

ADD:

A. spp. sensu Hasse

A. spp. sensu Noble

Thallus areolate, brownish but densely white pruinose. Hymenium 100 um. Spores ? Thallus thick. California. .... A. sp.

Thallus light to dark bluish gray or ashen. California. Spores often not developed, ellipsoid to subglobose, (4-)6-8 per ascus, 24-32 x 12-20 um. Thallus determinate, thickish, of roundish areoles or warts, their surface smooth, from flattish becoming tumid and irregular, Apothecia small, 1(-2-3) per areole, immersed, concave, finally protruded and sessile, the disc then plane; black, epruinose; margin persistent, entire, finally flexuous; paraphyses subconglutinate; epithecium dark brownish; asci clavate or ventricose. .... A. gibbosa sensu Herre (mostly)

Thallus distinctly olive green, thick, of contiguous areoles. Hymenium 150 um. Spores 12-13 x 8-10 um. Arizona. .... A. sp.

Thallus crustose, indeterminate, formed by appressed or slightly protruding squamules; squamules to 1 mm diam., gray or partly olivaceous to pure brown, with a white pruina of calcium oxalate crystals; upper cortex paraplectenchymatous with cell lumina 4-10 x 4-8 um. Photobiont green, unicellular, 6-11 um diam. Soralia frequent, developing from the margin, growing inwards in the algal layer and excavating the squamules; soredia dark brown to black, (14.3-)18-24(-28.6) um diam. Apothecia rare, only seen immature in one collection, innate, in the center of the squamules; disc concave, brown, pruinose; hypothecium colorless; epithecium brown, K-, N-, HCl-; hymenium 80-100 um high; paraphyses septate, 2-3 um thick, sparingly branched and slightly monilliform in upper part, tips 2-4 um thick, brown. Asci, ascospores and pycnidia not seen. No substances. All parts C-, K-, P-, UV-. On steep faces of limestone or calcareous shist. Frequently in south-facing, dry, open habitats without or with sparse tree vegetation. .... A. excavata Thor & Timdal