TWO NEW SPECIES OF MEDIOCALCAR (ORCHIDACEAE) FROM NEW GUINEA

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INTRODUCTION

Since the establishment of Mediocalcar by J.J. Smith in 1900, 51 species and 3 varieties have been described in this genus. Many of these are based on trivial characters, which lack diagnostic value for distinction at species level. Revisional work in progress at the Rijksherbarium suggests that less than 15 species should be recognized, but much work remains to be done before a satisfactory classification of this remarkable genus can be produced. During the course of these investigations it soon became apparent that two distinct species are still undescribed, of which one is fairly common throughout the highlands of New Guinea. They are strikingly different from all other species of the genus and they can easily be recognized by their vegetative characters alone.

DESCRIPTIONS

Mediocalcar decoratum Schuiteman, spec. nov. — Fig. 1.

A congeneribus pseudobulbis trivel quadrifoliatis, floribus parvis labello perbreviter unguculato, calcari profunde saccato ad basin labelli extenso differt. — Typus: Morrison 1659 (spirit material K), Papua New Guinea, Central Province, Efogi, 1400 m, February 1978.


Roots c. 0.5 mm thick, densely covered with root-hairs. Rhizome creeping, freely branching, mat-forming, c. 1 mm thick. Pseudobulbs 1–5 mm apart, cylindrical to slightly clavate, (5–)10–15(–20) mm long, 3–6 mm across, almost entirely adnate to the rhizome; three-, more frequently four-foliate. Leaves very shortly petiolate, spreading in one plane, narrowly elliptic (index 3.5–6), (7–)10–18(–23) mm long, 2–4 mm wide; apex obtuse to subacute, rarely acute, minutely mucronate; carnos. Young shoots as well as the bases of heteranthous inflorescences enveloped by 3–5 transparent, subacute, keeled sheaths. Inflorescences solitary, heteranthous or rarely synanthsous, at the base without an exposed bract. Peduncle 3–7 mm long, at
Fig. 1. *Mediocalcar decoratum* Schuiteman. a. Habit; b. flower; c. petal; d. lip; e. sepals; f. lip & column; g. column (a Schuiteman 69; b–g Womersley s.n. 30-10-1969).
the apex with a triangular acuminate bracteole c. 1.5 mm long. Pedicel and ovary 5–7 mm long. Flowers urceolate-globose, oblique; length, height and width 5–7 mm. Synsepalum 6.5–8.5 mm long and 12–16 mm wide when cut open and flattened; free tips triangular, subacute to acute, without mucro, reflexed, 2.5–3.5 mm long. All sepals smooth externally, conspicuously gibbose. Petals narrow, more or less elliptic (index 5.5–7), 5.5–7 by c. 1 mm; apex acute; 1-nerved. Lip 5–7 mm long, c. 3 mm wide in natural position; claw c. 1 by 2 mm, auricles inconspicuous; apex acute, reflexed; margins erect, more or less clasping the column; spur deeply saccate, somewhat laterally compressed, c. 2.5 mm across, extending to the base of the lip. Column short, much dilated apically, c. 3 mm long, 2 mm wide at the apex, foot very short. Fruit cylindrical, c. 10 by 3 mm.

Ecology. Epiphyte in montane forest, on trunk or major branches of Nothofagus, Castanopsis, Dacrydium, etc., usually in shaded positions. Altitude 900–2000 m.

Collections examined:


Notes. Mediocalcar decoratum is characterized, among other things, by its 3- to 4-foliate pseudobulbs. A few other species, usually 2-foliate, occasionally produce 3-foliate pseudobulbs. Of these only M. pygmaeum Schlr. is of similar small stature. The latter species differs in the broad leaves (index < 3), the always synanthesous inflorescences, the narrow flowers and the long-clawed lip with a weakly devel-
Fig. 2. *Mediocalcar subteres* Schuiteman. a. Habit; b. flower; c. petal; d. lip; e. sepals; f. lip & column; g. column (a Kairo NGF 44083; b–e Reeve 751; f, g Cribb S 129).
Mediocalcar subteres Schuiteman, spec. nov. — Fig. 2.

A congeneribus foliis subteretibus, radicibus minute papillosis differt. — Typus: Kairo NGF 44083 (LAE, holo; AMES, K, SING, iso), Papua New Guinea, Morobe Province, Baiame Creek near Yamp, 1850 m, August 1969.

Roots c. 0.5 mm thick, densely minutely papillose. Rhizome creeping, more or less frequently branching, c. 2 mm thick. Pseudobulbs approximate, terete, (8—)15—25—(35) mm long, 2.5—3.5 mm across, largely adnate to the rhizome; free apex ascending, 3—7 mm long; 1—, occasionally 2—foliate. Leaves sessile, subterete, straight, channeled above, (1.5—)3—5—(7) cm long, 2—3 mm wide; apex acute, mucronate. Young shoots enveloped by c. 5 closely adpressed, imbricate, subacute, membranous sheaths. Inflorescences solitary, synanthous, at the base with a narrow acuminate bract c. 3 mm long. Peduncle 5—15 mm long, at the apex with a triangular acute bracteole c. 1 mm long. Pedicel and ovary 7—10 mm long. Flowers urceolate, oblique, laterally compressed, 8—9 mm long, 5.5—5.5 mm high, 4—5 mm wide. Synsepalum 8—9 mm long and 11—16 mm wide when cut open and flattened; free tips triangular, subacute, mucronate, only slightly spreading, 3—3.5 mm long. Lateral sepals more or less sharply keeled to almost smooth externally. Petals narrow, more or less elliptic (index 5.5—6.5), 5.5—6.5 by c. 1 mm; apex acute; 1— or 3—nerved. Lip 6.5—7 mm long, c. 3 mm wide in natural position; claw c. 2 by 1.5 mm, auricles well developed, slightly recurved; apex acute; margins erose, clasping the column; spur broadly cylindrical, c. 2 mm across, extending to, or somewhat surpassing the base of the lip. Column clavate, 3—4 mm long, c. 2 mm wide at the apex, foot very short. Fruit not seen.

Ecology. Epiphyte in montane forest, creeping on moss covered branches of Nothofagus, Araucaria, etc. Altitude 1200—2000 m.

Colour. The whole flower is usually bright yellow or orange-yellow; the type is described as having yellow flowers with a red base. The ovary is bright greenish-yellow. The leaves are dull green, the pseudobulbs yellow-green.

Collections examined:

PAPUA NEW GUINEA. Enga Prov.: Apapa River near Yondalia, 1650 m, Aug. 1980, Reeve 751. — Morobe Prov.: head of Baiame Creek, Yamp, 1850 m, Aug. 1969, Kairo NGF 44083; Regina Creek logging area between Wau and Bulolo, 1200 m, Sept. 1980, Cribb S 129; Gumi logging area W of Bulolo, 1850 m, Sept. 1980, Cribb S 159.
Notes. *Mediocalcar subteres* is distinguished by its subterete leaves. The roots, practically glabrous to the naked eye but densely papillose in microscopic view, are also distinctive. In all other species, as far as now known, the roots are more or less noticeably covered with root-hairs.

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