


New identifications of Lamiaceae (Lamioideae and Scutellarioideae) from D.R. Congo, Rwanda and Burundi

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Background: The Lamiaceae family is one of the largest still not covered by the Flore d'Afrique centrale (except Premnoideae and Viticoideae) and many specimens are left unidentified in collections.

Objectives: To prepare the treatment of subfamilies Lamioideae and Scutellarioideae, herbarium materials have been revised.

Methods: Herbarium material from BR, BRLU and POZG was studied.

Results: Ten taxa (9 species and 1 variety) are reported as new to The Democratic Republic of the Congo (D.R. Congo) and Burundi: *Achyrospermum africanum*, *A. axillare*, *A. oblongifolium*, *A. tisserantii*, *Leucas deflexa* var. *kondowensis*, *L. fulvipila*, *L. songeana*, *Stachys pseudohumifusa* subsp. *minutiflora*, *S. pseudonigricans*, *Tinnea gracilis*. For several species, the new localities are remarkably distant from the species' previously known distribution area. New localities of five rare taxa are also included (*Achyrospermum micranthum*, *Leucas nyassae*, *L. stormsii* var. *parviflora*, *Tinnea coerulea* var. *linearifolia*, *T. platyphylla*). Many new localities are situated in regions subject to strong anthropogenic pressure.

Conclusion: The new records increase the number of accepted species of Lamioideae and Scutellarioideae in Central Africa by 27%.

Keywords: *Achyrospermum*; *Leucas*; *Stachys*; *Tinnea*; tropical Africa, flora; conservation; distribution; Haut-Katanga; Labiatae.

Introduction

Lamiaceae comprise thirty-five genera and \pm 200 species in Central Africa (D.R. Congo, Rwanda, Burundi) (Paton & Meerts 2020). So far, only two subfamilies have been covered by the Flore d'Afrique centrale i.e., Premnoideae (6 species) and Viticoideae (17 species) (Paton & Meerts 2020). Regional treatments of the Lamiaceae have been published for different parts of that territory i.e., Rwanda (Troupin & Ayobangira 1985), and the Virunga National Park (Robyns 1947). The whole family is now covered by standard floras in neighbouring regions, noticeably Flora of Tropical East Africa (Paton et al. 2009) and Flora Zambesiaca (Paton et al. 2013). The preparation of the treatment of subfamilies Lamioideae and Scutellarioideae for the Flore d'Afrique centrale is now underway. During the revision of the herbarium materials, a number of new records have come to my attention, which I publish here. New localities are also included for five taxa with restricted distributions.

Materials and methods

The study was conducted in BR (Meise Botanic Garden Herbarium, Belgium) and BRLU (Free University of Brussels Herbarium, Belgium), and is based upon

the examination of specimens either collected after the most recent revision of the relevant genus, or more ancient specimens that had remained unidentified so far. Digitized images of specimens from POZG (Adam Mickiewicz University Herbarium, Poland) have also been obtained. Herbarium acronyms are according to Thiers (2021). Other specimens have been retrieved from GBIF (<https://www.gbif.org/fr/occurrence/>). The nomenclature of accepted species names follows the African Plant Database (version 3.4.0). The specimens cited are grouped according to the phytogeographic regions following Robyns (1948). Geographic coordinates are those reported by collectors, or, when missing, retrieved with Bamps (1982). A map of the study region can be found online (<https://www.floredafriquecentrale.be/#/en/phytogeographical>).

Results

New records for D.R. Congo and Burundi are documented below. These comprise ten additions to the flora of D.R. Congo and Burundi (based on Govaerts et al. 2021) (marked ‘*’) (*Achyropermum africanum*, *A. axillare*, *A. oblongifolium*, *A. tisserantii*, *Leucas deflexa* var. *kondowensis*, *L. fulvipila*, *L. songeana*, *Stachys pseudohumifusa* subsp. *minutiflora*, *S. pseudonigricans*, *Tinnea gracilis*).

New records of five rare taxa are also included (marked ‘!’) (*Achyropermum micranthum*, *Leucas nyassae*, *L. stormsii* var. *parviflora*, *Tinnea coerulea* var. *linearifolia*, *T. platyphylla*).

The specimens in BR have been annotated online with our new identifications.

**Achyropermum africanum* Hook.f. ex Baker

Distribution: Cameroon, D.R. Congo, Guinea, Ivory Coast, Nigeria, Sierra Leone, Togo.

Habitat: Understory of dense forests, rainforests; alt. 800–1300 m in D.R. Congo, alt. 900–2380 m elsewhere.

Specimens examined: D.R. CONGO. **Kasaï:** Masapo, 06°56’S, 17°20’E, alt. ± 750 m, sous-bois, 14 Apr. 1953, *Callens 1190* (BR). **Lac Albert:** Kilo, 01°50’N, 30°09’E, forêt vierge, 28 Jun. 1914, *Bequaert 4869* (BR). **Lacs Edouard et Kivu:** Parc National Albert [Parc des Virunga], rivière Mulili, affl. droit Byangolo, 00°26’N, 29°46’E, alt. 1300 m, forêt ombrophile équatoriale, 23 Apr. 1952, *de Witte 7641* (BR).

Discussion: *A. africanum* was previously known from the Guinean region and the Sudanian region only. The new records in D.R. Congo represent a remarkable extension of the species’ range to the southeast. Interestingly, the three new records originate from different regions of

D.R. Congo, suggesting that the species could be more widespread in the Congolian region. In the materials from D.R. Congo, the corolla is white, while it is either purplish or white in W African materials.

Bibliography: Baker (1900), Bruce (1936), Hepper & Keay (1963).

**Achyropermum axillare* E.A. Bruce

Distribution: D.R. Congo, South Sudan, Uganda.

Habitat: Rainforest, dense evergreen forest, swamp forest, gallery forests, fallow fields; alt. 500–1800 m in D.R. Congo.

Specimens examined: D.R. CONGO: **Forestier central:** Kivu, Territ, Walikale, env. Mutongo, 52 km NE de Masisi, 01°10’S, 28°37’E, piste Kaseke-Pinga, alt. 1100–1200 m, forêt ombrophile, 22 Jan. 1957, *Troupin 3007* (BR); Mishuli, Mutongo, territ Walikale, 01°10’S, 28°37’E, alt. 1050 m, forêt équatoriale, 6 May 1958, *Gutzwiller 2822* (BR); Lungoma, territ Walikale, 01°06’S, 28°39’E, alt. 1050 m, 11 Jun. 1958, *Gutzwiller 3079* (BR); Bambesa, 03°28’N, 25°43’E, alt. 600 m, forêt, 3 Dec. 1954, *Gérard 1834* (BR); Bambesa, forêt secondaire, 1 Mar. 1961, *Gérard 4860* (BR); Bambesa, recu, 18 Jan. 1963, *Gérard 5519* (BR); Bambesa, jachère, 11 Oct. 1956, *Gérard 2477* (BR); La Kulu, 03°28’N, 23°46’E, alt. 500 m, woud, 3 Feb. 1931, *J.F. Van den Brande 407* (BR). **Ubangi-Uele:** Parc National de la Garamba, env. Bagbele, 04°21’N, 29°17’E, alt. 800 m, partie marécageuse de galerie forestière, sol humifère humide, 20 Jan. 1950, *Demoulin 18* in *De Saeger 068* (BR); Piste frontière vers 68 km, crête Congo-Nil, riv. Mogbwemu, ± 04°20’N, 29°18’E, alt. 800 m, galerie forestière dense, 10 Mar. 1952, *Troupin 388* (BR). **Lac Albert:** Route Gabu-Golu, village Logu, 02°15’N, 30°35’S, alt. 1800 m, galerie forestière, 3 Dec. 1948, *Taton 852* (BR); Ituri District, Mongbwalu Mine Site, 01°58’N, 30°03’E, alt. 1200 m, 23 Oct. 2010, *Luke & Bujo 14535* (BR); Réserve de Djugu, 01°56’N, 30°30’E, en forêt, 28 Nov. 1951, *Smeyers 125* (BR). Lacs Edouard et Kivu: Parc National Albert [Parc des Virunga], riv. Biangolo, 00°26’N, 29°46’E, alt. ± 1300 m, forêt ombrophile dégradée, 28 Apr. 1953, *Frédéricq* in *de Witte 8884* (BR).

Discussion: The new records are located in the N and NE of D.R. Congo, markedly expanding the species’ distribution range to the southwest; the westernmost locality (La Kulu) is situated ± 800 km to the west of the previous limit of the distribution range. Many specimens in collections had been previously misidentified as *Achyropermum schimperii* (Hochst. ex Briq.) Perkins ex Mildbr. *A. axillare* is quite distinct,

having a white corolla, pubescent bracts and acute calyx lobes [vs. purplish corolla, subglabrous bracts (except margin) and obtuse calyx lobes in *A. schimperi*].

Bibliography: Bruce (1936), Paton et al. (2009).

! *Achyropermum micranthum* Perkins

Distribution: Burundi, D.R. Congo, Rwanda.

Habitat: Rainforests, mountain evergreen forests, bamboo forests, especially near streams; alt. 1700–2800 m.

Discussion: The species was assessed by IUCN as VU (Gereau et al. 2019), based on 12 collections, while GBIF reports 19 localities. Seven new collections have been identified. Even though the new collections do not significantly change the area of occurrence, they indicate that the species is more widespread than previously thought.

Specimens examined (only newly determined materials): D.R. CONGO: **Lacs Edouard et Kivu:** Lushasha (Kivu), 02°12'S, 28°47'E, s.d., *Babault* 722 (BR); Dondo, territoire Masisi, 01°25'S, 28°42'E, alt. 1750 m, forêt à *Neoboutonia*, 16 May 1957, *Gutzwiller* 871 (BR); Mont Nyamunono, Terr. Kalehe, 02°04'S, 28°55'E, alt. 2000 m, 4 Mar. 1959, *Léonard* 3290 (BR); Mt Bugulumiza, ± 02°14'S, 28°41'E, alt. 2350 m, forêt dense à *Conopharyngia*, etc. sur sol argileux lourd (basalte à olivine), 26 Jul. 1955, *Pierlot* 663 (BR); Forêt de la Musisi, 21 km route Kavumu-Walikale, Territoire de Kalehe, 02°17'S, 28°37'E; alt. 2270 m, forêt de montagne à *Carapa grandiflora*, pente 40°, 10 Jan. 1959, *Pierlot* 2750 (BR).

RWANDA: **Rwanda-Burundi:** Forêt de Rugege, vallon Buruli (sous le gîte d'Uwinka, au NW de celui-ci), ± 02°28'S, 29°11'E, alt. 2280 m, vallon boisé encaissé, à *Cyathea manniana*, 2 Sep. 1974, *Lambinon* 74/1065 (BR).

BURUNDI: **Rwanda-Burundi:** Prov. Bubanza, Mugerero (Rugazi), 03°14'S, 29°28'E, alt. 1900 m, sous-bois de forêt de montagne, 01 May 1981, *Reekmans* 10008 (BR).

Bibliography: Bruce (1936), Robyns (1947), Troupin & Ayobangira (1985), Bloesch et al. (2009).

* *Achyropermum oblongifolium* Baker

Distribution: Cabinda (Angola), Cameroon, Congo, D.R. Congo, Gabon, Ghana, Guinea, Gulf of Guinea Is., Ivory Coast, Liberia, Nigeria, Sierra Leone, Tanzania (one record).

Habitat: Rainforest, secondary forests; alt. 855 m in D.R. Congo, alt. ± 150–900 m elsewhere.

Specimen examined: D.R. CONGO: **Forestier Central:** Maniema province, Namoya, lower slopes of Namoya summit, 04°00'59"S,

27°33'51"E, alt. 855 m, overgrown fallow fields and residual forest patches below secondary rainforest, 13 Apr. 2008, *Bytebier* 2867 (BR).

Discussion: The species is almost exclusively W African, apart from a single isolated record in Tanzania (material not seen). The new record is situated in a region subjected to increasing anthropogenic disturbance and collecting information indeed reports habitat degradation.

Bibliography: Perkins (1921), Bruce (1936), Hepper & Keay (1963), Adam (1975), Morales (2011).

* *Achyropermum tisserantii* Letouzey

Distribution: Cameroon, Central African Republic, D.R. Congo, Equatorial Guinea, Gabon, Republic of the Congo.

Habitat: Rainforest; alt. 800–900 m in D.R. Congo, alt. 150–940 m elsewhere.

Specimens examined: D.R. CONGO: **Forestier Central** (near the limit of Lacs Edouard & Kivu): Kivu, territoire Walikale, Musenge, 01°38'S, 28°16'E, alt. 800 m, jeune recru, 20 Dec. 1958, *A. Léonard* 1897 (BR); Kivu, territoire Walikale, Tandalukara, 01°33'S, 28°22'E, alt. 850 m, forêt à *Cynometra*, *Julbernardia* et *Staudtia*, 10 Dec. 1958, *A. Léonard* 1927 (BR); Nord Kivu, Irangi, 01°53'S, 28°27'E, alt. 900 m, rive droite de la rivière Luhoho, forêt dense à *Gilbertiodendron dewevrei* et *Uapaca guineensis* sur pentes fortes, 27 Nov. 1988, *Lejoly* 88/730 (BRLU); Kivu, Irangi, gîte IRSAC, ± 01°53'S, 28°27'E, alt. 800 m, forêt dense, sous-bois, 24 Mar. 1967, *Lewalle* 1737 (BR).

Discussion: *A. tisserantii* was previously known from the Lower Guinean region only. All new localities are located in Kivu, remarkably isolated > 1000 km in the east of the nearest locations. Collectors do not report the white spots on leaves often found in W African specimens, but the constancy of this trait is uncertain.

Bibliography: Letouzey (1967).

* *Leucas deflexa* Hook.f. var. *kondowensis* (Baker) Sebald

Distribution: D.R. Congo, Malawi, Tanzania.

Habitat: *Brachystegia* woodlands, streambanks, scrub; in D.R. Congo at alt. ± 1300 m, alt. 800–2150 m elsewhere.

Specimen examined: D.R. CONGO: **Haut-Katanga:** Kanfundwa, à environ 6.8 km au nord de Kambove, 10°49'S, 26°36'E, talus de la piste en bordure d'un ruisseau affluent de la Mulungwishi, 8 May 1983, *Schajjes* 1907 (BR, with colour picture).

Discussion: This variety is distinguished mostly by its long corolla. Only one collection from D.R. Congo is known, originating from a region that

has been strongly impacted by mining activities in the last decades; the locality could be destroyed.

Bibliography: Sebald (1980), Paton et al. (2009).

****Leucas fulvipila*** Bramley

Leucas descampsii in Angulo (1970) quoad *Michel & Reed 2336*, non Briq.

Leucas tettentis in Sebald (1980) quoad *Lewalle 5625*, *Michel & Reed 2336*, *Reekmans 536*, non Vatke

Distribution: Burundi, Tanzania, Zambia.

Habitat: *Brachystegia* woodlands; alt. 850–1500 m.

Specimens examined: BURUNDI: **Lacs Edouard & Kivu:** Bururi, Rumonge, 03°59'S, 29°26'E, alt. 850 m, forêt claire, 2 May 1971, *Reekmans 536* (BR); Rumonge, 03°59'S, 29°26'E, alt. 800 m, forêt claire, 13 May 1952, *Lewalle 5625* (BR, WAG). **Rwanda-Burundi:** Kinyinya Mosso, 03°39'S, 30°20'E, forêt de *Cryptosepalum*, 6 Jun. 1952, *Michel 2483* (BR); Kinyinya Mosso, 03°39'S, 30°20'E, forêt de *Brachystegia*, 8 May 1952, *Michel & Reed 1862* (BR); [Nyamabuye] Mosso, 03°28'S, 30°19'E, forêt de *Cryptosepalum*, 13 May 1952, *Michel & Reed 2336* (BR); Bururi, Rubindi, 04°15'S, 29°33'E, alt. 900 m, sous-bois de forêt claire à *Brachystegia*, 16 Apr. 1978, *Reekmans 6935* (BR, WAG).

Discussion: *Leucas fulvipila* is a recently described species (Paton et al. 2009). The materials from Burundi were previously misidentified as *L. tettentis* Vatke by Angulo (1970) and Sebald (1980), on account of the stiff cilia on bract margins; however, the calyx is quite different. It is closely related to the widespread *L. stormsii* Gürke, from which it is easily distinguished by the 1–2 mm pale yellow cilia on bract margins, much longer than bract width. The new localities extend the species' range ± 400 km to the north.

Bibliography: Paton et al. (2009, 2013).

! *Leucas nyassae* Gürke var. *nyassae*

Distribution: D.R. Congo, Malawi, Mozambique, Tanzania, Zambia, Zimbabwe.

Habitat: Miombo woodlands and shrub savannas; alt. ± 1300 m, alt. 400–2100 m elsewhere.

Specimens examined: D.R. CONGO: **Haut-Katanga:** Territoire de Sakania, environs de Kipushia, env. 5 km au SE de Namapala, ± 12°54'S, 29°37'E, alt. 1230 m, 28 Apr. 1971, *Lisowski 23593* (POZG); Lubumbashi, Kasapa, 11°36'S, 27°38'E, alt. 1230 m, brousse secondaire, 25 Apr. 1971, *Lisowski 23594* (POZG).

Discussion: The species was previously known from a single old collection [*Rogers 21822* (PRE), cited by Sebald (1980)]. Its presence in

D.R. Congo is confirmed here. The new collections are situated in the extreme SE of D.R. Congo, at the northwestern limit of the species' distribution range, at short distance from the nearest localities in Zambia.

Bibliography: Sebald (1980), Paton et al. (2009, 2013).

****Leucas songeana*** Sebald

Distribution: Angola, D.R. Congo, Malawi, Tanzania, Zambia, Zimbabwe.

Habitat: Miombo woodlands; alt. ± 1300 m in D.R. Congo, alt. 1150–1900 m elsewhere.

Specimens examined: D.R. CONGO: **Haut-Katanga:** Mont Mukuen, 10 km SE d'Eville [Lubumbashi], 11°46'S, 27°27'E, alt. 1300 m, petite gorge à sol plus profond et frais, 25 Jun. 1948, *Schmitz 1704* (BR).

Discussion: The species is closely related to the widespread *Leucas martinicensis* (Jacq.) R.Br., from which it differs by the median lobe of the posterior lip of the calyx, which is hardly longer than the other lobes (vs. much longer and erect in *L. martinicensis*), and the calyx tube only weakly curved (vs. strongly sigmoid in *L. martinicensis*). The single collection from D.R. Congo is located in the south of Lubumbashi, in a region that has been subjected to strong urbanization pressure in the last decades.

Bibliography: Sebald (1980), Paton et al. (2009, 2013), Vollesen & Merrett (2020).

! *Leucas stormsii* Gürke var. *parviflora* Bramley

Distribution: D.R. Congo, Tanzania, Zambia.

Habitat: *Julbernardia* and *Brachystegia* woodlands; alt. 850–2300 m in D.R. Congo, alt. 850–1000 m elsewhere.

Specimens examined: D.R. CONGO: **Haut-Katanga:** Sokele, 09°55'S, 24°36'E, alt. 950 m, Apr. 1950, *Desenfans 246* (BRLU); Marungu, Kisinde, 07°21'S, 29°52'E, alt. 2300 m, savane, au bord des chemins, *Dubois 1215* (BR); Route Mukoro-Pweto, between 09°10'S, 28°20'E and 08°28'S, 28°54'E, alt. ± 1000 m, forêt claire à *Julbernardia globiflora*, 24 Jun. 1957, *Duvigneaud 3672B* (BRLU); Dubie, 08°34'S, 28°31'E, forêt à *Brachystegia bussei* sur colline rocheuse, 24 Jun. 1957, *Duvigneaud 3676* (BRLU); Pweto, 08°28'S, 28°54'E, alt. 960 m, savane arborée à sol pierreux, 18 Apr. 1926, *Robyns 2027* (BR).

Discussion: This variety is characterized by shorter a calyx and corolla and a slenderer habit than the type variety. It was said to occur in D.R. Congo by Paton et al. (2013), but no specimen was cited. Its presence is confirmed here, based on five collections of which four in the E of Haut-Katanga, at short distance from the nearest localities in Tanzania.

Bibliography: Paton et al. (2013), Vollesen & Merrett (2020).

**Stachys pseudohumifusa* Sebsebe subsp. *minutiflora* Y.B.Harv.

Distribution: D.R. Congo, Zambia.

Habitat: Savannas and dambos, in seasonally waterlogged soil; alt. \pm 1300 m in D.R. Congo, alt. 1000–1300 m in Zambia.

Specimens examined: D.R. CONGO: **Haut-Katanga:** Ruashi, 11°37'S, 27°32'E, fond de vallée, terre jaune argileuse, 19 Dec. 1956, *Detilleux 264* (BR).

Discussion: The cited collection is only the third one of this subspecies. It is situated \pm 350 and 150 km, respectively, north of the two previous collections (Harvey 1996). The ecology of the species in its Congolese locality is quite similar to both Zambian collections, i.e. herbaceous vegetation on moist soil. The locality is situated in a region that has been under increasing anthropogenic pressure during the last decades due to urbanization and mining activities, and the species could no longer exist there. Two specimens from Tanzania recorded on GBIF [*Bidgood, Congdon & Vollesen 1291* (BR, K), *Bidgood, Congdon & Vollesen 2373* (BR, K)] are actually wrongly databased, being *Stachys pseudonigricans* Gürke. Two other subspecies have been described, i.e. subsp. *saxeri* Y.B.Harv. (Cameroon) and subsp. *pseudohumifusa* (Tanzania); the latter could exist in Haut-Katanga; it is recognized by its longer corolla (10–11 mm).

Bibliography: Sebsebe (1993), Harvey (1996), Paton et al. (2009).

**Stachys pseudonigricans* Gürke

Distribution: Angola, Malawi, Mozambique, Tanzania, Zambia, Zimbabwe.

Habitat: Miombo woodlands, dambos, on seasonally waterlogged clay soil.

Specimens examined: D.R. CONGO: **Haut-Katanga:** Kabanda, 08°42'S, 27°23'E, alt. \pm 1550 m, forêt claire, 19 Mar. 1953, *Desenfans 2489* (BRLU); Kabanda, forêt claire, alt. 1550 m, *Desenfans 2789* (BRLU); Welgelegen, 12°05'S, 27°31'E, alt. 1300 m, forêt dembo à *Uapaca* sur plateau latéritisé à sol hydromorphe, 7 Jan. 1960, *Duvigneaud 4967L* (BRLU); Niamumenda, 11°36'S, 27°18'E, alt. 1300 m, forêt claire à *Brachystegia boehmii* dans une plaine fraîche argileuse, 6 Jan. 1960, *Duvigneaud 4944L* (BRLU); Kamwali, 11°08'S, 27°09'E, alt. 1200 m, forêt claire de plaine à *Brachystegia spiciformis* et *Isoberlinia*, 19 Jan. 1960, *Duvigneaud 5118L1* (BRLU); Karavia, 11°39'S, 27°25'E, alt. 1300 m, cultures, anciennes

cultures, bords de sentiers, s.d., *Quarré 1954* (BR); 'Elisabethville' [Lubumbashi], 11°40'S, 27°28'E, alt. 1250 m, 1937, *Salésiens 1060* (BR).

Discussion: The new localities fall in two groups, i.e. one group of five collections in the region of Lubumbashi, and another one on the Mitwaba Plateau, \pm 400 km further north. The new localities extend the range to 400 km to the N and to the W of nearest locations in Zambia.

Bibliography: Paton et al. (2009, 2013), Vollesen & Merrett (2020).

! *Tinnea coerulea* Gürke var. *linearifolia* (Bamps) Vollesen

Distribution: Angola, D.R. Congo, Zambia.

Habitat: Miombo woodlands, steppic savannas, sometimes on copper-rich soil.

Specimens examined (new identifications only):

D.R. CONGO: **Haut-Katanga:** Parc national de l'Upemba, rive droite de la Lusinga, \pm 8°55'S, 27°12'E, alt. 1700 m, 28 Mar. 1947, *de Witte 2453* (BR); Parc national de l'Upemba, rivière Buye Bala, affluent de la Muye, 8°47'S, 26°56'E, alt. 1750 m, savane herbeuse, 4 Apr. 1948, *de Witte 3637* (BR); Parc national de l'Upemba, savane herbeuse autour de la tête de la source de la rivière Kalumengongo, 8°58'S, 27°06'E, alt. 1830 m, 31 Mar. 1949, *de Witte 5974* (BR); Entre Kisenge (10°42'S, 23°10'E) et Divuma (10°37'S, 22°56'E), alt. \pm 1050 m, 1957, *Duvigneaud 3287T* (BRLU); Dikuluwe, copper hill, 2006, *Lejoly 06/303* (BRLU); Parc national de l'Upemba, 1 km au sud du confluent Wakasinga-Djipwa, \pm 08°47', 27°11'E, alt. 1550 m, 25 Jan. 1956, *P. Vanden Brande 171* (BR, BRLU).

Discussion: This variety was initially described at species level by Bamps (1962) on account of its narrow, almost linear leaves; it also tends to have less tomentose inflorescence than the type variety. The new specimens identified show that the variety is widespread in the Upemba region, where the other two varieties [var. *coerulea* and var. *obovata* (Robyns & Lebun) Vollesen] are rare or lacking.

Bibliography: Bamps (1962), Vollesen (1975).

**Tinnea gracilis* Gürke

Distribution: D.R. Congo, Tanzania, Zambia.

Habitat: Miombo woodlands, especially on rocky outcrops and dry, shallow soil; alt. 1240–1500 m in D.R. Congo, elsewhere alt. 800–1850 m.

Specimens examined: D.R. CONGO: **Haut-Katanga:** Kitshinje, 08°24'S, 27°53'E, alt. 1400 m, forêt claire sur affleurement de quartzites, 7 May 1953, *Desenfans 3116* & *Desenfans 3134* (BRLU); Massif de la Luina,

± 12°00'–12°50'S, 27°40'–28°00'E, alt. ± 1250 m, forêt claire à *Brachystegia microphylla* sur conglomérat de base du Roan, 21 Jun. 1957, *Duvigneaud 3614Ti* (BRLU); Entre Welgelegen et Kasumbalesa, ± 12°08'S, 27°40'E, alt. ± 1250 m, forêt claire enrochée à *Brachystegia microphylla*, 29 Jan. 1960, *Duvigneaud 5302T* (BRLU); Près de Kasumbalesa, 100 km S of 'Elisabethville' [Lubumbashi], 12°12'S, 27°48'E, alt. ± 1350 m, crête rocheuse, 27 Mar. 1951, *Schmitz 3517* (BR); Environs de Kasumbalesa, ± 12°12'S, 27°48'E, forêt claire sur pente rocheuse, 20 Mar. 1971, *Lisowski 23785* (POZG); Colline à l'ouest de Kasumbalesa, ± 12°12'S, 27°48'E, alt. ± 1400 m, forêt claire, 20 Mar. 1971, *Lisowski 23789* (POZG).

Discussion: The species was previously known from Zambia and Tanzania only. It was first identified in the collections by Paul Bamps in 1985, but that record has apparently remained unpublished. The new collections fall in two groups, i.e. a group located in the SE of Lubumbashi, quite close to the nearest Zambian locality (Ndola), and another one ± 400 km in the north, on the Mitwaba Plateau.

Bibliography: Robyns & Lebrun (1930), Vollesen (1975), Paton et al. (2009, 2013), Vollesen & Merrett (2020).

! *Tinnea platyphylla* Briq.

Distribution: D.R. Congo, (possibly Zambia).

Habitat: Miombo woodlands, steppic savannas; alt. 1300–2300 m.

Specimens examined (new identifications only):

D.R. CONGO: **Haut-Katanga:** Kamatanda, 10°57'S, 26°47'E, alt. 1200 m, forêt claire mixte sur terre rouge et termitières, 9 Feb. 1960, *Duvigneaud 5490* (BRLU); 16 km NW of Likasi, ± 10°52'S, 26°38'E, alt. 1300 m, forêt claire à *Brachystegia boehmii* ceinturant un dembo, 9 Feb. 1960, *Duvigneaud 5486T* (BRLU); Territ. Kasenga, entre Kapama et Kinika, ± 10°27'S, 28°07'E, alt. ± 1000 m, forêt claire sur sable, Jun. 1957, *Duvigneaud 3632T* (BRLU); Mpura, 10 km N Kinika, 10°21'S, 28°06'E (?), alt. 1050 m, steppe arbustive suffrutescente à *Brachystegia nains* sur schiste, 22 Jun. 1957, *Duvigneaud 3639T* (BRLU); Marungu, 2 km S of Lusale Mount, ± 07°36'S, 30°02'E, alt. ± 2200 m, steppe, 27 Jun. 1957, *Duvigneaud 3739* (BRLU); Luiswishi, 11°31'S, 27°27'E, alt. 1208 m, forêt claire, 17 May 1984, *Malaisse 12958* (BR).

Discussion: This species is endemic to Haut-Katanga [one collection possibly originating from Zambia (*Bredo 3951*)]; six new collections were found, adding to the ± 11 previously known collections.

Bibliography: Robyns & Lebrun (1930), Vollesen (1975).

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