

## Orchidaceous Additions to the Floras of China and Vietnam

Paul Ormerod<sup>(1)</sup>

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**ABSTRACT:** Literature and herbarium studies of Chinese and Vietnamese orchids have revealed a variety of new and noteworthy data pertinent to the floras of China and Vietnam. Three new combinations are proposed, viz. *Bhutanthera humidicola*, *Odontochilus saprophyticus* and *Peristylus garrettii*. Three new species are proposed, viz. *Epigeneium mimicum*, *Podochilus banaensis* and *P. oxystophylloides*.

**KEY WORDS:** Orchidaceae, Additions, China, Vietnam.

The present paper is mainly the result of herbarium and literature studies made at the Harvard University Herbaria (A, AMES, GH). Most of the Chinese materials examined were collected in the 1930's, an era that was one of the high points of Sino-American botanical cooperation in the twentieth century. Vietnamese specimens on the other hand are poorly represented at Harvard and these mostly consist of duplicates made by French collectors, a small collection made by Chinese collectors in North Vietnam and an important set formed by Joseph and Mary Strong Clemens during their visit to South Vietnam in 1927.

**Bhutanthera humidicola** (K. Y. Lang & Deng) Ormerod, comb. nov.

Basionym: *Peristylus humidicola* K. Y. Lang & Deng, Novon 6: 190, fig. 2, 1996.

Type: China – Quinghai, Magen Xian, Dawu Xiang, Muchang, SE of Magen, 3980m, 5 August 1993, *Ho et al.* 807 (holotype: HNWP, isotypes: AMES!, BM, CAS, MO).

Distribution: China - Quinghai.

Notes: This species represents the sixth member of the genus *Bhutanthera* Renz. All taxa so far assigned to this concept recently described by Renz (in Pearce *et al.* 2001) occur above 3500 metres in the Himalayas.

**Epigeneium mimicum** Ormerod, sp. nov.

Fig. 1

*Affinis Epigeneio nakaharae* (Schltr.) Summerh. sed floribus labello porcis 3 longitudinalibus brevibus non nisi in pagina adaxiali non porcis 2 longitudinalibus in dimidium proximale porcis callum parvum mediale formantibus et porcis 3 e hic callus ad labelli apicem extensis differt.

Typus: China – Guangxi, SE of Shang-sze, Shap Man Taa Shan, near Hoh Lung Village, 28 June 1933, *Tsang* 22581 (holotypus: AMES 104025!, isotypi: AMES 56025!, 67267!).

Synonym: *Epigeneium nakaharae* auct. non (Schltr.) Summerh.: Seidenf., Op. Bot. 124: 23, fig. 10, Pl. 4d, 1995.

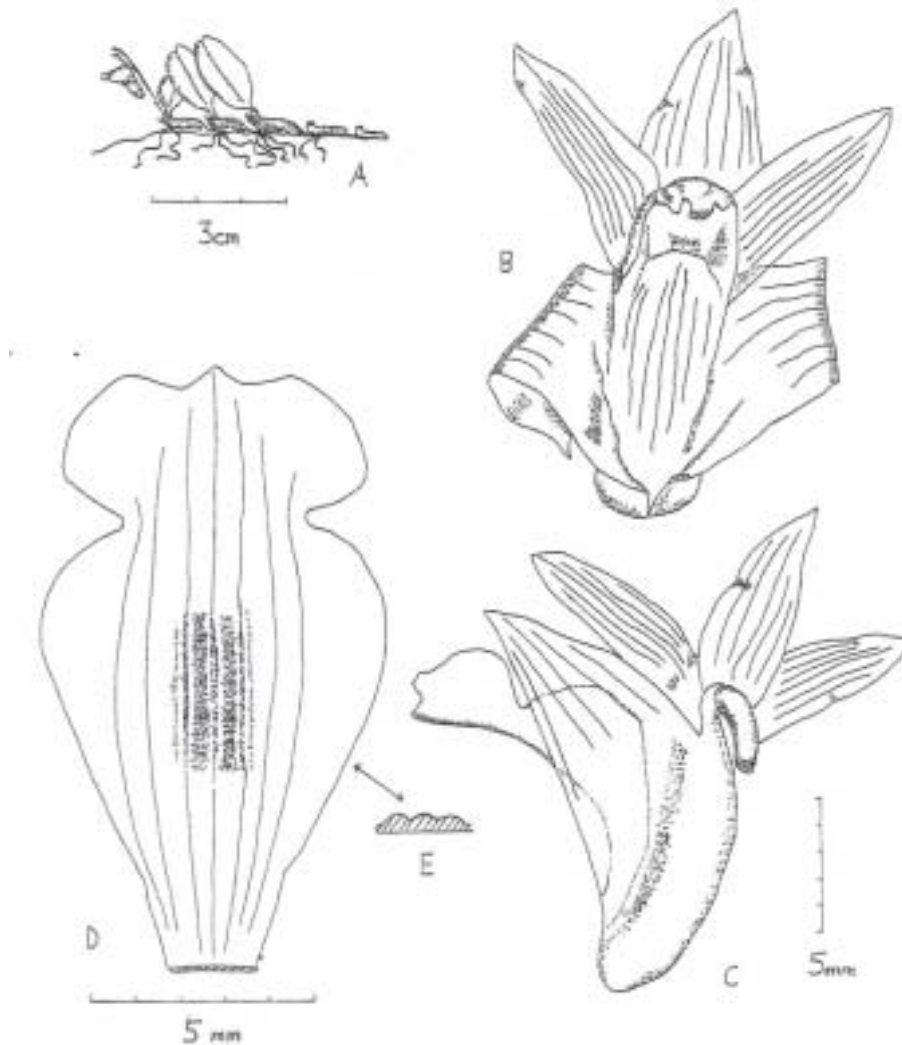


Fig. 1. *Epigeneium mimicum*. A. Plant. B. Flower minus labellum. C. Flower from side. D. Labellum. E. Cross-section of keels. A, BC and D to respective scales. E. Not to scale. Drawn from holotype.

Creeping herb forming chains to 8 cm long. Rhizome terete, rooting, 1-1.5 mm thick. Pseudobulbs prostrate, apex raised, covered by brown drying sheath, obliquely ellipsoid-fusiform, unifoliate, up to 4 mm apart, 6-13 mm long, 5-6 mm thick. Leaves stiffly coriaceous, erect, ovate-elliptic to elliptic, 11-24 mm long, 7-10 mm wide, petiole short, to 2 mm long. Inflorescence subterminal, one-flowered; peduncle 4 mm long. Pedicellate ovary terete, 10 mm long. Flowers "light red" or with greenish tepals and a lip with a red-brown midlobe and front of sidelobes, lower half of lip greenish. Dorsal sepal ovate, acute, 5-veined, 6.5 mm long, 4 mm wide. Petals oblong-lanceolate, acute, 6-veined, 8 mm long, 3 mm wide. Lateral sepals broadly ovate-triangular, acute, 6-veined, 10 mm long, 8 mm wide. Labellum trilobed, 13.5 mm long, 7.5-8 mm wide; hypochile obovate, with three low longitudinal keels in the centre, 10 mm long, base 2 mm wide, apex 7.5-8 mm wide; midlobe transversely elliptic-reniform, subacute, 4 mm long, 7 mm wide. Column arrect, 1 mm wide, 3 mm wide below; columnfoot forming with lateral sepals a mentum 8-10 mm long.

Distribution: China – Guangxi; Thailand.

Notes: This new species is externally very similar to *Epigeneium nakaharae* (Schltr.) Summerh. in habit, flower colour and size. However it differs from that species in bearing only three low keels restricted to the middle of the lip. In *E. nakaharae* the lip has two keels in its lower half which are united apically into a small transverse callus which then has three low keels in front of it more or less continuing to the lip apex.

*Epigeneium mimicum* may also occur in China's Guangdong province because there is in AMES an identical but sterile specimen (*Sin 9763*) from the Yao Shan mountains.

**Eulophia zollingeri** (Rchb. f.) J. J. Sm., *Orch. Java*: 228, 1905.

Basionym: *Cyrtopera zollingeri* Rchb. f., *Bonpl.* 5: 38, 1857.

Types: Java – Lampung Province, September 1845, *Zollinger s.n.* (syntype: W); Gebbok Klakka, November 1844, *Zollinger 585* (syntype: W).

Distribution: Sri Lanka; India; Thailand; Vietnam; SE China; Taiwan; Japan; Philippines; Malaysia; Indonesia to NE Australia.

**Specimen examined:** Vietnam – Dalat and area March/April 1932, *Squires 919* (AMES).

Notes: The above is a new record for Vietnam.

**Odontochilus saprophyticus** (Averyanov) Ormerod, comb. nov.

Basionym: *Pristiglottis saprophytica* Averyanov, *Updated Checkl. Orch. Vietnam*: 90, fig. 9, 2003.

Type: Vietnam – Lam Dong Prov., Lac Duong Distr., Da Chay Municip., Nui Gia Rich ridge, 1500 m., 15 April 1997, *Averyanov et al. VH 3977A* (holotype: HN, isotype: LE).

Distribution: Vietnam.

Notes: I place this species in *Odontochilus* Blume sect. *Evrardia* Ormerod and regard it as probably most closely related to *O. poilanei* (Gagnep.) Ormerod, which is also a mycoparasitic (or “saprophytic”) taxon.

**Peristylus garrettii** (Rolfe ex Downie) J. J. Wood & Ormerod, comb. nov.

Basionym: *Habenaria garrettii* Rolfe ex Downie, *Bull. Misc. Inf. Kew*: 418, 1925.

Type: Thailand – Doi Suthep, *Kerr 118* (holotype: K).

*Peristylus tentaculatus* auct. non (Lindl.) J. J. Sm.: *Seidenf., Dan. Bot. Ark.* 31, 3:41, fig.18, 1977; Tsi & Chen, *Acta Phytotax. Sin.* 33, 3: 295, 1995.

Distribution: Thailand; Burma; SW China.

**Specimen examined:** China – Yunnan, Menghai Xian, 1700 m, 6 September 1991, *Tsi 91- 472* (AMES; PE n.v.).

Notes: I have above cited the single Chinese specimen seen in line with the intentions of this paper. Several more Burmese and Thai collections were studied either by Jeff Wood at Kew or myself at Harvard.

*Habenaria garrettii* was wrongly reduced to a synonym of *Peristylus tentaculatus* (Lindl.) J. J. Sm. by Seidenfaden (1977). Both of these taxa have flowers with long filiform sidelobes to the lip but *P. garrettii* has a globose, didymous spur whilst *P. tentaculatus* has an ellipsoid to fusiform entire spur.

**Podochilus** Blume

Apart from the three species discussed below there was present in AMES material of another possibly new taxon from Yunnan, China (*Wang 74275*) which unfortunately lacked flowers.

**Podochilus banaensis** Ormerod, sp. nov.

Fig. 2

*Affinis Podochilo khasiano sed floribus labello lobo terminali suborbiculari et ca. 1.2 mm longo et ca. 1.5 mm lato (non oblongo - elliptico et ca. 0.4 mm longo et 0.2-0.3 mm lato) differt.*

Typi: Vietnam – Tourane, Mt. Bana, May to July 1927, *J. & M. S. Clemens 3901* (holotypus: AMES!, isotypi: K, P).

Caespitose, lithophytic herb. Stems terete, densely foliose, to 130 mm long, 1-1.2 mm thick, internodes 1-1.5 mm long. Leaves articulate with sheath, erect, ligulate, acute, 9.5-12.5 mm long, 1.8-2 mm wide. Inflorescences pseudoterminal, fractiflex, successively in total 4-5-flowered; floral bracts ovate, acute, ca. 2 mm long, 0.8-1 mm wide. Pedicellate ovary narrowly clavate, terete, 2.7 mm long. Flowers white. Dorsal sepal with midvein slightly carinate externally, ovate, acute, 3.8 mm long, 1.8-2 mm wide. Petals shortly clawed, obliquely elliptic, subacute, lower third of margin connate to column, one-veined, 3.5 mm long, 1.35 mm wide. Lateral sepals with lower basal half dilatate-saccate to form a 1.5 mm long pseudomentum, midvein carinate externally, obliquely ovate, acute, 4mm long, 2.5 mm wide unexpanded. Labellum in total 4mm long, 2 mm wide; claw broad cuneate, ca. 0.5 mm long and wide; lamina subpandurate, terminated in the apical third by a suborbicular, concave lobe 1.2 mm long x 1.5 mm wide. Column 2 mm long, 1.5 mm wide laterally. Anther cap cordate-lanceolate, 1.4 mm long, 0.8 mm wide.

Distribution: Vietnam.

Notes: This species is externally identical to *P. khasianus* Hook. f. from which it differs in having a subpandurate labellum with a prominent suborbicular terminal lobe. In *P. khasianus* the labellum is sagittate with a small oblong-elliptic terminal lobe.

**Podochilus khasianus** Hook. f., Fl. Brit. Ind. 6: 81, 1890.

Types: NE India – Sylhet, *De Silva in Wallich Catal. 7335B* (syntype: K-L, isosyntype: K, K-W); Khasia Hills, Amwee, 915m, *Hooker & Thomson s.n.* (syntype: K, isosyntype: GH!).

*Podochilus chinensis* Schltr., Fedde Rep. 19: 380, 1924.

Type: China – Guangdong, Yamchow, 11 July 1908, *Ts'oong 1971 (=CCC 3808)* (holotype: B\*, isotype NY, photo at AMES!).

*Podochilus intermedius* Averyanov, Bot. J. Leningr. 73, 7: 1022, fig. 1, 1988.

Type: Vietnam – Quang Nam-Da Nang Prov., Giang District, Ha Ra, 13 July 1986, *LX - VN s.n.* (holotype: LE, isotype: C).

Distribution: NE India; Bhutan; S China; Vietnam.

**Specimens examined:** China – Yunnan, Menghai Xian, 1400m, 6 September 1991, *Tsi 91-482* (AMES). Guangxi, Shap Man Taai Shan, Nam She Village, 16 November 1934, *Tsang 24660* (AMES); Tanglung Village, 20 October 1934, *Tsang 24081* (AMES); loc. cit., *Tsang 24018* (AMES); Sup-man-ta Shan, May to July 1937, *Liang 69663* (AMES). Hainan, sine loc., 2 January 1934, *Wang 36122* (AMES). Vietnam – Tonkin, Dam-ha, Sai Vong Mo Leng, Lomg Ngong Village, 18 July to 9 September 1940, *Tsang 30404* (AMES); loc.cit., Ha-Coi, NE Chuk-phai, Shui Mei Village, August 1939, *Tsang 29455* (AMES); Bien Hoa Province, Mt. Chua Chiang, *Pierre 1877* (AMES).

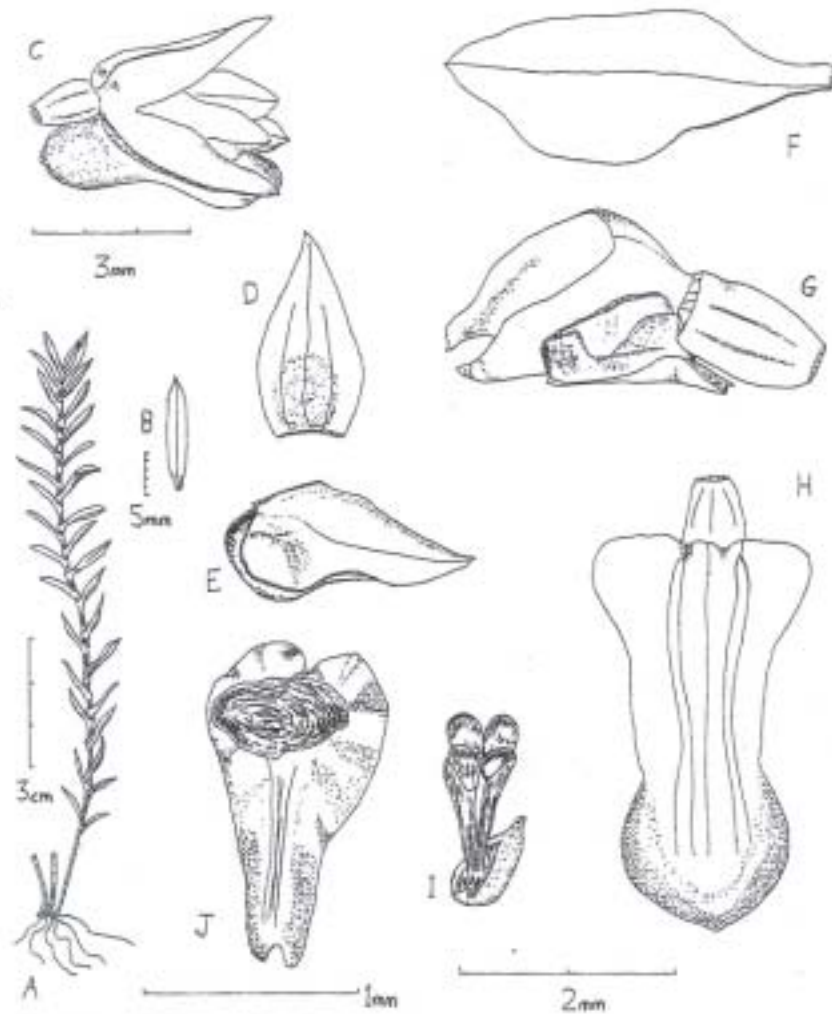


Fig. 2. *Podochilus banaensis*. A. Plant. B. Leaf. C. Flower. D. Dorsal sepal. E. Lateral sepal, inside. F. Petal. G. Column. H. Labellum. I. Pollinia. J. Anther cap. A, B, CDE, FGHI and J to respective scales. Drawn from holotype.

Notes: Nearly all records of *P. microphyllus* Lindl. from Vietnam (See Seidenf. 1992) are probably referable to *P. khasianus* with the exception of a collection from the Tourane area which has been described above as *P. banaensis*. Averyanov's *P. intermedius* is not conspecific with *P. microphyllus* as proposed by Seidenfaden (1992) but identical with *P. khasianus*.

***Podochilus oxystphyloides* Ormerod, sp. nov.**

Fig. 3

*Affinis Podochilo cultrato* Lindl. sed foliis late patentibus (non imbricatis) et aspectu laterali oblique ensiformibus, usque ad 13.5 mm longis et 4.5 mm latis (non deltatis, usque ad 10 mm longis et 5 mm latis) differt. Folia specierum ambarum proximaliter equitancia at distaliter valde complicate sunt.

Typi: China – Guangdong, Kung P'ing Shan and Area, T'aan Faan, Fang Ch'eng District, 25 to 30 August 1936, Tsang 26704 (holotypus; AMES!, isotypi: C, K).

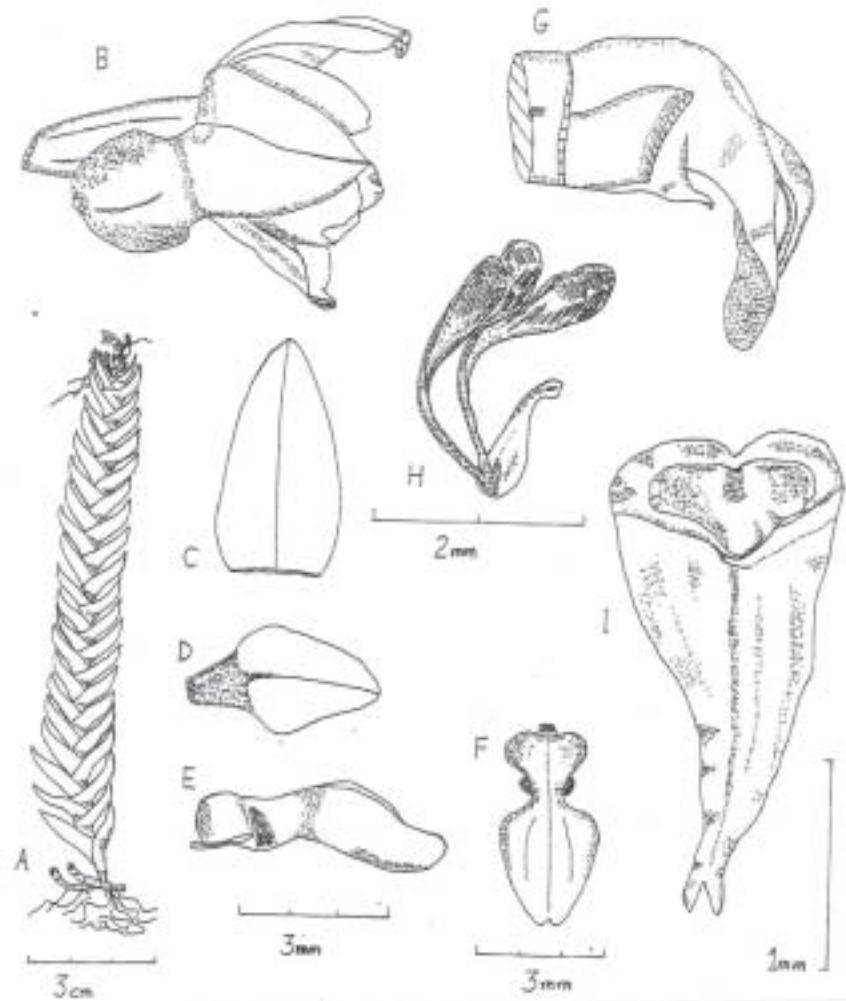


Fig. 3. *Podochilus oxystophylloides*. A. Plant. B. Flower. C. Dorsal sepal. D. Petal. E. Labellum, side view. F. Labellum from above. G. Column. H. Pollinia. I. Anther cap. A, BCDE, F, GH and I to respective scales. Drawn from holotype.

*Podochilus cultratus* auct. non Lindl.: Seidenf., Bot. Tidsskr. 68, 1: 57 pp., fig. 17, 1973. Caespitose epiphytic herb. Stems terete, densely foliose, to 155 mm long, 2 mm thick. Leaves not articulate at base, folded longitudinally, V-shaped in cross-section, erect-patent, ensiform in lateral view, acute, to 13.5 mm long, 4.5 mm wide laterally. Inflorescence pseudoterminal, fractiflex, successively in total 3-flowered, 3-5 mm long; floral bracts ovate, acute, 4.5 mm long, 2 mm wide. Pedicellate ovary terete, clavate, 3.2 mm long. Flowers white. Dorsal sepal ovate-elliptic, subacute, 4.2 mm long, 2 mm wide. Petals with a short claw connate to the column, free part obliquely ovate, obtuse, one-veined, in total 3.5 mm long, 2 mm wide. Lateral sepals with lower basal half dilatate-saccate to form a 2mm long pseudomentum, midvein slightly carinate externally, obliquely broad ovate, subacute, 3.8 mm long along midvein, 3 mm wide above basal dilation. Labellum in total 4.2 mm long, 2.5 mm wide; claw ligulate, 1 mm long; lamina trilobate, constricted in basal third; basal lobe concave-saccate, transversely elliptic or subcordate; terminal lobe ovate, shortly retuse, 3 mm long, 2.5 mm wide. Column 2- 2.5 mm long, 1.5 mm wide laterally. Anther cap ovate-lanceolate, apex shortly bifurcate, 2 mm long, 0.5 mm wide.

Distribution: China – Guangxi and Guangdong.

**Additional specimen examined:** China – Guangxi, Sup-man-ta Shan, May to July 1937, *Liang 69774* (AMES).

Notes: This species is related to *P. cultratus* Lindl. from which it is distinguished by its spreading ensiform leaves. In *P. cultratus* the leaves are imbricate and deltate.

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### LITERATURE CITED

- Pearce, N., P. J. Cribb and J. Renz. 2001. Notes relating to the flora of Bhutan: XLIV. Taxonomic notes, new taxa and additions to the Orchidaceae of Bhutan and Sikkim (India). *Edinb. J. Bot.* **58**: 99-122.
- Seidenfaden, G. 1977. Orchid Genera in Thailand V. Orchidoideae. *Dan. Bot. Ark.* **31**: 1-149.
- Seidenfaden, G. 1992. The Orchids of Indochina. *Opera Botanica* **114**: 1-502.

## 中國與越南蘭科植物誌新見聞

Paul Ormerod<sup>(1)</sup>

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### 摘 要

研究中國與越南野生蘭之文獻與標本，發現了許多新的與值得注意的資料。本文中提議三個新的組合學名，即：*Bhutanthera humidicola*, *Odontochilus saprophyticus* 和 *Peristylus garrettii*。另提出三個新種，分別為：*Epigeneium mimicum*, *Podochilus banaensis* 和 *P. oxystophylloides*。

關鍵詞：蘭科、新見聞、中國、越南。

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1. Paul Ormerod P. O. Box 8210 Cairns, Qld. 4870, Queensland, Australia. Email: niel@bigpond.com