Supporting information

Overcoming deterrent metabolites by gaining essential nutrients: a lichen/snail case study

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Test S1 *Usnea taylorii* complete description

***Usnea taylorii* D. Hook.**

Thallus shrubby erect, rigid, 1-8 cm, yellow green with irregular to continuous (close to the apices) jet black pigmentation, with isotomic-dichotomic ramifications**. Basal part** single or with proliferating holdfast, brownish but not with jet black pigmentation. **Branches** cylindrical to slightly irregular in the first third of the thallus close to the basal part, not segmented, ± terete in cross-section, up to 2 mm diameter at their thickest parts. **Lateral branches** not constricted at ramification point. **Papillae**, **tubercles**, **fibrils** and **fibercles** absent. **Pseudocyphellae** present, following longitudinal cracks in the cortex. **Maculae** numerous on main branches, up to 0.3 mm width, lenticel-like ± elongated longitudinally or of irregular shape, often on small protuberances of the cortex. **Soralia** and **isidiomorphs** absent. **Cortex** thin to very thin (2.5-5.5%), sometimes longitudinally cracked (pseudocyphellae). **Algal layer** protruding together with the medulla into the central axis, seldom as a continuous layer under the cortex. In some parts of the branches the algal layer is greenish whereas in other parts it is more yellowish orangish. Under the microscope these algae appear to have orange pigment inside (carotenoids?). **Medulla** very thin to thin (2-10.5%) protruding into the central axis and thus dividing it into several thinner axial strands. **Axis** very thick (67-89%) divided in several smaller axial strand by the protruding medulla. **A/M**: calculated values were very variables among studied specimens (6.5-89). **Apothecia** absent or present, terminal to subterminal with a ± short geniculate appendage, with a jet black pigmented disc of 2-17 mm diameter, without fibrils at the edge of the disc. Apothecia and branches transversal and longitudinal cuts are available in Fig 1.

Chemistry: the studied specimens react P+ (fumarprotocetraric acid) or P- (no substances detected).

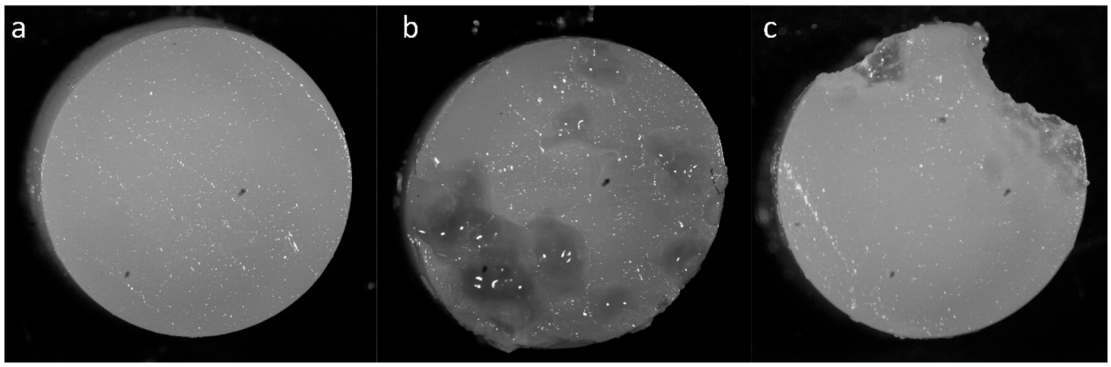

Fig. S1 Different levels of snail feeding on starch gels: (a) not consumed, (b) superficially consumed and (c) totally consumed. For (b) and (c), a corrective factor (1 and 2 respectively) was applied to the feeding score.

Table S1: Quantity of metabolites detected in the lichen *Usnea taylorii* (mean ± standard deviation)

Metabolites	**Quantity in the lichen (in mg.g^{-1} DM) (mean ± s.d.)**
Arabitol	138.39 ± 25.82
Citrate	1.08 ± 0.22
Mannitol	2.83 ± 0.67
Sucrose	0.34 ± 0.24
Usnic acid	4.09 ± 1.13