow), not interspersed but with a few scattered oil globules; hypothecium 80–120  $\mu\text{m}$  thick, carbonaceous. Paraphyses 1.3–1.7  $\mu\text{m}$  thick, simple or branched subapically; apices cells 3–4  $\mu\text{m}$  wide, with brown caps. Asci 8-spored. Ascospores yellow-brown, olive-brown or brown, 1-septate, 9–13  $\times$  4.5–6.0  $\mu\text{m}$ ; wall of uniform thickness; outer wall moderately ornamented. Pycnidia black or dark brown, immersed in granules, c. 0.1 mm wide; conidia 8–10  $\times$  0.8–1.0  $\mu\text{m}$ .

*Chemistry*: Thallus K<sup>+</sup> yellow, C<sup>-</sup>, P<sup>-</sup>, UV<sup>+</sup> bright yellow; containing barbatic acid (major), lichexanthone (minor), obtusatic acid (minor or trace).

Rare on bark in hinterland forests of central Qld; also in Africa, North, Central and South America and the Hawaiian Islands.

Qld: Crediton S.F., 16 km SW of Finch Hatton, *J.A.Elix 21072 & H.Streimann* (CANB).

This species is characterised by the granular to isidiose thallus, epruinose discs, the lack of red pigments and the presence of lichexanthone and barbatic acid.

## **2. *Gassicurtia subpulchella* (Vain.) Marbach, *Biblioth. Lichenol.* 74: 244 (2000), as *subpulchella***

*Buellia subpulchella* Vain., *Bol. Soc. Brot.*, ser. 2, 6: 148 (1929), as *subpulchella*. T: near Palme, Mozambique, "ad corticem aboris", *A.Pires de Lima 874*: holo: TUR-V n.v.

For further synonymy, see Marbach (2000).

Illustration: B.Marbach, *op. cit.* 246, fig. 116.

Thallus continuous or rimose, finely verruculose or, rarely, granular, 1–3 cm wide, containing red pigments; prothallus dark grey to black or absent. Upper surface whitish grey to yellow or yellow-grey; upper and lower cortices 10–15  $\mu\text{m}$  thick. Apothecia 0.3–0.5 mm wide, sessile, often crowded but rarely confluent; margin distinct, narrow to moderately broad; disc grey-pruinose, plane to convex. Excipulum 30–45  $\mu\text{m}$  thick, K<sup>+</sup> yellow, with a dark brown or black outer zone and a red-brown or pale brown inner zone. Epihymenium 5–9  $\mu\text{m}$  thick, grey, yellow-grey or olive-brown, with granular crystals that are C<sup>+</sup> yellow-orange, K<sup>-</sup>; hymenium 40–60  $\mu\text{m}$  thick, pale yellow, K<sup>+</sup> intense yellow, not interspersed but with a few minute scattered oil globules; hypothecium 120–160  $\mu\text{m}$  thick, dark brown or black. Paraphyses 1.5–1.8  $\mu\text{m}$  thick, simple or furcate subapically; apices 2.5–3.5  $\mu\text{m}$  wide, with colourless or brown caps. Asci 8-spored. Ascospores olive-grey to olive-brown or grey-brown, 1-septate, 10–15  $\times$  4.0–5.5  $\mu\text{m}$ ; spore wall of uniform thickness; outer wall moderately ornamented. Pycnidia not seen.

*Chemistry*: Thallus K<sup>-</sup>, C<sup>+</sup> yellow-orange, P<sup>-</sup>; containing thiophanic acid (major), arthothelin (trace), 3-O-methylthiophanic acid (trace), atranorin (trace), unknown red pigment (minor).

Very rare on bark in tropical forest in north-eastern Qld; also in Africa, Asia, North and South America and Lord Howe Island.

Qld: Davies Creek Falls, 20 km E of Mareeba, Atherton Tableland, *J.A.Elix 43533* (CANB).

*Gassicurtia subpulchella* is characterised by the whitish grey to yellow or yellow-grey, finely verruculose thallus, the grey-pruinose apothecia, the excipulum with a red-brown or pale brown inner zone and by the presence of thiophanic acid and an unknown red pigment.