

## PHAEOGRAPHIS

Alan W. Archer

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*Phaeographis* Müll.Arg., *Flora* 65: 336 (1882); from the Greek *phaeo* (dusky, brown), and the genus name *Graphis*, in reference to the brown, *Graphis*-like ascospores.

Type: *P. dendritica* (Ach.) Müll.Arg.

Thallus thin or evanescent, whitish, or pale shades of grey, yellow, green or brown, dull or glossy, usually smooth. Ascomata lirelliform, rarely discoid, sometimes branched or irregular in outline, adnate or immersed, usually open. Disc pruinose or epruinose. Proper exciple usually present, occasionally lacking, thin, weakly carbonised or not. Paraphyses unbranched. Hymenium interspersed or not, I-. Asci 1 or 8-spored. Ascospores oval, elongate-ellipsoidal or fusiform-cylindrical, pale brown to brown, transversely septate, with 4–10 lenticular locules, or muriform, I–.

Chemistry: Depsidones present, lichexanthone (not in Australian species), or lacking lichen compounds.

A genus of c. 200 mostly corticolous species (some saxicolous); 20 are known from Australia. Most species are tropical to subtropical; some taxa occur in temperate regions.

A.W.Archer, The lichen genera *Phaeographis* and *Phaeographina* (Graphidaceae) in Australia 1: Species based on Australian type specimens, *Telopea* 8: 461–475 (2000); A.W.Archer, The lichen genera *Phaeographis* and *Phaeographina* (Graphidaceae) in Australia 3: *Phaeographis* – new reports and new species, *Telopea* 9: 663–677 (2001).

1	Ascospores muriform.....	2
1:	Ascospores transversely septate.....	6
2	Ascospores 1 per ascus, 100–135 µm long; norstictic acid present (1).....	1. <b>P. atromaculata</b>
2:	Ascospores 8 per ascus; norstictic acid absent.....	3
3	Stictic acid present; ascospores 30–53 µm long (2:.).....	4
3:	Lichen compounds absent.....	5
4	Ascospores 36–53 × 15–22 µm, 8–11 × 2–5-locular; proper exciple carbonised (3).....	21. <b>P. wilsonii</b>
4:	Ascospores 30–40 × 10–12 µm, 6–8 × 1–3-locular; proper exciple not carbonised.....	8. <b>P. epruinosa</b>
5	Ascospores 23–35 µm long, 6–8 × 2–3-locular (3:.).....	3. <b>P. caesioradians</b>
5:	Ascospores 40–60 µm long, 10–14 × 2–3-locular.....	14. <b>P. litoralis</b>
6	Thallus saxicolous; ascospores 4-locular (1:.).....	7
6:	Thallus corticolous; ascospores with at least 4-locules.....	9
7	Lirellae open; disc visible; ascospores 12–15 µm long (6).....	11. <b>P. hypoglaucoides</b>
7:	Lirellae closed or only slightly open.....	8
8	Thallus smooth; thalline margin absent; ascospores 12–15 µm long (7:.).....	6. <b>P. eludens</b>
8:	Thallus tuberculate; thalline margin conspicuous; ascospores 10–12 µm long.....	20. <b>P. tuberculifera</b>
9	Ascospores 4-locular (6:.).....	10
9:	Ascospores with at least 4-locules.....	14
10:	Norstictic acid present; ascospores 15–25 µm long (9).....	11
10	Norstictic acid absent.....	12
11	Hymenium interspersed (10).....	5. <b>P. colligata</b>
11:	Hymenium not interspersed.....	2. <b>P. brasiliensis</b>
12	Proper exciple not carbonised; ascospores 8–12 µm long (10:.).....	4. <b>P. ceratoides</b>
12:	Proper exciple variably carbonised, thin; ascospores 14–23 µm long.....	13
13	Proper exciple weakly or not carbonised (12:.).....	19. <b>P. subintricata</b>
13:	Proper exciple apically carbonised.....	13. <b>P. lindigiana</b>

14	Ascospores 4–6-locular (9:)	15
14:	Ascospores at least 7-locular	17
15	Norstictic acid present; ascospores 16–20 $\mu\text{m}$ long (14)	12. <b>P. intricans</b>
15:	Norstictic acid absent	16
16	Lichen compounds absent (15:)	18. <b>P. subdividens</b>
16:	Neotricone present	16. <b>P. neotricosa</b>
17	Norstictic acid present; proper exciple not carbonised; ascospores 15–31 $\mu\text{m}$ long, 6–8-locular (14:)	17. <b>P. platycarpa</b>
17:	Norstictic acid absent; proper exciple carbonised	18
18	Lichen compounds absent; proper exciple apically carbonised; ascospores 27–47 $\mu\text{m}$ long, 8–10-locular (17:)	15. <b>P. lobata</b>
18:	Stictic acid present; proper exciple completely carbonised, thin	19
19	Hymenium interspersed; ascospores 6–8-locular (18:)	6. <b>P. dendroides</b>
19:	Hymenium not interspersed; ascospores 6-locular	10. <b>P. girringunensis</b>