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Notes on *Trentepohlia dialepta* (Nylander) Hariot (Trentepohliaceae, Chlorophyta) and sporangia of some other species of *Trentepohlia* Mart. from Malaysia.

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Abstract–This paper discusses specimens identified as *Trentepohlia dialepta*. Sporangia of some other Malaysian species of *Trentepohlia* are also briefly discussed.

Introduction

Malaysian subaerial algae have not been sufficiently documented compared to those of its neighbor Indonesia. Wildeman (1900) has listed algae, including the subaerial genus *Trentepohlia* Mart., of the Indonesian Islands. Among the few subaerial algae recorded from Malaysia are *Trentepohlia aurea* Mart. and *T. jolithus* Wallroth. They were recorded by Johnson (1969) and Ratnasabapathy (1972) respectively.

Methods

Specimens were collected from various localities in Malaysia. They are now deposited in the Cryptogamic Herbarium of the University of Malaya.

Specimens of *T. dialepta* examined: Sarawak, Bako National Park, 100 m altitude, 23 April 1992, PM049 (forming yellowish green tufts on moist tree trunk), PM053 (yellowish green and orange clumps on dry cave wall); Kuala Lumpur, University of Malaya, 70 m altitude, 30 April 1993, PM221 (forming yellowish green patches on dry tree trunk), PM224 (dark green patches on dry tree trunk); Selangor, Ulu Gombak, 25 June 1993, forming yellowish green mat on dry rock, PM238.

Results and Discussion

Trentepohlia dialepta is described as follows. Filaments with smooth or rough surface, prostrate an erect branches indistinct, tapering or not tapering towards tips. Cells mostly cylindrical, rarely barrel-shaped or terete, mostly 4.8–12.6 µm wide, 4.8–69.3 µm long. Gametangia spherical, lateral or terminal, solitary, 12.6–18.9 µm in diameter. Sporangia more or less ovoid, not more than 16.8 µm wide, 14.7–21.0 µm long, single or in pairs. Cells supporting stalk cells of single sporangia not distinct from other vegetative cells. Stalk cells of paired

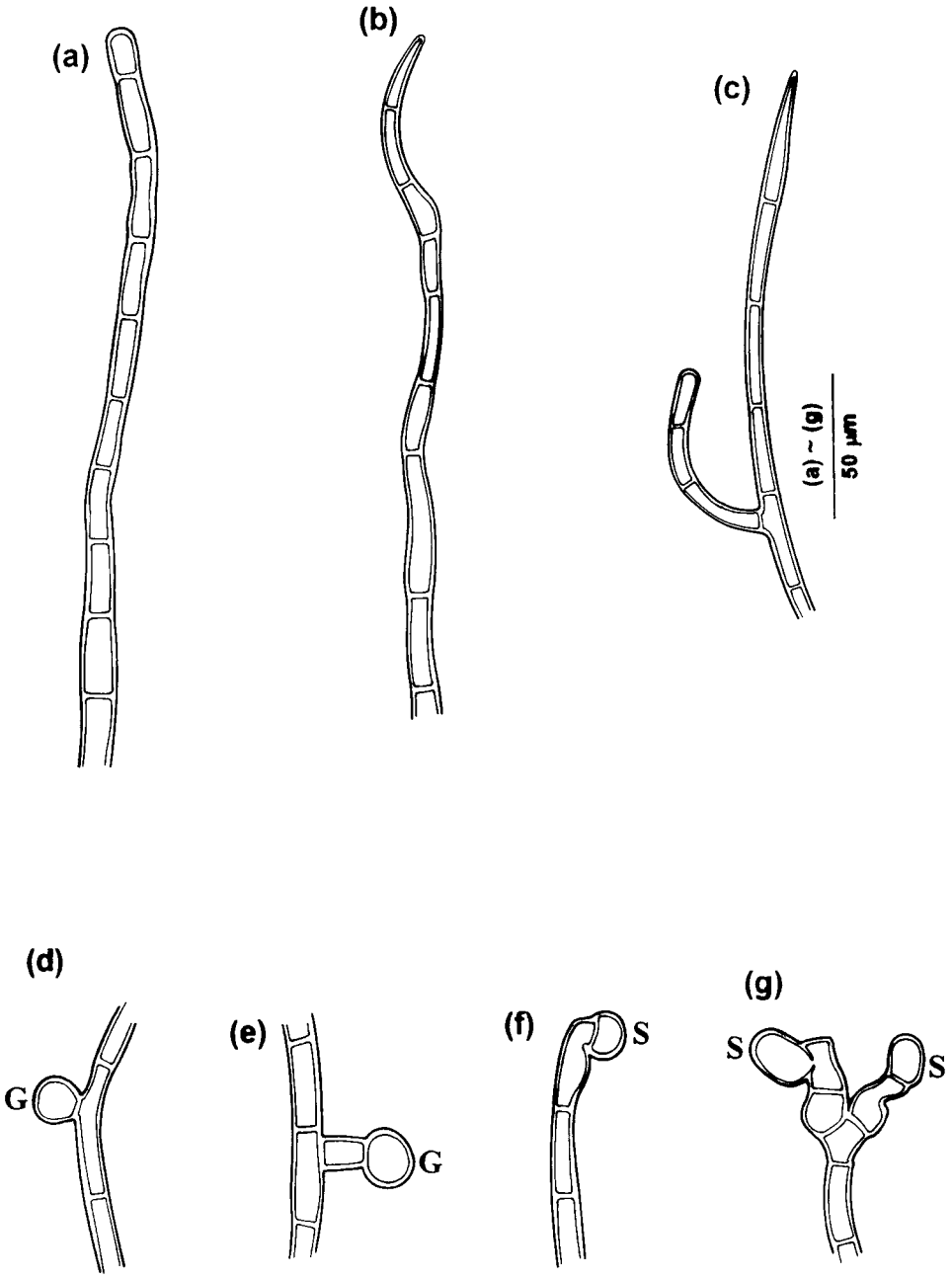

Figure 1 (a-g). Filaments, vegetative and reproductive cells of *Trentepohlia dialepta* (Nylander) Hariot. Gametangia and sporangia are labeled G and S respectively.

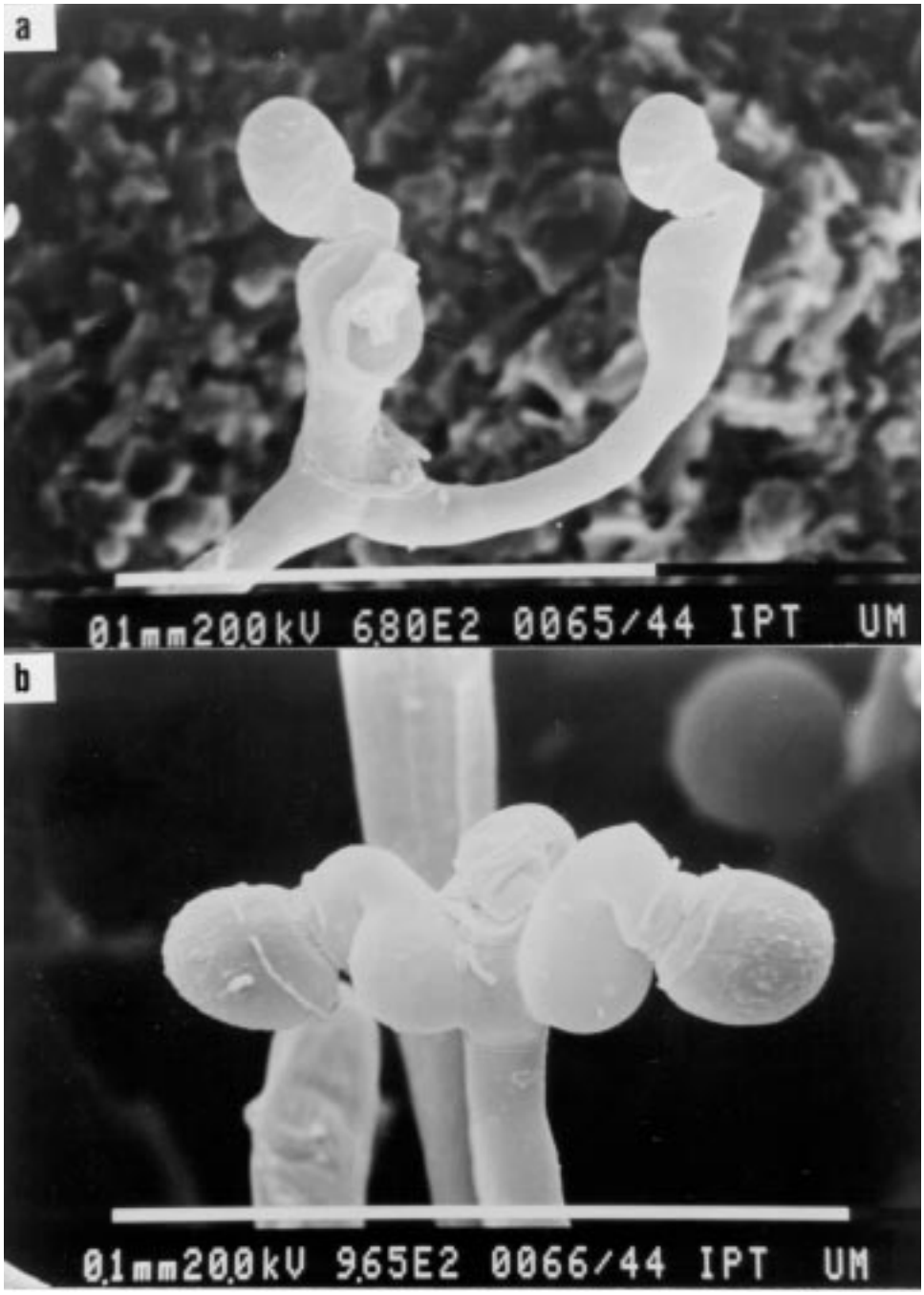

Figure 2. (a) and (b) scanning electron micrographs of sporangia of *Trentepohlia dialepta.*

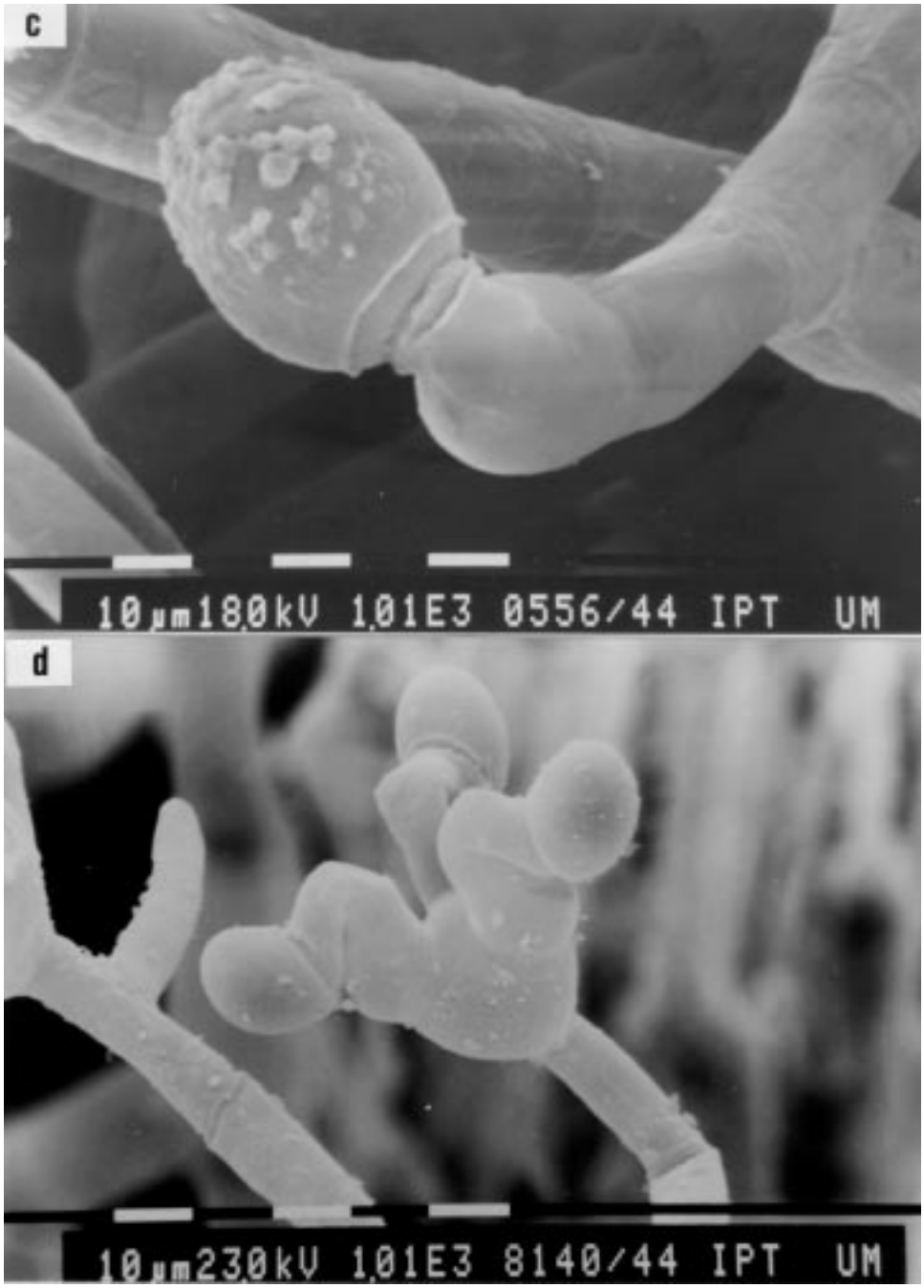

Figure 2, cont. (c) Scanning electron micrograph of a sporangium of *Trentepohlia aurea.* (d) Scanning electron micrograph of sporangia *Trentepohlia arborum.*

sporangia borne on cuneate head cells which are not more than 14.7 µm wide and 16.8–21.0 µm long. Stalk cells bottle-shaped, often bent at neck, 6.3–14.7 µm wide and not more than 21.0 µm long. Figs. 1a–g, 2a, b.

Specimens PM049, PM053 and PM238 possess cells which are quite uniform in width, 8.4–12.6 µm. Cells with the smallest width were seen in specimens PM221 and PM224. Nevertheless, cell width and length, and gametangia of all these specimens fit Printz's (1940) description of *T. dialepta.* He described the cells of *T. dialepta* as 6–10 µm wide, 18–50 µm long. Its gametangia were described as spherical, lateral or terminal and 12–28 µm in diameter. Printz's (1940) description of *T. dialepta* is similar to Wildeman's (1900) description of the alga from Java. Both Printz (1940) and Wildeman (1900) did not clearly describe sporangia of *T. dialepta.* Sporangia are present in specimen PM221.

Thompson & Wujek (1992) have transferred species of *Trentepohlia* which formerly placed by Hariot (1890) under the subgenus *Heterothallus* into a genus *Printzina* Thompson *et* Wujek. Shape of sporangia was used as a primary feature by Thompson & Wujek (1992) to distinguish *Trentepohlia* from *Printzina,* i.e., ovoid in the former (as in specimen PM221), globular to reniform in the latter. Sporangia of other Malaysian species of *Trentepohlia* which were also examined under the scanning electron microscope were *T. aurea.* (Fig. 2c) and *T. arborum* (Ag.) Hariot (Fig. 2d). Study of the two species were based on specimens PM231 and PM112 respectively. The shape of sporangia of the Malaysian *T. aurea* and *T. arborum* are consistent with the key as constructed by Thompson & Wujek (1992) for *Trentepohlia* and *Printzina.* These observations are imporant in the future verification of the key constructed by Thompson & Wujek (1992) for the two genera, *Trentepohlia* and *Printzina.*

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