

New records for the flora of Cameroon, including a new species of *Psychotria* (Rubiaceae) and range extensions for some rare species

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Background – The inventory of Cameroon's flora is far from complete and additional work is needed to document the country's extremely rich flora, and thus enhance its conservation. In this framework, botanical exploration was conducted between 2007 and 2011 in various regions of Cameroon and resulted in the discovery of several new national records and new species.

Methods – Normal practices of herbarium taxonomy have been applied. For the endemic or subendemic species, a preliminary IUCN conservation has been proposed using the IUCN criteria.

Results – A total of twelve taxa are recorded as new for the flora of Cameroon. Significant range extensions are reported for eight restricted-range species. A new species, *Psychotria yaoundensis* O.Lachenaud, endemic to Cameroon and only known from two rocky hills in the surroundings of Yaoundé, is described and illustrated. Additions to the flora of Equatorial Guinea (five species), Nigeria, Ivory Coast and the Democratic Republic of Congo (one species each) are also reported. *Psychotria moliwensis* and *Vangueriopsis gossweileri* are synonymised under *P. fernandopoensis* and *V. rubiginosa*, respectively.

Conclusion – Many areas within Cameroon remain botanically poorly explored. Our exploration highlights the importance of the Rumpi Hills, Tchabal Mbabo, and the rocky hills around Yaoundé for plant conservation. Our data will help conservationists in determining areas highly valuable for conservation.

Key words – Cameroon, Central Africa, flora, IUCN, Orchidaceae, *Psychotria*, Rubiaceae, Rumpi Hills, Tchabal Mbabo, Yaoundé.

INTRODUCTION

The Republic of Cameroon, situated on the Atlantic Coast in the Gulf of Guinea, covers 475440 km² and has such a great diversity of habitats that it is often compared to “a small Africa”. The main vegetation zones, studied in detail by Letouzey (1968, 1985), are:

- an arid savanna plain situated in the extreme north, around lake Chad;
- the Adamaoua plateau, a region of hilly savannas interspersed with gallery forests, extending between c. 5°30' and 8°30'N;

- the Guineo-Congolian rainforest zone, covering the south of the country, where several forest types have been distinguished by Letouzey (op. cit.). Although mostly constituted of lowland forest, this area includes some hills up to near 1300 m with small areas of submontane forest;

- the Western Cameroon highlands, a succession of mountains stretching from Mt Cameroon, the country's highest peak (4097 m) near the coast, to the Bamenda highlands and Tchabal Mbabo in the northwest; the natural vegetation (now highly degraded in some areas) consists of submontane and montane forest up to c. 2500 m,

and montane grassland higher up; it is an important area of endemism for both plants and animals.

Although Cameroon has been better explored by botanists than most other Central African countries, its flora remains incompletely known, and several new species are described every year (e.g. Cheek et al. 2008, Sonké et al. 2008, Cheek 2009, Droissart et al. 2009a, 2009b, Sonké et al. 2009, Lachenaud & Harris 2010, Lachenaud & Séné 2010, 2012). Even among large trees, new species are regularly discovered (e.g. van der Burgt & Newbery 2006, Mackinder et al. 2010). This is partly due to the high botanical diversity of the country which includes many endemics. In addition, botanical efforts have tended to focus on some specific sites (e.g. Mt Cameroon, Mt Kupe), leaving other areas almost unexplored, especially in the north and southeast. The *Flore du Cameroun* series, started in 1960 by the Muséum National d'Histoire Naturelle in Paris, and continued by the National Herbarium of Cameroon in Yaoundé, covers only about half of the families and its publication has markedly slowed down in recent years. More recently, a national checklist, numbering 7500 indigenous or naturalized species, has been published by Onana (2011).

As a result of collaboration between the University of Yaoundé I, the National Botanic Garden of Belgium, the Université Libre de Bruxelles and the Institut de Recherche pour le Développement, we conducted fieldwork in various areas of Cameroon between 2007 and 2011. Since we were primarily interested in Orchidaceae and Rubiaceae, we focused on wet forest areas, where these two groups are most diverse. The present paper is mainly based on the results of our exploration. In addition to the description of a new species, *Psychotria yaoundensis* O.Lachenaud, we report here twelve new records (eleven species and one infraspecific taxon) for Cameroon, and important range extensions for eight other restricted species, most of which are Cameroon highland endemics.

MATERIAL AND METHODS

Main localities visited (fig. 1) cover a broad range of forest types (semi-deciduous, lowland evergreen, montane and submontane) and vary from well-prospected (e.g. Mt Kupe) to very little-known (e.g. Rumpi Hills, Tchabal Mbabo).

Identification of the collections was carried out based on comparison with reference specimens hosted at BR, BRLU, HBG, K, P, WAG and YA, which also provided some additional data.

We defined new records as those not appearing in the *Flore du Cameroun* or in Onana (2011).

To estimate the conservation status of the species, geo-referenced specimen data were imported into a GIS using ArcView™ software to generate the distribution map and to calculate area of occupancy (AOO) and extent of occurrence (EOO) using Cats 1.2 (Moat 2007). The cell area was set to the largest permissible value (cell width = 3.16 km). The AOO and EOO figures were used in conjunction with our field experience, Google Earth observations and literature data to assess the conservation status based on the IUCN Red List Categories criteria (IUCN 2001).

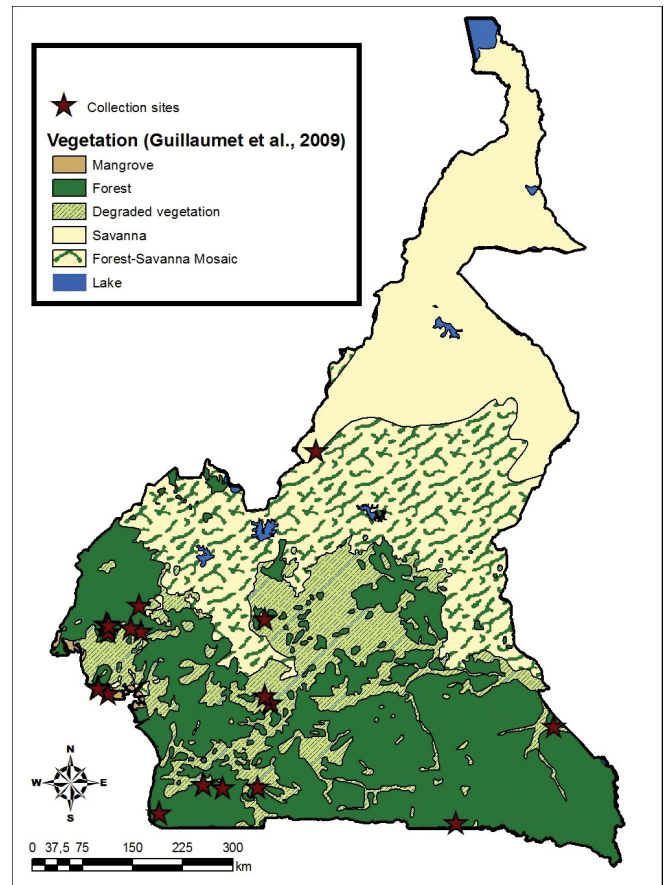


Figure 1 – Map of Cameroon indicating areas prospected by the authors between 2007 and 2011.

RESULTS

The species are arranged by alphabetical order of families, genera and species. Taxa new to Cameroon are marked with an asterisk. For each species, specimens are cited by alphabetical order of provinces. Collections from outside Cameroon are also cited if they are of particular interest. For example, new country records are reported for Nigeria (*Mussaenda epiphytica*), the Democratic Republic of Congo (*Vangueriopsis rubiginosa*), Ivory Coast (*Psychotria recurva*) and Equatorial Guinea (Bioko: *Chassalia laikomensis*, *Gaertnera letouzeyi*; Rio Muni: *Bulbophyllum calyptratum* var. *lucifugum*, *Chazaliella longistylis*, *Rutidea ferruginea*).

APOCYNACEAE (incl. Asclepiadaceae)

**Secamone erythradenia* K.Schum.

Distribution – Cameroon, Gabon, D.R.Congo, Angola, Zambia.

Ecology – A small twining liana found mainly in Zambezian savannas; in the forest zone restricted to fringing forest on inselbergs.

Notes – The only Cameroonian specimen known is sterile, but the leaves are unmistakable and identical to Gabonese material. This population, from the inselbergs of Cameroon and Gabon, is geographically separated from the main range

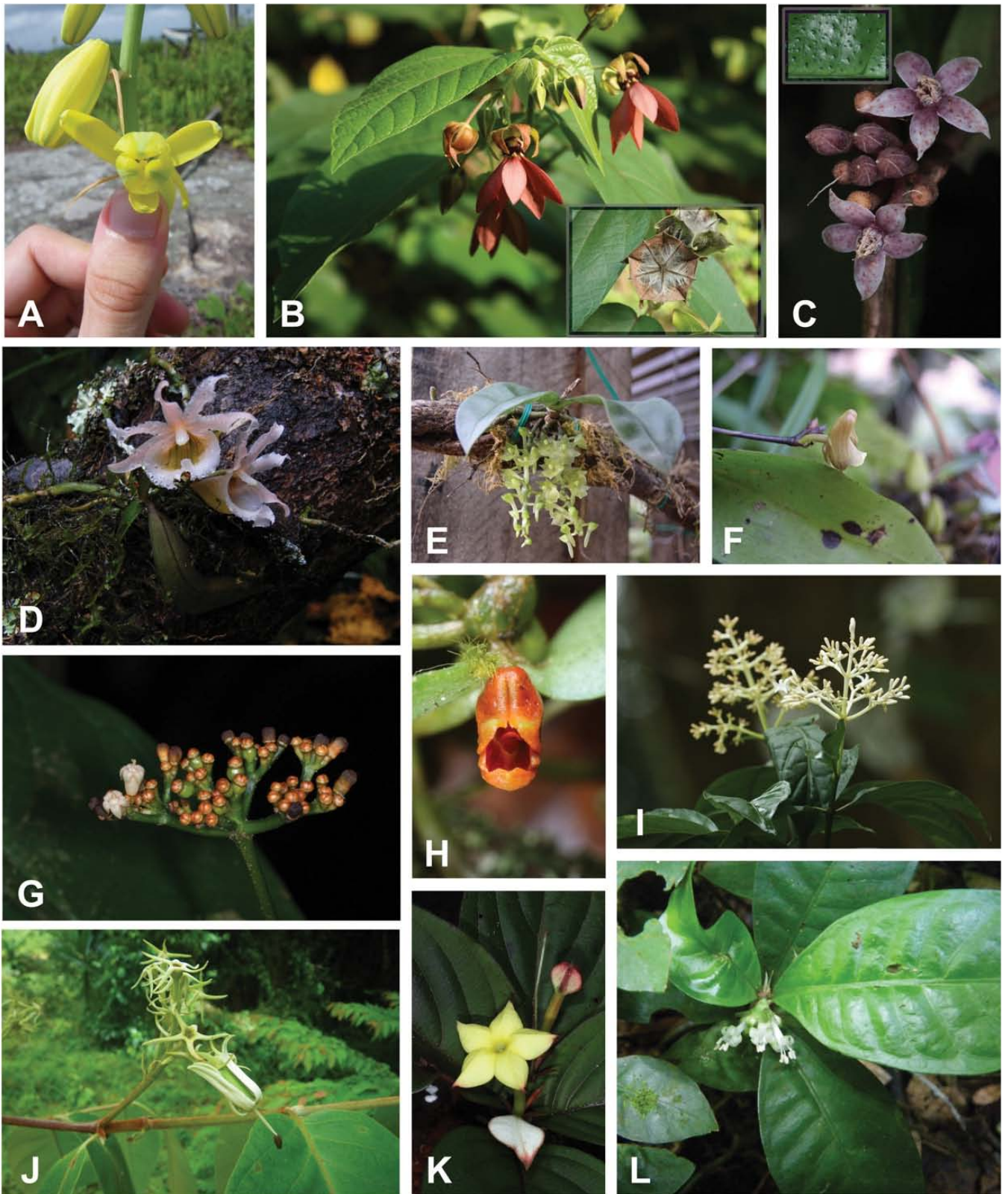


Figure 2 – Photographs illustrating a selection of species treated in the present paper: A, *Albuca abyssinica*, flowers; B, *Abroma augustum*, flowers and detail of fruits; C, *Ardisia atrobullata*, flowers and detail of leaf; D, *Eurychone galeandrae*, flowering plant; E, *Rhipidoglossum paucifolium*, flowering plant; F, *Polystachya riomuniensis*, flower; G, *Psychotria fernandopoensis*, flowers; H, *Stolzia repens* var. *cleistogama*, flower; I, *Chassalia laikomensis*, flowers; J, *Vangueriopsis rubiginosa*, flowers; K, *Mussaenda epiphytica*, flowers; L, *Psychotria yaoundensis*, flowers.

of the species (D.R.Congo, Angola, Zambia) and may be worth of infraspecific distinction on account of its corolla lobes shorter in relation to the tube; however, more flowering material is needed to check whether this difference is constant.

Specimen studied – Cameroon. South Province: Akoakas Rock, c. 35 km SE of Ebolowa, 6 May 2009, *Lachenaud et al.* 602 (BR, YA).

HYACINTHACEAE

**Albuca abyssinica* Jacq. (fig. 2A)

Distribution – Nigeria, Cameroon, D.R.Congo, and widespread in East Africa.

Ecology – A herb of rocky savanna on inselbergs.

Notes – Gledhill & Oyewole (1972) report this species from Cameroon but no specimens are cited and we have found no other mentions in literature. *A. abyssinica* is common on the summit of the Mbam Minkom massif; one plant was also seen (but not collected) on the summit of the Akoandoum hill near Yaoundé.

Specimen studied – Cameroon. Central Province: summit of Mbam Minkom, 29 May 2009, *Lachenaud & Taedoum* 924 (BR, YA).

MALVACEAE

**Abroma augustum* (L.) L.f. (fig. 2B)

Distribution – In Africa: Cameroon, D.R. Congo (Germain 1963).

Ecology – A ruderal shrub.

Notes – Native to south-east Asia, the species has been cultivated in many tropical countries for fiber production and became locally naturalised. Although there are apparently no published records from Cameroon, it has been present in the country since 1983 at least. So far it is known only from Lake Barombi Mbo, where it is completely naturalised. The species is potentially invasive, and Cameroonian botanists should pay attention to its possible spread. The plant is easily recognized by its leaves (which are trilobed on the main branches but entire on flowering shoots), its pendulous pinkish brown flowers with curiously clawed petals, and its 5-winged capsules covered with irritating hairs.

Specimens studied – Cameroon. Southwest Province: Lake Barombi Mbo near Kumba, 16 Apr. 2009, *Dessein et al.* 2542 (BR, YA); Kumba vicinity, Dec. 1983, *Thomas* 2736 (BR, MO).

MYRSINACEAE

Ardisia atrobullata Taton (fig. 2C)

Distribution – Endemic to Cameroon, only found in the coastal area near Douala and Limbe (fig. 3).

Ecology – Littoral forest on volcanic soils.

Notes – A very rare species, only known from these two collections. It is easily recognized by the very prominent dark dots on the upper surface of the leaves (hence the specific name). The pale violet anthers, of the same colour as the pet-

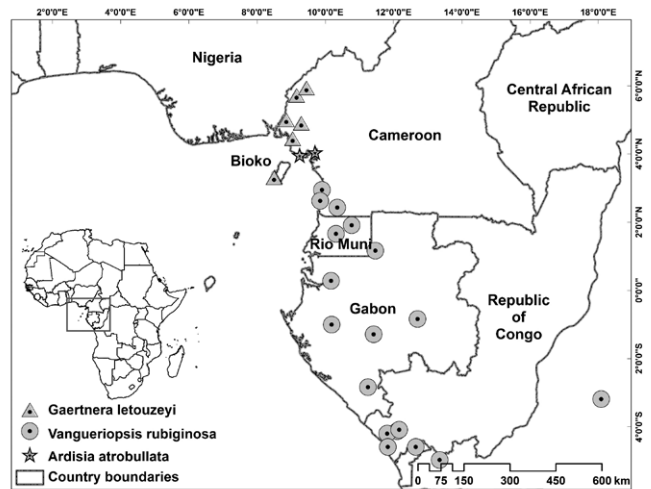


Figure 3 – Distribution of *Gaertnera letouzeyi*, *Vangueriopsis rubiginosa* and *Ardisia atrobullata*.

als, are also exceptional in the genus (other species have yellow anthers, as far as this is recorded).

A Gabonese specimen (*N.Hallé & Villiers* 5171), cited in the protologue of *A. atrobullata* (Taton 1979), in our opinion belongs to a new taxon, together with *Lachenaud et al.* 773 from southern Cameroon (Campo region). This taxon has the leaves conspicuously dark-dotted, like *A. atrobullata*, but markedly narrower. Unfortunately its flowers are not yet known.

Conservation status – The species is assessed as Endangered (EN B2ab(iii)) based on the restricted range (AOO = 19.97 km², EOO not calculable), the small number of locations (two) and the continued decline in habitat extent and quality (it only occurs in low-altitude forests which are under strong pressure from agriculture and urban extension).

Specimens studied – Cameroon. Littoral Province: Douala, route Razel km 43, 7 June 1959, *Letouzey* 2124 (holo-: P; iso-: P, WAG, YA). **Southwest Province:** Bimbria-Bonadikombo Community Forest, Elephant River, 27 Apr. 2009, *Dessein et al.* 2820 (BR).

ORCHIDACEAE

**Bulbophyllum calyptratum* var. *lucifugum* (Summerh.) J.J.Verm.

Distribution – Ivory Coast, Liberia, Sierra Leone, Cameroon, Equatorial Guinea (Rio Muni) (distribution in Lower Guinea: fig. 4).

Ecology – Epiphyte in rain forest rich in Caesalpinioideae; also found in secondary forest or in old cocoa plantation; 100–600 m.

Notes – This taxon is newly recorded from Atlantic Central Africa (Cameroon and Equatorial Guinea). However, drawings given by Zapfack (1993) and Simo (2003) show clearly that they collected specimens of this taxon but misidentified them as *B. teretifolium* Schltr. The most striking difference between the two taxa is that the pseudobulbs of *B. teretifolium* are unifoliated and perfectly terete while those of *B. calyptratum* var. *lucifugum* are bifoliated and semi-terete. Most

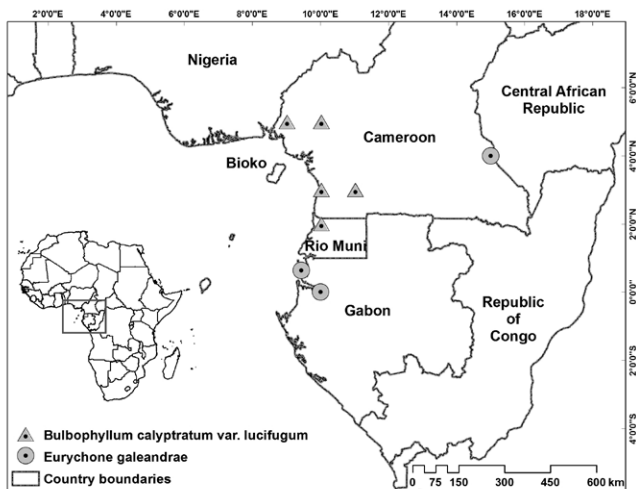


Figure 4 – Distribution of *Bulbophyllum calyptratum* var. *lucifugum* and *Eurychone galeandrae* in Lower Guinea.

specimens cited below are sterile, but can be identified without any doubt.

Specimens studied – Cameroon. South Province: Bidjouka (Massif de Ngovayang), 14 Jun. 2006, *Droissart* 147 (BRLU, YA); Bindem, 15 Aug. 2006, *Droissart & Simo M.* 264 (BRLU, YA); *ibid.*, 11 May 2007, *Droissart* 536 (BRLU, YA); *ibid.*, 7 Jul. 2007, *Droissart & Simo M.* 604 (BRLU, YA); *ibid.*, 22 Jul. 2008, *Simo M. & Sonké* 83 (BRLU, YA); *ibid.*, 22 Jul. 2008, *Simo M. & Sonké* 84 (BRLU, YA); Nkolembonda, 15 Mar. 2008, *Simo M. & Sonké* 16 (BRLU, YA). **Southwest Province:** Sanctuaire de Banyang Mbo, village de Nguti, 15 Mar. 2004, *Stévant et al.* 2152 (BRLU, YA); *ibid.*, 17 Mar. 2004, *Stévant et al.* 2175 (BRLU, YA); *ibid.*, village de Bejange, 1 Feb. 2008, *Droissart* 643 (BRLU, YA).

Equatorial Guinea. Rio Muni: inselberg de Bicurga, 31 May 2002, *Stévant* 1598 (BRLU).

**Eurychone galeandrae* (Rchb.f.) Schltr. (fig. 2D)

Distribution – Ivory Coast, Cameroon, Central African Republic, Gabon, Republic of Congo, D.R. Congo, Angola (distribution in Lower Guinea: fig. 4).

Ecology – Epiphyte in semi-deciduous forest rich in Sterculiaceae and Ulmaceae. In Cameroon, only one individual was found growing on a branch with a diameter of 15 cm, partially covered with moss.

Specimen studied – Cameroon. East Province: Bitonga, 25 km à l'E de Yokadouma, 4 Oct. 2009, *Droissart* 652 (BRLU, YA).

**Polystachya riomuniensis* Stévant & Nguema (fig. 2F)

Distribution – Cameroon, Equatorial Guinea (Rio Muni) (fig. 5).

Ecology – Epiphyte in lowland and submontane moist forest, 500–1200 m. In Rio Muni, specimens were collected in the forest fringe and saxicolous forest of an inselberg (*Stévant & Nguema* 2004).

Specimens studied – Cameroon. South Province: Sud du village d'Akom II, 21 May 2008, *Simo M. et al.* 44 (BRLU, YA); *ibid.*, 20 Sept. 2008, *Simo M. et al. (Ombrière de Yaoundé)* 1336 (BRLU, YA); *ibid.*, 24 Sept. 2008, *Simo M. et al. (Ombrière de Yaoundé)*

1348 (BRLU, YA); *ibid.*, 9 Feb. 2009, *Simo M. et al. (Ombrière de Yaoundé)* 1466 (BRLU, YA).

**Rhipidoglossum paucifolium* D.Johanss. (fig. 2E)

Distribution – Liberia, Cameroon (distribution in Cameroon: fig. 5).

Ecology – Epiphyte collected along riverside forest.

Notes – Previously known only from the type specimen collected on Mount Nimba, Liberia. The species' discovery in Cameroon considerably extends its range. The species is now considered as an Upper Guinea-Lower Guinea linking species.

Specimens studied – Cameroon. Southwest Province: Sanctuaire de Banyang Mbo, à environ 500 m du village Babubok, 4 Jun. 2008, *Simo M. et al. (Ombrière de Yaoundé)* 1090 (BRLU, YA).

Stolzia repens (Rolfe) Summerh. var. *cleistogama* Stévant, Droissart & Simo (fig. 2H)

Distribution – Cameroon (fig. 5).

Ecology – Epiphyte in moist submontane forest.

Notes – This recently described taxon (*Droissart et al.* 2009a) was only known from three localities in the South and Central provinces. Its discovery in the Southwest province is therefore a significant range extension. It is a tiny epiphytic plant, and therefore easily overlooked.

Conservation status – A preliminary assessment as Endangered was provided by *Droissart et al.* (2009a), but the important range extension reported here call for a re-examination of this status. It is now known from five locations, all situated outside protected areas. The species has an EOO of 34928.24 km² and an AOO of 49.93 km². However, its habitat is extremely fragmented (submontane forest) and the area of this vegetation is continually decreasing. We therefore propose to keep the species as Endangered (EN) under B2ab(iii) criteria.

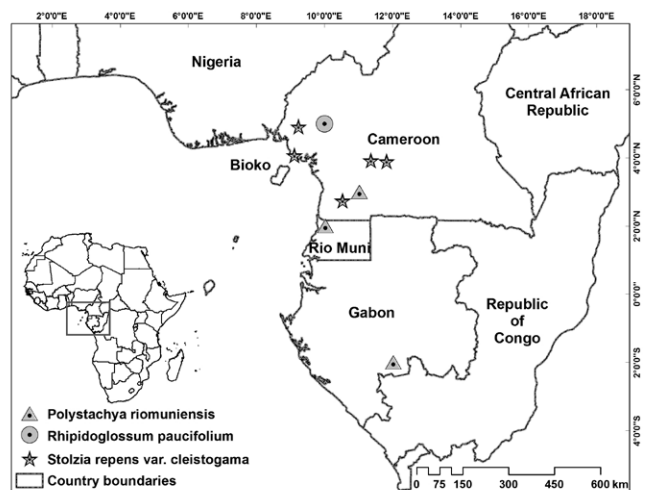


Figure 5 – Distribution of *Polystachya riomuniensis*, *Rhipidoglossum paucifolium* and *Stolzia repens* var. *cleistogama* in Lower Guinea.

Specimens studied – Cameroon. Southwest Province: Rumpi Hills near Dikome Balue, 19 Apr. 2009, *Dessein et al.* 2595 (YA); Mt Etinde above Etome, 28 Apr. 2009, *Dessein et al.* 2850 (YA). **Central Province:** Mbam-Minkom (région au NO de Yaoundé), village de Nyemeyong, sommet d'une colline à l'O du village, alt. 1115 m, 13 May 2006, *Droissart* 68 (BRLU, MO, YA); *ibid.*, 14 Apr. 2008, *Simo M. et al.* (*Ombrière de Yaoundé*) 1002 (BRLU); Mefou, 22 miles Yaoundé on Akonolinga road, 19 Oct. 1968, *Sanford* 5204 (YA). **South Province:** Akom II (route Kribi-Ebolowa), sommet de la colline située à 8km au S du village, alt. 1065 m, 24 Apr. 2007, *Droissart & Simo M.* 427 (BRLU); *ibid.*, 24 May 2008, *Simo M. et al.* 51 (BRLU).

RUBIACEAE

Chassalia laikomensis Cheek (fig. 2I)

Distribution – Nigeria, Cameroon, Equatorial Guinea (Bioko) (fig. 6).

Ecology – A shrub in submontane and montane forests, (1100–)1300–2400 m, where it is often the dominant species.

Notes – This recently described species was known only from the Bamenda highlands (Cameroon) and Chappal Hendu (Nigeria) (Cheek & Csiba 2000). It has since been found on Bioko, and in most submontane areas of western Cameroon, including Mt Cameroon, Mt Etinde (rare), the Rumpi Hills (where particularly abundant, dominating the shrub layer in submontane forest), Mt Kupe (abundant), the Mbam massif and Tchabal Mbabo. An isolated population occurs on the summit of the Mbam Minkom massif, near Yaoundé. The species is quite variable, evidently in relation with altitude; plants from Mt Cameroon, initially thought to be a different taxon (Cheek & Csiba 2000), are here considered conspecific. The Bioko specimens have been misidentified as *C. cristata* (Hiern) Bremek. or *C. pteropetala* (K.Schum.) Cheek; all collections cited under these names by Davis & Figueiredo (2007) belong to *C. laikomensis*.

Conservation status – Hitherto regarded as Critically Endangered A2c (IUCN 2011) but the discovery of new and important populations, call for a revision of its conservation status. The species qualifies for EN under the AOO criterion (AOO = 229.67 km²) and LC under the EOO criterion (EOO = 266918.19 km²). It is known from more than ten locations and is abundant in some of them. Some of the locations are severely degraded, but others are still intact and protected at different degrees. Since some of the subpopulations may disappear due to deforestation in the near future, we propose to classify the species as near threatened (NT).

Specimens studied – Cameroon. Central Province: Sommet du Mbam Minkom, alt. 1243 m, 29 May 2009, *Lachenaud & Taedoung* 929 (BR, YA). **Northwest Province:** Tchabal Mbabo, alt. 2063 m, 9 May 2009, *Dessein & Taedoung* 2966 (BR, YA). **Southwest Province:** Mt Cameroon, 7 Feb. 1969, *Breteler et al.* MC 291 (WAG, YA); Rumpi Hills near Dikome Balue, alt. 1408 m, 18 Apr. 2009, *Dessein et al.* 2559 and 2562 (BR, YA); *ibid.*, alt. c. 1400 m, 19 Apr. 2009, *Dessein et al.* 2588 (BR, YA); Mt Kupe above Nyasosso, alt. 1360 m, 24 Apr. 2009, *Dessein et al.* 2727 (BR, YA); Mt Etinde, above Etome, alt. 1601 m, 28 Apr. 2009, *Dessein et al.* 2842 (BR, YA); Mt Cameroon, 18 Mar. 1969, *Ekeme* 14 (YA); Mounts Rumpi - Rata Mt, 2 km SW Dikome Balue, 24 Mar. 1976, *Letouzey* 14573 (BR, K, P, YA); versant NW du Mont Kupe, 25 Apr. 1976, *Letouzey* 14691 (BR, P, YA); summit of Mt Kupe, 30 Nov. 1985, *Thomas & MacLeod* 5078 (YA); above Mbilishe, 7 May 1987,

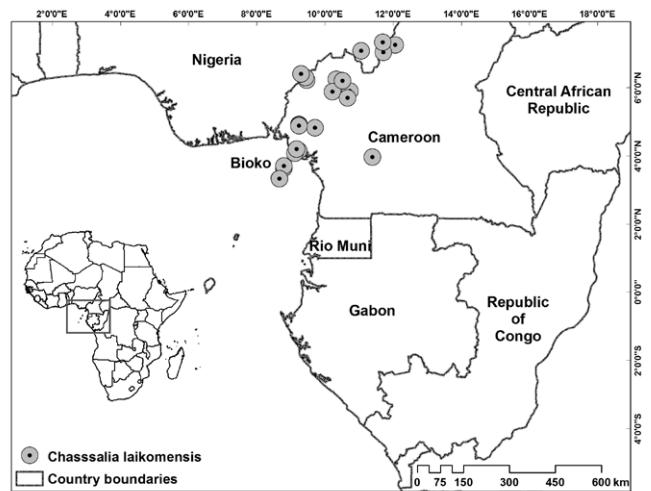


Figure 6 – Distribution of *Chassalia laikomensis*.

Thomas et al. 7439 (K, WAG). **West Province:** Nkoutoupi, Mbam massif, 1 Apr. 1983, *Goetghebeur* 4973 (YA).

Equatorial Guinea. Bioko: Malabo - Pico Basilé, road km 14–15, 5 May 1987, *Carvalho* 2893 (K); Malabo - Pico Basilé, Pico road km 11–12, 8 Aug. 1988, *Carvalho* 3559 (K); s.l., s.d., *Fernandez Casas* 10211 (K) & 11926 (K); entre Moca y el lago Biao, 15 July 1986, *Fernandez Casas* 10389 (BR, K, S, WAG); s.l., s.d., *Mann* 310A (K); above Moka, 8 Sep. 1959, *Wrigley & Melville* 578 (BM, K, P).

**Chazaliella longistylis* (Hiern) E.M.A. Petit & Verdc.

Distribution – Cameroon, Equatorial Guinea (Rio Muni), Gabon.

Ecology – A shrub, restricted to littoral forests on sandy soils.

Notes – Previously known only from two collections in Gabon (Verdcourt 1977), the species is in fact locally common in this country. It is newly recorded from Cameroon (where apparently uncommon) and Equatorial Guinea.

Specimens studied – Cameroon. South Province: km 27 Kribi – Ebolowa, 27 Jan. 1970, *Bos* 6177 (BR, P, WAG, YA); 20 km S Kribi, 7 Feb. 1983, *De Namur* 2150 (YA); km 28 Kribi – Campo, 1 Dec. 1998, *J.J. de Wilde et al.* 12055 (WAG); Likodo river, Ebodje, 8 Mar. 2001, *van Andel et al.* 3231 (WAG).

Equatorial Guinea. Rio Muni: Bata - Pembe: Estrada kms 22–23, 15 Feb. 1993, *Carvalho* 5251 (WAG); Etembue (Réserve de Ndote), 18 Aug. 1997, *Eneme & Lejoly* 44 (BRLU); Ndote, 6 Jun. 1999, *Eneme* 282 (BRLU); Jandje, 29 Jul. 1999 *Eneme* 465 (BRLU); Estuaire du Rio Muni, village Mayang, 14 Sep. 1997, *Lisowski M-790* (BRLU)

Gaertnera letouzeyi Malcomber

Distribution – Cameroon (Southwest Province) (fig. 3).

Ecology – A shrub of primary forest undergrowth, up to 1100 m in altitude.

Notes – A recently described species (Malcomber & Taylor 2009), hitherto only known from two collections around Mamfe and one in Korup N.P. It is here newly recorded from Bioko island, Mokoko F.R. and the Rumpi Hills. In the latter

locality it was not rare around 1100 m but apparently absent from submontane forest higher up.

Conservation status – The species qualifies for Vulnerable under criterion EOO (8529.77 km²) and Endangered under AOO (69.8992 km²). It is known from six locations, most of which are unprotected (only one is in a national park) and occurs at the lower altitudes where the forest is most threatened by deforestation. It is therefore considered as Endangered EN B2ab(iii).

Specimens studied – **Cameroon. Southwest Province:** Rumpi Hills near Dikome Balue, alt. 1107 m, 21 Apr. 2009, *Dessein et al.* 2676 (BR, YA); Mokoko F.R., 2 May 1994, *Sonké* 1133 (BR).

Equatorial Guinea. Bioko. C. UPM/C. Hormiga, 18 Mar. 2007, *Galán & Barberá* 4760 (BR); C. Hormiga/C. Peter, 19 Mar. 2007, *Galán & Barberá* 4773 (BR).

Mussaenda epiphytica Cheek (fig. 2K)

Distribution – Nigeria, Cameroon (fig. 7).

Ecology – An epiphytic shrub (sometimes becoming ± lianescent) growing in the canopy of submontane and montane forests, 530–1650 m in altitude.

Notes – A recently described species, hitherto only known from Mt Kupe and nearby Bakossi Mts (Cheek 2009). It is here recorded from the Rumpi Hills, Mt Etinde, and the Mbam-Minkom massif near Yaoundé. A collection from Nigeria (unfortunately without locality) is also a new record for that country. The flowers, described by Cheek (2009) as “orange-white”, are, in our experience, always pale sulphur yellow. A white enlarged calyx-lobe is usually present, but our two collections from Mt Etinde lack it; since they are otherwise identical, we regard this as individual variation.

Conservation status – The species was treated as Vulnerable by Cheek (2009). The EOO (15601.7 km²) indeed suggests a Vulnerable status, but is not a very relevant criterion for a montane species with highly fragmented range, and under AOO (69.8992 km²) the species qualifies for Endangered (these evaluations are based on Cameroon localities only, since the exact locality in Nigeria is unknown). It is known

from six locations, and a decline in habitat extent and quality is occurring at the lower limit of its altitudinal range. We therefore propose to treat the species as Endangered under criteria B2ab(iii).

Specimens studied – **Cameroon. Central Province:** Mbam-Minkom, village de Nye-Meyong, sommet de la colline située au N-NE du village, alt. 1165 m, 27 Jul. 2006, *Droissart & Simo M.* 234 (BRLU). **Southwest Province:** Rumpi Hills near Dikome Balue, alt. c. 1400 m, 19 Apr. 2009, *Dessein et al.* 2589 (BR, K, MO, P, WAG, YA); Mt Kupe above Nyassosso, alt. 1658 m, 24 Apr. 2009, *Dessein et al.* 2742 (BR, YA); Mt Etinde above Etome, alt. 1601 m, 28 Apr. 2009, *Dessein et al.* 2841 (BR, YA); *ibid.*, alt. 531 m, 29 Apr. 2009, *Dessein et al.* 2887 (BR).

Nigeria: s.l., s.d., *van Meer* 1840 (WAG).

Oxyanthus okuensis Cheek & Sonké

Distribution – Cameroon (fig. 7).

Ecology – A shrub or small tree of montane forest, 1825–2200 m.

Notes – A Cameroon highland endemic, so far only known from Lake Oku and nearby Ajung forest (Cheek & Sonké 2000). Its discovery in Tchabal Mbabo is of importance, since, in contrast with the severely degraded Oku region, the forests of Tchabal Mbabo are largely intact.

Two collections from the Rumpi Hills, *Dessein et al.* 2631 (BR, MO, YA) and 2638 (BR, MO, YA) also probably belong to *O. okuensis*. Fruits of the latter collection, still immature, lack the typical beak of the species, but appear to be pathological: they are developing under closed flower buds, and a dissection revealed the presence of small insect larvae.

Conservation status – The species is listed as Critically Endangered A1c, B1+2b, C2a, D (Cheek & Sonké 2000, Cheek & Pollard 2000). It was known from a single, highly degraded location (Cheek & Sonké 2000). With the discovery of a second population, its status should be reevaluated as Endangered, based on criteria B1ab (iii)+2ab(iii) (EOO = 1300.14 km², AOO = 29.96 km²; number of locations = 2, decline in habitat extent and quality).

Specimen studied – **Cameroon. Northwest Province:** Tchabal Mbabo, alt. 1826 m, 10 May 2009, *Dessein & Taedoung* 2993 (BR, MO, YA) and 2995 (BR, MO, WAG, YA).

Psychotria darwiniana Cheek

Distribution – Cameroon (Southwest Province) (fig. 8).

Ecology – A shrub of submontane forest undergrowth, (850)1000–1650 m.

Notes – A recently described species, so far only known from Mt Kupe (where it is very abundant), the Bakossi Mts, and Mt Ekomané (Cheek et al. 2008). We also found it in the Rumpi Hills, where it is rare, at least in the area visited.

Conservation status – The species was assessed as Vulnerable (VU B2ab(iii)) by Cheek et al. (2008). We suggest to consider it as Endangered (EN B1ab(iii) +2ab(iii)) based on the restricted EOO (1440.97 km²), AOO (99.86 km²), the number of locations (four), and the decline in habitat extent and quality (deforestation is ongoing in the lower part of its altitudinal range).

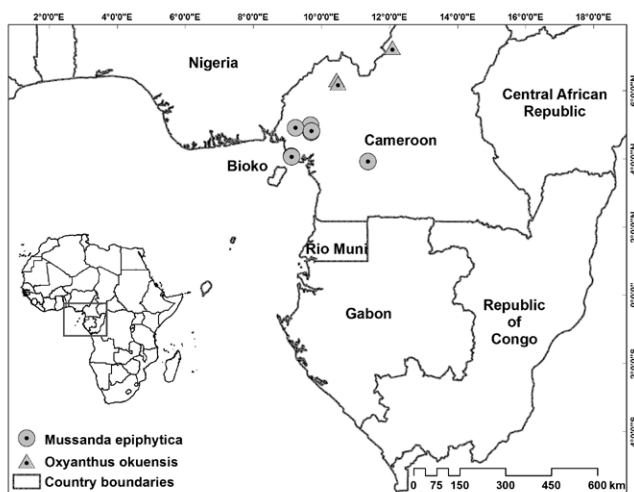


Figure 7 – Distribution of *Mussaenda epiphytica* and *Oxyanthus okuensis*.

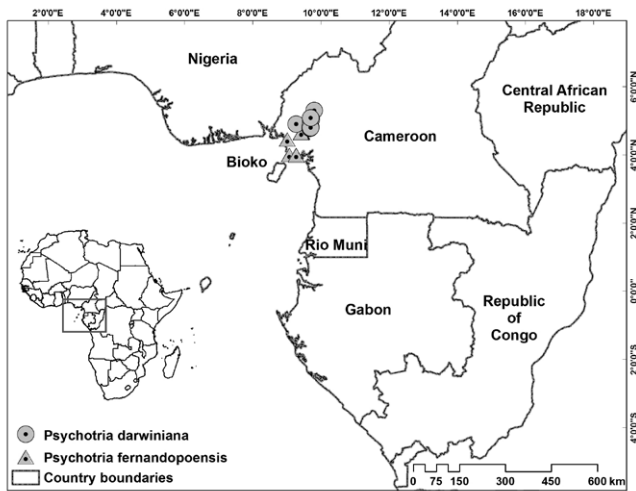


Figure 8 – Distribution of *Psychotria darwiniana* and *P. fernandopoensis*.

Specimen studied – Cameroon. Southwest Province: Rumpi Hills near Dikome Balue, alt. 1101 m, 21 Apr. 2009, *Dessein et al.* 2682 (BR, MO, WAG, YA).

Psychotria fernandopoensis E.M.A. Petit (fig. 2G)

Psychotria moliwensis Bridson & Cheek, **syn. nov.**

Distribution – Cameroon, Equatorial Guinea (Bioko) (fig. 8).

Ecology – A shrub of high forest undergrowth.

Notes – The type of *P. moliwensis* (*Watts* 110 from Cameroon) has large leaves and inflorescences almost completely surrounded by the stipules, while the type of *P. fernandopoensis* (*Mann* 223 from Bioko) has smaller leaves and a larger inflorescence much exceeding the stipules. At first sight these specimens look very different, but new collections showed that the inflorescence character varies within the same locality, and independently of leaf size. Therefore, we recognize only one polymorphic species.

Conservation status – *Psychotria moliwensis* is listed as Critically Endangered A2c+3c+4c (IUCN 2011). We here propose to classify *P. fernandopoensis* as Endangered (EN B1ab(iii) & B2ab(iii)) based on the restricted EOO (2221.30 km²) and AOO (79.88 km²), the small number of locations (three) and the continued decline in habitat extent and quality (it only occurs in lowland forests which are under strong pressure). It is close to classifying as Critically endangered, since two of its Cameroonian localities (Lake Barombi Mbo, Bimbia-Bonadikombo forest) have already experienced much forest clearance, while the third (Mokoko F.R.) is also threatened by logging (M.Cheek, pers. comm.). The Bioko population is possibly extinct as there have been no records for 150 years.

Specimens studied – Cameroon. Southwest Province: Bimbia-Bonadikombo Community Forest, Elephant River, 27 Apr. 2009, *Dessein et al.* 2822 (BR, MO, YA); S shore of Lake Barombi Mbo, 9 Nov 1986, *Manning* 766 (YA); E shore of Lake Barombi Mbo, 14 Nov. 1986, *Manning* 826, 829 & 838 (all YA); *ibid.*, 15 Nov. 1986, *Manning* 852 (YA); Victoria [=Limbe], Apr. 1899, *Schlechter* 12374 (K); Mokoko F.R., 1 May 1994, *Sonké* 1097 (K); slopes of

Barombi Mbo Crater, Kumba, Mar. 1986, *Thomas* 5703 (K, YA); E side of Barombi lake, Kumba, 26 Mar. 1986, *Thomas* 5947 (YA); Mabeta, 26 Mar. 1992, *Watts* 110 (K, holotype of *P. moliwensis*, WAG isotype).

* *Psychotria recurva* Hiern

Distribution – Ivory Coast (see below), Nigeria, Cameroon, Equatorial Guinea (Bioko) (distribution in Lower Guinea: fig. 9).

Ecology – A small shrub in lowland and submontane forest, up to c. 1400 m in altitude.

Notes – The species was only known from three collections from Bioko and Nigeria (Petit 1966), but proved to be common in the Rumpi Hills. It is obviously under-collected due to uncommon flowering. The narrow leaves with strongly undulate margin allow identification when sterile. The species is also newly recorded from Ivory Coast, which constitutes a considerable range extension westwards.

Conservation status – The species is assessed as Vulnerable (VU B2ab(ii, iii)) based on the restricted range (AOO = 69.90 km², within the limits of Endangered; EOO not relevant here since the range is disjunct), small number of localities (six) and continued decline in AOO and habitat extent and quality. It might qualify as Endangered, since the Ivory Coast population is possibly extinct now, the Haute-Dodo forest having been largely destroyed (G. Koffi pers. comm.). Of the known locations, only the Rumpi Hills (and possibly the Bioko locality) seem to be less threatened.

Specimens studied – Cameroon. Southwest Province: Ekombe-Mofako, Mokoko F.R., 21 Apr. 1994, *Acworth* 151 (K); Rumpi Hills near Dikome Balue, alt. 1325 m, 17 Apr. 2009, *Dessein et al.* 2550 (BR, MO, YA); *ibid.*, alt. 1417 m, 18 Apr. 2009, *Dessein et al.* 2575 (BR, YA); Mokoko F.R., Dikome, 5 May 1994, *Ekema et al.* 937 (K). West Province: Plaine des Mbos, 14 km S Dschang, 17 Dec. 1981, *Nkongmeneck* 196 (BR, YA).

Ivory Coast. F.C. de la Haute Dodo, 7 May 1999, *Jongkind* 4561 (WAG).

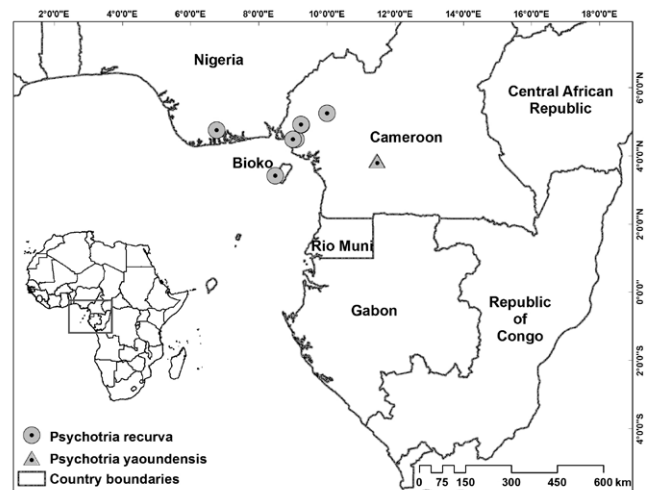


Figure 9 – Distribution of *Psychotria recurva* and *P. yaoundensis* in Lower Guinea.

****Psychotria yaoundensis* O.Lachenaud, sp. nov.**

Capitulis involucreatis sect. *Involucratae* E.M.A.Petit & Verdc. pertinens; bracteis liberis habituque suffruticoso 15–30 cm alto *P. nodiflorae* O.Lachenaud & D.J.Harris, *P. schnellii* (Aké Assi) Verdc. et *P. mwiniungae* Verdc. valde affinis; sed a primo differt inflorescentiis terminalibus et solitariis (nec axillaribus et saepe geminatis), alabastraque glabro et haud corniculato; a secundo et tertio bracteis angustioribus, acutis et conspicue plicatis distinguitur. Type – Cameroon, Central Province, Nkolbisson (ouest de Yaoundé), colline Akoandoum derrière l'I.R.A.D., 31 May 2009, Lachenaud 950 (holo-: BR; iso-: WAG, YA).

Undershrub, creeping at base, 15–30 cm high. **Stems** slender (1–2 mm thick), densely appressed-pubescent. **Stipules** pale green to brownish green, narrowly elliptic, 4.5–10 × 1.5–5 mm, free, deeply bifid at apex with acute and narrow lobes, weakly carinate at base, densely appressed-pubescent, caducous. **Leaves** with petiole 0.3–1(–1.7) cm long, shortly appressed pubescent; lamina elliptic to slightly obovate, 7–11.5 × 2.6–6 cm, acute at base, acuminate at apex, papery, puberulent on nerves beneath, otherwise glabrous, dark green above and pale green beneath, drying brownish green with underside paler; midrib flat or very weakly impressed above; lateral nerves 10–14 pairs, weakly impressed above, conspicuously arching 1–3 mm from margin; tertiary veins densely reticulate but weakly contrasting beneath; no domatia or bacterial nodules. **Inflorescences** terminal, capitate and involucre, held horizontally, 7–15 flowered; peduncle extremely short (< 0.2 cm), glabrous or pubescent towards apex, hidden by the stipules; involucre pale green, consisting of 2–4 unequal pairs of bracts, arranged star-like (when viewed from above) and long exceeding the flowers; bracts free, entire, narrowly ovate to lanceolate, acute and longitudinally plicate at apex, shortly ciliate on margins, otherwise glabrous, the outer pair (largest) 6.5–8 × 3–6 mm. **Flowers** subsessile, 5-merous (probably heterostylous but only the short-styled morph is known); calyx very short, c. 0.5 mm long, irregularly and minutely denticulate, shortly ciliate on the margin; corolla white on both side (apex of buds pale green), with narrow tube c. 6.5 × 2 mm and reflexed lobes 2.5–3 mm long, glabrous outside, hairy inside in upper third of tube just below throat; anthers pale buff, 1.5 × 0.6 mm, on slender white filaments exceeding throat by c. 1.5 mm; style white, c. 6 mm long, pubescent at apex, just reaching corolla throat. **Fruits** only known in very young stage, pale green, ellipsoid, c. 5 × 3.5 mm, smooth, shortly and very sparsely pubescent, subsessile (pedicels probably elongating later), topped with persistent calyx. Figs 2L & 10.

Distribution – Cameroon. Only known from two neighbouring hills in the outskirts of Yaounde (fig. 9). It has not been found from other sites in the vicinity, e.g. the relatively well-collected Mbam-Minkom massif.

Ecology – Undergrowth of degraded semi-deciduous rainforest, on granitic hills with numerous rocky outcrops, c. 750–900 m in altitude.

Conservation status – The species is assessed as Critically Endangered (CR B2ab(iii)) based on its highly restricted range (AOO estimated to be <10 km²), its occurrence in only one location, and the continuing decline in extent and qual-

ity of habitat. It is found only in the immediate vicinity of Yaoundé, and is severely threatened by agriculture and urban expansion; the forests where it occurs are already reduced to very small degraded remnants. The following recommendations are made for its conservation: (1) measures should be taken to prevent agriculture and building on steep hills slopes around Yaoundé (which, besides threatening the endemic flora, also seriously increases the risk of floods); (2) *ex situ* cultivation from cuttings should be attempted. In addition, other hills in the area should be prospected in attempt to locate new populations.

Notes – This species belongs to sect. *Involucratae* E.M.A. Petit & Verdc., which is recognized by its flowers grouped in involucre heads. Within this group it closely resembles *P. schnellii* (Aké Assi) Verdc. from West Africa, *P. mwiniungae* Verdc. from Zambia, and the recently described *P. nodiflora* O.Lachenaud & D.J.Harris from the Congo Basin. All four species share free bracts and a low rhizomatous habit. *Psychotria nodiflora* has axillary and usually paired inflorescences (a unique condition within the genus) and its flower buds are corniculate and pubescent at apex (Lachenaud & Harris 2010). In contrast, *P. yaoundensis* has terminal and solitary inflorescences, and glabrous rounded flower buds. From the two other species, *P. yaoundensis* differs in having relatively narrow, longitudinally plicate bracts that long exceed the capitulum, rather than broad bracts closely surrounding the capitulum.

It is very remarkable that *P. yaoundensis* has not been collected before, although it grows in the immediate vicinity of Yaoundé. This is probably due in part to its low habit, but it also shows that the Yaoundé area is not as well-known as previously thought (Simo et al. 2009). The rocky habitats on hill tops and upper slopes, botanically the most interesting, appear to have been somewhat neglected by previous collectors. In view of the city's growth, there is an urgent need for exploration and conservation of these habitats (see Discussion).

Other specimen studied – Cameroon. Central Province: Nkolbisson, colline Mbogdoum derrière l'Université Catholique, 3 May 2009, Lachenaud 592 (BR, YA).

****Rutidea ferruginea* Hiern**

Distribution – Cameroon, Equatorial Guinea (Rio Muni), Gabon.

Ecology – The Cameroon specimen was collected on the bank of a river in lowland forest.

Notes – The species is also new to Equatorial Guinea. *Rutidea ferruginea* is closely related to the much more widespread *R. olenotricha* Hiern. The key difference lies in the bracteoles (conspicuous, linear and exceeding the calyx in *R. ferruginea*, very short in *R. olenotricha*). Another character used by Bridson (1978), the domatia, proves unreliable: several specimens of *R. ferruginea*, including ours, have domatia similar to those of *R. olenotricha*.

Specimens studied – Cameroon. South Province: SE of Nkoadjap; c. 20 km E of Campo, 15 May 2009, Lachenaud et al. 749 (BR, MO, WAG, YA).

Equatorial Guinea. Rio Muni: de Sendje à Ongamnsok, 20 Feb. 2001, Lejoly 01/93 (BRLU); Estuaire du Río Muni, Mandjani, 8

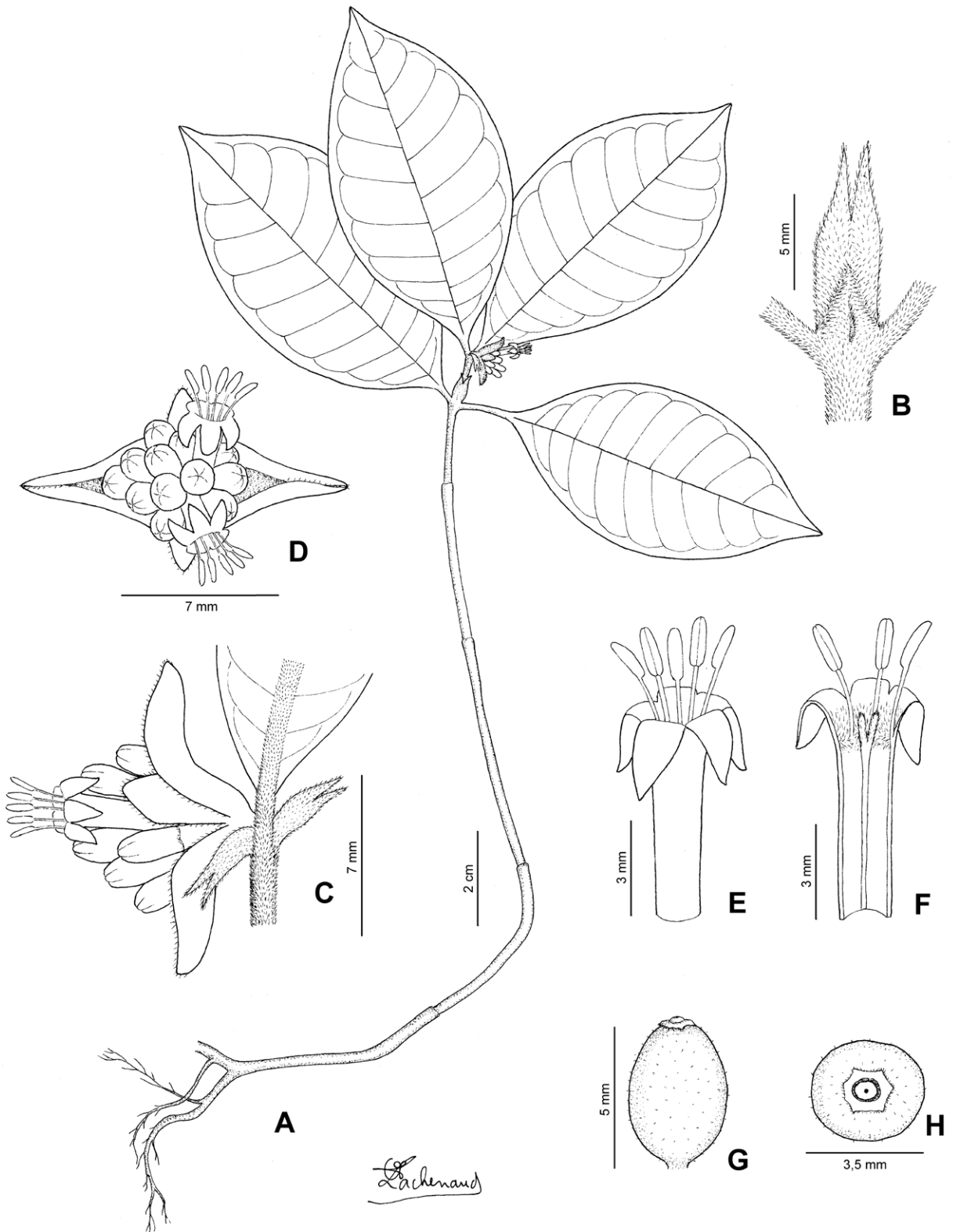


Figure 10 – *Psychotria yaoundensis*. A: habit; B: stipule; C: top of stem with inflorescence; D: inflorescence from above; E: corolla; F: longitudinal section of corolla; G: immature fruit, side view; H: immature fruit, from above. Drawing based on *Lachenaud* 950 (A–F) & *Lachenaud* 592 (G–H).

Oct. 1997, *N. Nguema* 96 (BRLU); SO du Parc National de Monte Alén, sur la piste du rio Uolo au transect Ecofac de Mosumo, 6 Feb. 2001, *Senterre & Ngomo* 64 (BRLU).

**Vangueriopsis rubiginosa* Robyns (fig. 2J)

Vangueriopsis gossweileri Robyns, **syn. nov.**

Distribution – Cameroon, Equatorial Guinea (Rio Muni), Gabon, Republic of Congo, D.R.Congo, Angola (Cabinda) (fig. 3).

Ecology – A tree of evergreen lowland forest, 0–950 m in altitude.

Notes – We consider that *V. rubiginosa* and *V. gossweileri* are the same species, as already suspected by Verdcourt (1987). The main supposed difference between them, the number of locules in the ovary (Robyns 1931), proves to be non-existent: reexamination of the type of *V. rubiginosa* (*Lecomte* C56, P) shows the ovary is 5-locular, as in *V. gossweileri*, and not 2-locular as stated by Robyns (1928). Other differences cited by Robyns (1931) are minor and represent individual variation. *V. rubiginosa* is the older name.

V. rubiginosa is also newly reported from D.R.Congo, and since the species is very little-known we found it useful to give below a complete list of specimens. Despite a wide distribution, it appears to be very rare and always occurring as isolated trees (Raponda-Walker & Sillans 1961, F. Dowsett-Lemaire pers. comm., and pers. obs.). It may flower as a small tree of c. 6 m high (*Lachenaud et al.* 827) but is more commonly a medium-sized tree, 20–25 m high. The tree is very conspicuous due to its bark (very flaky, dull red-brown on young trees, becoming red and smooth on larger trees when the flakes are shed to reveal the inner layer). The regular horizontal branching and pale green drooping foliage are also unusual. The flowers are very fragrant.

Specimens studied – **Cameroon. South Province:** near Kribi, 12 Apr. 1928, *Hédin* 1699 (P); km 34 road Campo – Kribi, 17 May 2009, *Lachenaud et al.* 827 (BR, YA); Nkolobenga, colline au NW d'Ebianemeyong, 11 Apr. 1970, *Letouzey* 10363 (BR, P).

Equatorial Guinea. Rio Muni: Parc National de Monte Alén, près du village de Monte Alén, 14 Mar. 2002, *Senterre et al.* 2842 (BRLU); Nkolentangan, 11 Apr. 1908, *Tessmann* 338 (K).

Gabon: Ezanga-Offoubou, 5 Mar. 1953, *Corbet* SRF 1048 (P); Lac Ezanga, 2 Jun. 1953, *Corbet-Grandez* SRF 1069 (P); Mbel, Jan. 1968, *N. Hallé* s.n. (P); Inganga, 20 May 1914, *Le Testu* 1747 (P); Nyoÿ, 11 Apr. 1926, *Le Testu* 5913 (P); Lastoursville, 13 May 1929, *Le Testu* 7326 (P); Ebé, 21 May 1933, *Le Testu* 9152 (P).

Congo (Brazzaville): Mayombe à Goumina (Sounda), 28 Nov. 1990, *Dowsett-Lemaire* Ecol 432 (BR); Tchisseka (lac Nanga), 19 Apr. 1991, *Dowsett-Lemaire* 1582 (BR); Niounvoux, 14 Jan. 1894, *Lecomte* C 56 (P, type of *V. rubiginosa*); Bilala, 16 Apr. 1990, *Nkounkou* 96 (BR).

Angola. Cabinda: Belize, 24 Mar. 1917, *Gossweiler* 7077 (BM, type of *V. gossweileri*).

D.R.Congo: Sumbi, Feb. 1949, *Flamigni* 10116 (BR); Nsemendwa, 18 May 1957, *Jans* 1087 bis (BR); Botchumi near Nsemendwa, 1 Dec. 1958, *Jans* 1094 (BR); *ibid.*, 13 Sep. 1959, *Jans* 1094 bis (BR).

SAPOTACEAE

**Pradosia spinosa* Ewango & Breteler

Distribution – Cameroon, Gabon, Republic of Congo, D.R.Congo.

Ecology – Occurs sporadically in various types of forest, either riparian (*Sonké & Zemagho* 5561) or hilly (*Letouzey* 10862), including *Gilbertiodendron dewevrei* formations (*Letouzey* 8475).

Notes – A recently described species, easily distinguished from other African Sapotaceae by the spines on the trunk. Initially described from D.R.Congo, it has since been found in Gabon and the Republic of Congo (Gillet & Doucet 2012).

Specimens studied – **South Province:** près rivièrè Fom, 12 km E Kamelon (5 km SE Sangmelima), 24 Nov. 1966, *Letouzey* 8475 (YA). **Littoral Province:** NW Ndoknabao, 30 km SW Ndikinimeki, 18 Dec. 1971, *Letouzey* 10862 (YA). **Southwest Province:** Sanctuaire Mbanyang Mbo, Nguti (05°20'38.3"N 09°31'02.4"E), 5 Apr. 2011, *Sonké & Zemagho* 5561 (BR, BRLU, K, MO, P, WAG, YA).

DISCUSSION

Our results show that much remains to be known about the flora of Cameroon, and demonstrate the interest of some previously neglected localities.

The Rumpi Hills are a chain of hills (the highest of which, Mt Rata, reaches 1764 m) situated north-west of Kumba and west of the Mungo River, which separates them from the Bakossi Mts to the east. This area, little-known botanically, proved very interesting, yielding about half of our new records. Botanically the Rumpi Hills are very close to the Kupe-Bakossi region, and appear to be part of the same area of endemism. Endemic species that are shared between the Rumpi Hills and the Kupe-Bakossi region, but absent from Mt Cameroon to the south or the Bamenda highlands to the north, include *Impatiens letouzeyi* Grey-Wilson, *Justicia leucoxiphis* Vollesen, Cheek & Ghogue, *Psychotria darwiniana*, another new species of *Psychotria* (listed as *P. sp. aff. latistipula* in Cheek et al. 2004), *Rhaptopetalum geophylax* Cheek & Gosline, *Sabicea* sp. nov. (listed as *Sabicea* sp. A in Cheek et al. 2004) and *Talbotiella bakossiensis* Cheek. It is likely that more 'Kupe-Bakossi endemics' will be discovered in Rumpi, especially since parts of the chain are still unexplored. In addition, there is at least one species, *Ocotea ikonyokpe* van der Werff, which is only known from Rumpi. The Rumpi Hills are therefore a priority site for plant conservation. Although the lower areas have mostly been cleared, submontane forest above c. 1100 m is still largely intact. The site is so far protected only as a forest reserve, and an upgrading of its status should be considered, especially since, in addition to its very rich flora, it also holds most of the Cameroon highlands endemic birds, and is considered an Important Bird Area (BirdLife International 2009).

Tchabal Mbabo (2460 m) is a mountain situated in the savanna zone, but which has an outlier of montane forest, the northernmost spot of this forest type in Cameroon. It is hardly known botanically, apart from collections by Jacques-Félix dating back to the 1930s. We only briefly visited the site but discovered there a new species of *Impatiens* and a new population of the threatened *Oxyanthus okuensis*, hitherto only known from the Oku area. The forests of Tchabal

Mbabo appear quite similar floristically to those of Oku, so further discoveries may be expected there.

One would hesitate to qualify the Yaoundé area as little-known, considering the large number of botanists that have collected there. However, it appears that the rocky hills surrounding the city have not received due attention. A remarkable illustration of this situation is the discovery of *Psychotria yaoundensis* which, although growing in the city's immediate outskirts, escaped the attention of collectors until 2009. These rocky hills, mostly 800–1100 m in altitude, have a very interesting flora with several endemic or extremely rare species, e.g. *Afrothimia amietii* Cheek, *Pristimera breteleri* N.Hallé, *Talbotiella breteleri* (Aubrév.) Mackinder & Wieringa and *Multidentia saxicola* O.Lachenaud & Séné (the latter also known from one locality in D.R.Congo). Unfortunately these species are now severely threatened as the city is expanding in a rather anarchic way, with houses being built even on fairly steep slopes. Yet, although exploration and conservation efforts are probably more urgent there than anywhere else in the country, there have been very little if any in recent years. We strongly recommend further inventories to be carried out in the area, in order to identify priority sites for conservation.

The Mbam-Minkom massif, although part of the same formation as the other hills around Yaoundé, stands apart in its higher altitude (1295 m) which allows the presence of submontane forest on the summit. Interestingly this submontane forest has some affinities with the Western Cameroon highlands, as shown by the occurrence of extralimital populations of *Chassalia laikomensis* and *Mussaenda epiphytica*. Mbam-Minkom is also home to the endemic *Coffea fotsoana* Stoffelen & Sonké, and several interesting orchids have been recorded there (Droissart et al. 2009a, Simo et al. 2009). The area is unprotected and deforestation is ongoing on the lower slopes. This is unfortunate since the site, beside its floristic interest, has a strong touristic potential, due to its beautiful landscape, the presence of two emblematic and highly threatened animal species (the gorilla and the grey-necked picathartes), and the vicinity of Yaoundé.

There are further areas in Cameroon which definitely need better botanical prospecting. These include the Nta Ali massif near Mamfe, the hilly area between Yabassi and Ndi-kimiméki, and the Mame hills between Edea and Yaoundé, all of which have only been briefly visited by botanists. The extreme southeast (i.e. east of the Dja reserve) is also little-known. The few botanical expeditions there have mostly followed the main roads and watercourses, leaving aside the more hilly areas near the Congo border. The forests of the Adamaoua have also received little attention. They are evidently not as diverse as those in the south of the country, but nevertheless have some species found nowhere else in Cameroon, e.g. *Sericanthe raynalianorum* (N.Hallé) Robbr. Finally, large parts of the savanna region have not or scarcely been explored, and would certainly yield a number of additions to the country's flora.

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