Fungi from West Australia.

By W. B. Grove.

Dr. F. Stoward, Chief of the Government Agricultural Department of Perth, West-Australia, has at various times sent me a number of Fungi collected in that district, among which the four mentioned below are the most interesting. The specimens are deposited in the Herbarium, Birmingham University.

1. **Puccinia Conostylidis** Grove.

Soris uredosporiferis amphigenis, 1—2 mm longis, sparsis seriatisve, maculis plus minusve decoloribus insidentibus, oblongis vel lineari-lanceolatis, pulvinatis, compactis, tectis, dein epidermide fissa diu cinctis; uredosporis globosis vel ovali-oblongis, subtiliter echinulatis, flavo-brunneolis, 20—25 × 15—20 μ; episporio ca. 2 μ crasso, poris germinationis binis oppositis subaequatorialibus.

Soris teleutosporiferis majoribus, compactis, obscurioribus, et diutius epidermide tectis; *teleutosporis* clavatis v. oblongo-clavatis, apice rotundatis vel leniter attenuatis, valde incrassatis (usque 8 μ), subconstrictis, saepe deorsum attenuatis, levibus, 40—70 × 15—20 μ (saepius 48 × 17 μ); loculis facillime secedentibus, superiori obscure castaneo, inferiori pallido longiori; poro germinationis loculi superioris in apice incrassato, inferioris juxta septum sito; pedicello crasso, persistenti, sursum brunneolo, usque 45 μ longo; mesosporis paucissimis, ovoideis, obovoideis, v. subfusiformibus, apice incrassato (usque 12 μ), saepius immaturis, pallidioribus, 35—37 × 12—15 μ, pedicello plerumque breviori.

Hab. in *Conostylide bracteata* (ex *Haemodoraceis*) Subiaco, prope Perth Australiae occidentalis, Junio, 1913, Jan. 1914 (Dr. F. Stoward, no. 1).

There is no doubt that this species is closely allied to *P. Haemodori* P. Henn. (in Hedwigia, Beibl. 1901, p. 96), but it differs from the latter widely in the presence of abundant uredospores, as well as in the rarity of mesospores. Sydow examined (Monogr. 1, 609, f. 456) an original specimen from Hennings, but was not able to find

uredospores in it (as described by Hennings, l. c.); he remarks that as the teleutospores easily separate into their component cells, and the description of the alleged uredospores agrees with the upper cell of the teleutospores, he suspects that they are identical.

Mc Alpine (Rusts of Australia, p. 139, f. 40), on examining a specimen sent by Hennings, could likewise find no uredospores, but mesospores he remarks were very common. In Dr. Steward's specimens, the uredospores are abundant and at first in separate sori; later teleutospores appear in the same sori, mixed with the uredospores, but afterwards in sori of their own. The germ-pore of the upper cell of the teleutospores is sometimes large and broad; this makes them appear truncate at the apex, in that case. The mesospores resemble the lower cell of the teleutospore, but are distinguished by the pore contained in the apical thickening; the great majority of them were immature and very pale in colour.

Pteroconium.

Genus *Coniosporio* affine, sed conidia ambitu tenuiore lobato accincta.

2. **Pteroconium asteroides** sp. n.

Acervulis conidiorum aterrimis, nitidis, piceis, oblongis, magnitudine ludentibus, subepidermicis, dein epidermide nigrificata evanida erumpentibus, planis, compactis, secus fibras in series digestis, ca. 0,5—2 mm longis, at saepe confluentibus. Conidiis polygonis, asteroideis. compressis, lentiformibus, 17—20 μ lat., 4—7 μ cr., olivaceis, ambitu dilutiore (3—4 μ lat.) cinctis, stromati e cellulis exiguis olivaceis contexto insidentibus, pedicello brevissimo subhyalino suffultis.

Hab. in *Schoeno* quodam, prope Perth Australiae occidentalis, Jul. 1913 (no. 38). Conidia matura, asteris sic dicti formam aliquatenus imitantia, in ordines confertos singula arrecta digeruntur.

This species is an ally of *Coniosporium pterospermum* C. & M. (in Grevillea, XIX, 90), for which Saccardo suggests (Syll. X, 570) the new genus *Pteroconium*. *Pteroc. pterospermum* is from Victoria, Australia.

3. **Hendersonia oligoseptata** sp. n.

Maculis nullis; pycnidiis hypophyllis, in greges rotundatos hinc inde sparsos laxe collectis, globoso-conicis, atris, nitidis, 180—200 μ diam., tectis, ostiolo papillato pertuso epidermidem perforantibus. Sporulis numerosis, oblongis, utrinque rotundatis, 1-septatis, dein

rarissime biseptatis, leniter constrictis, dilute fuscescentibus, pellucidis, 8—13 × 2½—4 μ.

Hab. in foliis languescentibus *Dolichi* sp., prope Perth Australiae occidentalis, Jan. 1914 (no. 67). *H. biseptatae* Sacc., *H. pauciseptatae* B. & C., et *H. diversisporae* (Preuss) affinis, sed sporulis diu uni-septatis bene distincta.

4. **Harknessia uromycoides** Speg. Arg. IV, no. 309. Sacc. Syll. III, 320. *H. longipes* Harkn. Fung. Calif. p. 13.

Pycnidia thickly scattered, minute, roundish, pallid-brown, opening by a round pore, formed beneath the epidermis which at length splits over the ostiole into 3 or 4 dentate triangular segments (like a *Phacidium*). Sporules oblong-elliptic, 25—30 × 9—12 μ (occasionally up to 34 μ long), with two or three guttules, olivaceous, apiculate, the apiculus rather paler; pedicels long, narrow, curved, hyaline, persistent, up to 80 μ long.

On the phyllodes of *Eucalyptus* sp., Perth, West-Australia, July 1913 (no. 37).

The membrane of the pycnidium is pseudoparenchymatous above, but composed below of pale-olive more or less parallel hyphae. It dehisces by a somewhat papillate ostiole, with a perfectly round pore which is visible below the star shaped opening made in the epidermis. The spores are at first hyaline, then olivaceous and granular, and when mature thin-walled, with 2 or 3 (usually two) guttules. The pedicels are very persistent, long, slender and flexuous. The spores ooze out like those of a *Melanconium* and form a black globule at the mouth, which becomes very large and is ultimately effused on the surface like a black stain. The occurrence of this species in Australia is, of course, exactly what would he expected, although it was first discovered in America.

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