

**CATALOGUE OF THE AFRICAN PLANTS
COLLECTED BY DR. FRIEDRICH
WELWITSCH IN 1853-61. VOLUME II,
PART I. MONOCOTYLEDONS AND
GYMNOSPERMS**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649110162

Catalogue of the African plants collected by Dr. Friedrich Welwitsch in 1853-61. Volume II,
Part I. Monocotyledons and gymnosperms by Alfred Barton Rendle

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Cover @ 2017

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ALFRED BARTON RENDLE

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CATALOGUE
OF THE
AFRICAN PLANTS

COLLECTED BY
DR. FRIEDRICH WELWITSCH
IN 1853-61.

VOLUME II. PART I.

MONOCOTYLEDONS AND GYMNOSPERMS.

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LONDON:
PRINTED BY ORDER OF THE TRUSTEES.

SOLE BY
LONGMANS & CO., 39 PATERNOSTER ROW;
B. QUARETB, 15 PICCADILLY; DULAU & CO., 37 SOHO SQUARE, W.;
KEGAN PAUL, TRENCH, TRÜBNER & CO., CHANCERY LANE;
AND AT THE
BRITISH MUSEUM (NATURAL HISTORY), CROMWELL ROAD, S.W.
1899.

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MONOCOTYLEDONS.

I. HYDROCHARIDÆÆ.

1. **LAGAROSIPHON** Harv. ; Benth. & Hook. f. Gen. Pl. iii. (part 2, Apr. 1853) p. 450.

1. **L. rubellus** Ridl. in Journ. Linn. Soc. xxii. p. 234 ; Durand & Schinz, Consp. Fl. Afr. v. p. 2 ; Wright in Fl. Trop. Afr. vii. p. 3.

HERB..—Habit of *Ceratophyllum*, inhabiting the rivers in great masses, herbaceous-green, stems densely caespitose, elongated, 3 to 5 ft. long, purplish, slender, leaves opposite, linear ; flowers dimorphic, with a long (3 to 8 in.) capillary tube, at the time of pollination floating on the surface of the water, reddish, very small, trimerous ? Ovary many-ovuled, subsessile within a tubular spathe with gaping apex in the leaf-axils. Plentiful in the river Quipumpunhine and other deeper streams round Humpata and Ohai, growing along with species of *Utricularia* and *Potamogeton* ; fl. and fr. April 1860. Nos. 6472, 6472b.

2. **BLYXA** Thou. ; Benth. & Hook. f. Gen. Pl. iii. p. 451.

1. **B. radicans** Ridl. in Journ. Linn. Soc. xxii. p. 236, t. 14 ; Durand & Schinz, Consp. Fl. Afr. v. p. 3 ; Wright in Fl. Trop. Afr. vii. p. 6.

HERB..—A perennial herb, dioecious ; male flowers 6-androus, petals white, sepals herbaceous ; female flowers with white petals, a little longer and narrower than the male. Fruit a long cylindrical berry. Plentiful in masses in the clear streams near Lopollo, especially at the Cataracts ; somewhat rarely flowering. Not seen elsewhere in Angola and Benguela. In fl. and with unripe fr. beginning of May 1860. No. 6471.

3. **OTTELIA** Pers. ; Benth. & Hook. f. Gen. Pl. iii. p. 453.

1. **O. lancifolia** Rich. Tent. Fl. Abyss. ii. p. 280, t. 95 (1851) ; Ridl. in Journ. Linn. Soc. xxii. p. 238 ; Durand & Schinz, Consp. Fl. Afr. v. p. 4 ; Wright in Fl. Trop. Afr. vii. p. 7.

AMBACA.—Plentiful in lake to the left of the river Caringa. In fl. and fr. June 1855. No. 6466.

Var. **fluitans** Ridl., *l.c.* ; Durand & Schinz, *l.c.* ; Wright, *l.c.*

PUNGO ANDONGO.—An elegant herb, swimming ; with fibrous root. Flowers very delicate, very fragile when dry, intensely yellow. Plentiful with species of *Nymphæa* in ponds on the lofty rocks of the presidium. Pedra Songue, on the lower ridge. In fl. middle of February, in fr. April 1857. No. 6468.

2. *O. plantaginea* Welw. ex Ridl., *l.c.*; Durand & Schinz, *l.c.*; Wright, *l.c.*

HULLA.—Spathes with numerous acute teeth; flowers yellow; root-fibres copper-coloured, shining. In masses in ponds close to the river-banks near Catumba, where the camp of the Monani was formed at the time of the invasion. April 1860. No. 6459.

3. *O. vesiculata* Ridl., *l.c.*, p. 237; Durand & Schinz, *l.c.*; Wright, *l.c.*

HULLA.—An acaulescent herb $\frac{1}{2}$ to 2 ft., with 6-androus, 7-carpellary yellow flowers which at time of pollination float on the surface of the water; styles several or all bifid. Spathe loosely enclosing the fruit, inflated, filled with water, compressed, broadly ovoid, purple-banded on the outside, mouth bidentate finally torn. Leaves originally somewhat stiff, fragile, bright pellucid green; scape slightly flattened, shortly 2-winged, gradually thickened a little below the spathe, tetragonal, lateral angles acutely winged. Ovary in the several fruits examined always incompletely 3-locular. Plentiful in slowly flowing streams and clear ponds near Lopolla, Mumpulla, etc., along with species of *Myriophyllum*, *Isuardia*, *Nymphaea* and *Potamogeton*. In fl. end of Oct. 1859; in fl. and fr. April 1860. No. 6457.

4. *O. crassifolia* Welw. ms.

Boottia crassifolia Ridl., *l.c.*, p. 239; Durand & Schinz, *l.c.*; Wright, *l.c.*, p. 9.

As the flowers are δ and solitary in the spathe, the species belongs to the genus *Ottelia*, as Welwitsch suggested, and not to *Boottia*.

HULLA.—A fleshy subrigid herb, growing erect from the muddy bottom, hidden 1 to 2 fathoms deep in flood-time. Leaves 2 to 3 ft., erect. Flowers yellow. Fruit flattened cylindrical, deeply 7-furrowed on both sides. Rather rare in the deeper ponds and streams round Mumpulla and Lopolla, only flowering in almost dried-up ponds. In fr. Oct. 1859, in fl. and fr. April 1860. No. 6470.

II. BURMANNIACEÆ.

1. **BURMANNIA** L.; Benth. & Hook. f. Gen. Pl. iii, p. 457.

1. *B. bicolor* Mart. Nov. Gen. et Sp. i, p. 10, t. 5, fig. 1 (1824).

Var. *africana* Ridl. in Journ. Bot. 1887, p. 85; Wright in Fl. Trop. Afr. vii, p. 11.

HULLA.—An annual very slender herb one digit high. Leaves and stem herbaceous-green, upper part of stem purplish. Flowers deep blue or deep violet marked with bright yellow, terminal, 3 or 4 together. In spongy wooded meadows of Monino with species of *Eriocaulon*, *Xyris*, *Primula*, and *Scleria*, fairly plentiful where it occurs, but found only in a few localities. In fl. and fr. Feb. 1860. No. 6473. Gregarious in a few localities in lofty spongy places, and in rather damp sandy places, at Morro de Lopolla, near Sambo, growing along with grasses, in rocky places covered with a thin but rich soil. In fl. April and May 1860. Nos. 6474, 6474b. Marshy places Lopolla; in fr. Feb. 1860. COLL. CARP. 68.

III. ORCHIDÆ.

TRIBE I. EPIDENDRÆ.

1. **LIPARIS** L. C. Rich. ; Benth. & Hook. f. Gen. Pl. iii. p. 495.

1. **L. Guingangæ** Rehb. f. in Flora 1867, p. 103 ; Ridl. in Journ. Linn. Soc. xxii. p. 274 ; Durand & Schinz, Consp. Fl. Afr. v. p. 9 ; Rolfe in Fl. Trop. Afr. vii. p. 22.

HUILLA.—On mossy slopes at Morro de Monino, but a *rara avis*. Subsequently sought in vain. Flowers whitish to pale yellow. March and beginning of April 1860. No. 723.

2. **L. Welwitschii** Rehb. f. in Flora 1865, p. 184 ; Ridl., *l.c.*, p. 280 ; Durand & Schinz, *l.c.*, p. 10 ; Rolfe, *l.c.*, p. 21.

GOLUNGO ALTO.—Very rare in wet palm-groves on the right of the river Quispeze near Sange. In fl. and fr. July 1855. No. 660.

2. **BULBOPHYLLUM** Thou. ; Benth. & Hook. f. Gen. Pl. iii. p. 501.

1. **B. andongense** Rehb. f. in Flora 1865, p. 184 ; Durand & Schinz, *l.c.*, p. 10 ; Rolfe in Fl. Trop. Afr. vii. p. 31.

PUNGO ANDONGO.—Terrestrial growing on rocks, creeping, pseudo-bulbs crowded in a series, ovate-conical, acutely 4-angular. Leaves thickly coriaceous, herbaceous-green, oblong-lanceolate. Flowers crimson, laxly arranged in very long nodding or pendulous spikes, very elegant, resembling a little feather variegated with white and purple. On the vertical rocks of the prassidium near Catete, very inaccessible. In fl. Jan. 1857. No. 689.

2. **B. rupicola** Rehb. f., *l.c.* ; Durand & Schinz, *l.c.*, p. 14 ; Rolfe, *l.c.*, p. 33.

PUNGO ANDONGO.—Terrestrial, very widely caespitose, bulbs very thick, angled. On sunny rocks Feb. 1857. No. 697. March 1857. COLL. CARP. 998.

TRIBE II. VANDEÆ.

3. **EULOPHIA** R. Br. ; Benth. & Hook. f. Gen. Pl. iii. p. 535.

1. **E. Ledienii** Stein in Jahresber. Schles. Gesell. Vaterl. Cult. 1886, p. 254 (nomen) ; N. E. Brown in Kew Bull. 1889, p. 90 ; Rolfe in Fl. Trop. Afr. vii. p. 50.

E. maculata Rehb. f. (in part) in Flora 1867, p. 103 ; Stein in Gartenfl. 1888, p. 609, t. 1285 ; Durand & Schinz, Consp. Fl. Afr. v. p. 23. *Eulophidium maculatum* Pfitzer in Engl. & Prantl Pflanzenfam. ii. Abth. 6. p. 188.

GOLUNGO ALTO.—Terrestrial, bulbophyllous, creeping ; leaves broadly lanceolate, fleshy, very stiff, obscurely green, with white spots, erect to spreading. Scapes sheathed, two-edged, leafless, a span or a foot long, erect, somewhat firm, springing from the base of the new leaf. Flowers rose-white. Perianth spreading, outer segments free, lanceolate, spatulate, dirty white, a little longer than the inner, the two lower curved falcately downwards ; inner a little broader than the outer,

quite white, erect. Lip white, spreading, spurred (spur $2\frac{1}{2}$ to 3 lines long, reddish, with a yellow globular swollen apex), 4-lobed, lobes obtuse, posterior erect red-margined, with purple streaks, smaller, anterior larger, spreading deflexed, marked on the base with an oblong purple spot. Column short, incurved from the base, rose-white, semiterete, red-margined. Ovary a little twisted, channelled and ribbed. Very rare and sporadic in primitive woods by streams. Primitive forest of Quissaculo in fl. Jan. 1856, in fr. June 1855. Flowers violet-red. Very rare in very thick woods by streams at Mata de Quissaculo; in fl. Dec. 1855. No. 661.

2. *E. monile* Rehb. f., *l.c.*, p. 105; Durand & Schinz, *l.c.*, p. 24; Rolfe, *l.c.*, p. 53.

HUILLA.—Tubers moniliform, white, compact; stem cylindrical; leaves subrigid, striate, green; flowers white, nodding, shortly spurred; ovary scarcely twisted. Here and there in moss-grown shady places by streams on the heights (over 5000 feet) of Morro de Monino. Unique. In fl. Nov. 1859. No. 709.

3. *E. Protearum* Rehb. f., *l.c.*, p. 104; Durand & Schinz, *l.c.*, p. 24; Rolfe, *l.c.*

HUILLA.—Flowers yellowish, with a reddish tint. Perhaps only a poor form of the species under No. 720 (*E. Welwitschii*). Here and there in woods of Proteaceæ, in sandy shortly grassed places between Lopollo and Monino. Unique. In fl. beginning of Jan. 1860. No. 719.

4. *E. aloifolia* Welw. ex Rehb. f., *l.c.*; Durand & Schinz, *l.c.*, p. 19; Rolfe, *l.c.*, p. 55.

PUNGO ANDONGO.—Very rare (only a single specimen seen) among shrubs on rocky slopes on the right of the river Cuanza near Candumba. End of March 1857. No. 682.

5. *E. euglossa* Rehb. f. ex Batem. in Bot. Mag. t. 5561 (1866); Durand & Schinz, *l.c.*, p. 21; Rolfe, *l.c.*, p. 57.

GOLUNGO ALTO.—Stem narrow, 4 ft. long, raceme 2 ft. Terrestrial at the roots of shrubs in the very dense elevated (2000 ft.) primitive woods near streams at Banza de Quilombo. Very rarely seen. In fl. Jan. 1855. No. 671.

6. *E. Welwitschii* Rolfe in Bolet. Soc. Brot. vii. p. 236 (1889) non Hook. f. in Bot. Mag. sub t. 7330; Durand & Schinz, *l.c.*, p. 26; Rolfe in Fl. Trop. Afr. vii. p. 61.

Orthochilus Welwitschii Rehb. f. in Flora 1865, p. 186.

HUILLA.—Erect 1 to $1\frac{1}{2}$ ft. high; tubercles triangular, white, thick and fleshy, fibres snow-white, flowers a fine scarlet, perianth bell-shaped, between spreading and pendulous, bracts orange-coloured. Somewhat plentiful in thickets and rather dry mountain districts 4000 to 5000 ft. high near Huilla, especially in little forests of Proteaceæ, Nov. 1859. In sandy places among Proteaceæ at Monino; Jan. 1860. No. 720.

7. *E. dichroma* Rolfe in Fl. Trop. Afr. vii. p. 62 (1897).

E. bicolor Rehb. f. & Sond. ex Rehb. f., *l.c.*, in part; (non Blume).

E. Welwitschii Hook. f. in Bot. Mag. sub t. 7330; (non Rolfe).

HUILLA.—Flowers very beautiful, sulphur-coloured. A marsh plant. Varzea do Ferrão da Sols in meadows inundated during the summer. Many flowers still in the water. Feb. 1860. No. 718.

8. *E. Woodfordii* Rolfe, *l.c.*, p. 68.

Cyrtopera longifolia Rehb. f., *l.c.*, p. 189. *C. Woodfordii* Lindl. Gen. & Sp. Orch. p. 189.

GOLUNGO ALTO.—In herb-grown marshes on the banks of the river Casahalla, Sobato de Bumba, along with Mungo (*Mamboga stipulosa*) and species of *Fuirena*. 22 Oct. 1853. No. 664.

9. *E. guineensis* Lindl. in Bot. Reg. t. 686 (1823); Durand & Schinz, *l.c.*, p. 21; Rolfe, *l.c.*, p. 59.

GOLUNGO ALTO.—Scape 1½ to 2 ft., 5- to 10-flowered; flowers subpendulous, *Scirpius*-like, middle lobe of lip a beautiful rose-colour, disc marked with dark purple streaks, perianth-segments all similar, dull purple. Montalegres, Feb. 1855; woods near N-delle, May 1856. No. 656.

4. **LISSOCHILUS** R.Br., Benth. & Hook. f. Gen. Pl. iii. p. 536.

1. *L. dilectus* Rehb. f. Otia Bot. Hamb. i. p. 62 (1878); Durand & Schinz, *l.c.*, p. 28; Rolfe in Fl. Trop. Afr. vii. p. 83.

L. arenarius Rehb. f. in Flora 1865, p. 188; (non Lindl.).

PUNGO ANDONGO.—3 to 3½ ft. high, rhizome of thick white sub-trigonal moniliform tubers; leaves 1 ft. long; scape 2½ to 3 ft. or more, sheathing scales distant dark purple or livid. Flowers very large and fine, rose-coloured. Disc of labellum with a dark purple shortly bearded line, and two thick elevated crests at the mouth, cavity of labellum sheathed with purple on the inside, yellow outside. In damp thickets on the rivers Cuanza and Lopollo; Dec. 1856. No. 696.

GOLUNGO ALTO.—Rather rare in schistose slopes on the banks of the river Múio between Bango and Quilombo; 14 Jan. 1855. Two specimens in flower. No. 666.

2. *L. Paivmannus* Rehb. f. in Flora 1865, p. 187; Durand & Schinz, *l.c.*, p. 29; Rolfe, *l.c.*, p. 89.

HULLA.—Bulbs conical, green, very fleshy, erect, crowded, furnished at the base with numerous white fibres; leaves appearing after the flowers. Scape 2 ft., more rarely 3 ft., deep purple. Flowers beautiful, pendulous, sepals obovate-lanceolate, purplish, petals twice as large, a fine yellow; lateral lip-lobes dull purple erect, the median channelled, bright yellow, 2- or 3-toothed on each side. Column white. Plentiful in sandy thickets round Hulla. In fl. end of Oct. to middle of Nov. 1859. No. 731.

Var. *stenophyllus* Rehb. f. in Flora 1867, p. 105; Durand & Schinz, *l.c.*; Rolfe, *l.c.*

PUNGO ANDONGO.—2 ft. high, scape distantly sheathed, 2 ft. more rarely 3 ft. Flowers between spreading and nodding, sepals herbaceous-green with dull purple spots on the inside; petals deep sulphur-colour outside, within (or beneath) whitish; lateral lip-lobes pale, purple-streaked, median keel-like deep yellow, spur dull purple. Bracts yellowish-green. Rather rare in stony thickets at the base of Pedra Pungo on the presidium. Beginning of March 1857. No. 690.

3. *L. calopterus* Rehb. f. in Bonplandia iii. p. 218 (1855); Durand & Schinz, *l.c.*, p. 28; Rolfe, *l.c.*, p. 93.

LOANDA.—2½ to 3 ft., leaves only well developed after the flowers; flowers a shining sulphur yellow. Plentiful but seen only in this