

CHECKLIST OF THE CYPERACEAE OF EQUATORIAL GUINEA  
(ANNOBÓN, BOKO, RÍO MUNI)

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ABSTRACT. — A checklist of the Cyperaceae of Equatorial Guinea, comprising 95 species, is presented. Thirteen species are known from Annobón, 45 from Bioko and 73 from Río Muni. The best represented genus is *Cyperus*, with 25 species. In addition, bibliographic references for Cyperaceae from Equatorial Guinea have been gathered and checked. Twenty-two species are recorded for the first time from the country.

KEY WORDS. — Cyperaceae, Equatorial Guinea.

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#### INTRODUCTION

Comprising about 104 genera and ca. 5000 species, the Cyperaceae form the third largest family of Monocotyledons. Distributed worldwide, they are abundant in humid or flooded places. In tropical Africa *Bulbostylis*, *Cyperus* and *Pycneus* are particularly rich in the numbers of species (GOETGHEBEUR 1998). In Equatorial Guinea, sedges are widely distributed, being especially frequent in coastal meadows or marshy places. They are characteristic in zones such as the prairies in the high altitude areas of Pico Basilé or the inselbergs of Río Muni.

Important works on the Cyperaceae of West tropical Africa include those of CLARKE (1902), HUTCHINSON (1936) and HOOPER & NAPPER (1972). Other related studies include those of HAINES & LYE (1983) or GOETGHEBEUR & COUDIJSER (1984). The latter two studies are useful although they refer only to some genera and/or countries. Previous studies on the Cyperaceae of Equatorial Guinea refer only to Bioko island (GUINEA 1950,

CEBOLLA & RIVAS PONCE 1995). A complete account of the Cyperaceae of Río Muni has never been published, although they were included in the general vascular plant catalogue of GUINEA (1946).

Over the last 20 years the Real Jardín Botánico of Madrid has carried out intensive fieldwork on both Bioko and Río Muni. The identification of these collections at MA has revealed further new records and new areas of distribution for some taxa (HERRERO *et al.* 2001, VELAYOS *et al.* 2001, FERRO *et al.* 2003).

The aim of this work was to update the catalogue of Cyperaceae for the whole of Equatorial Guinea including both bibliographic records and herbarium material. This checklist is a new step towards a modern Flora of Equatorial Guinea.

#### MATERIAL AND METHODS

The checklist is primarily based on herbarium specimens. We studied more than 400 specimens from BATA (Herbario Nacional de Guinea Ecuatorial),

BRLU, K, and MA, including both the historic collections made under British expeditions by Mann or Vogel, and modern collections obtained by Spanish and Belgian expeditions. For comparative purposes some selected BM specimens of Cyperaceae from West tropical Africa were also studied, although none of these were from Equatorial Guinea.

Bibliographic references for the sedges of Equatorial Guinea were also checked (AEDO *et al.* 1999). Seven species were included based only on literature records since their distribution area make their presence in Equatorial Guinea likely. They are quoted with their number between brackets.

The locality names used in this checklist were updated following VELAYOS *et al.* (2001 : 147-149).

The checklist is alphabetically ordered by genera and species. Generic circumscription is in accordance with GOETGHEBEUR (1998), although recent molecular data suggest that *Kyllinga* and *Pycneus* should be included under *Cyperus* (MUASYA *et al.* 1998, 2001). In *Bulbostylis* and *Abildgaardia* we follow GOETGHEBEUR & COUDIJZER's (1984) revision. For *Mapania* we follow SIMPSON's (1992) monograph.

Under each accepted name a list of synonyms used in the relevant literature is included. Specimens are ordered alphabetically by the different regions and provinces : Annobón, Bioko (provinces of Bioko Norte and Bioko Sur) and Río Muni (provinces of Centro Sur, Kie Ntem, Litoral and Wele Nzas).

Previous bibliographical records of each taxon are grouped under the already mentioned three regions. When the taxon was recorded under a different name (synonym) it is indicated as follows : MILDBRAED 1922 : 160, sub *Fimbristylis exilis*. In case of a misidentification, the author's name is included following the cited species : HOOKER 1864 : 225, sub *Isolepis schoenoides* Kunth. Doubtful or erroneous records are given at the end of the checklist.

## THE CHECKLIST

### ABILDGAARDIA Vahl

#### (1). – *Abildgaardia ovata* (Burm. f.) Kral

*Fimbristylis ovata* (Burm. f.) Kern

*Abildgaardia monostachya* (L.) Vahl

This species has been recorded from Annobón (SOBRINHO 1953 : 188, sub *Abilgaardia monostachya* ; EXELL 1956 : 50, sub *A. mono-*

*stachya* ; 1973 : 399, sub *Fimbristylis ovata*). We found no herbarium material of *A. ovata* from Equatorial Guinea in BATA, BM, BRLU, K and MA. This species is widespread in tropical and warm-temperate areas (GOETGHEBEUR & COUDIJZER 1984 : 86), and has been recorded from Ivory Coast, Ghana and Nigeria (HOOPER & NAPPER 1972 : 324), and S. Tomé (EXELL 1944 : 356). The distribution range of the species suggests it may occur in Equatorial Guinea.

### ACTINOSCHOENUS Benth.

#### 2. – *Actinoschoenus filiformis* Benth.

Centro Sur : Bicurga, *Lejoly 99/493* (BRLU) ; inselberg de Bicurga, *Parmentier 1740bis* (BRLU), *Parmentier & Esono 3093* (BRLU). Litoral : Ndote Sud, *Lisowski M-535* (BRLU). Wele Nzas : inselberg Akuom, *Lisowski M-723* (BRLU) ; inselberg Asoc, *Obama & Lejoly 489* (BATA, BRLU) ; inselberg n° 3, südlich Mongomo, *Porembski & al. 3567* (BATA, BRLU) ; inselberg de Mungum, *Parmentier & Esono 3376* (BRLU) ; inselberg Piedra Nzas, *Joffroy 291* (BRLU), *Lejoly 99/204* (BATA, BRLU), *99/234, 99/265* (BRLU).

Not previously recorded from Equatorial Guinea. Species already recorded from neighbouring Gabon (ANONYMOUS 1988).

### AFROTRILEPIS (Gilly) J. Raynal

#### 3. – *Afrotrilepis pilosa* (Boeck.) J. Raynal *Catagyna pilosa* (Boeck.) Hutch.

Centro Sur : inselberg de Bicurga, *Parmentier 1662* (BRLU) ; inselberg n° 3, südlich Mongomo, *Porembski & al. 3566* (BATA) ; P. N. Monte Alén, 5 km au NW de Engong, *Lejoly 99/084* (BATA). Wele Nzas : 3 km au S de Asoc, *Lejoly 99/280* (MA-621849), *99/281* (MA-621850) ; Kukumankok, 13 km W de Aconibe, inselberg Mongum, *Esono & Lejoly 77* (BATA, BRLU) ; Nzuamayong, *Lisowski M-644* (BATA).

Previously recorded from Río Muni (GUINEA 1946 : 184k, 241, sub *Catagyna pilosa*, LEJOLY & LISOWSKI 1999 : 118).

**BULBOSTYLIS** Kunth**4. – *Bulbostylis abortiva*** (Steud.) C. B. Clarke

Litoral : Bata-Bome, *Carvalho 4704* (MA-597836) ; Corisco, Endote, *Pérez Viso 1945* (MA-651548), *1955* (MA-651547).

Not previously recorded from Equatorial Guinea. Widespread in tropical Africa, and recorded from Senegal, Mali, Sierra Leone, Burkina Faso, Ghana, Togo, Nigeria (HOOPER & NAPPER 1972 : 318), Uganda, Kenya and Tanzania (HAINES & LYE 1983 : 118), and Madagascar (CLARKE 1902 : 441-442).

**5. – *Bulbostylis coleotricha*** (Hochst. ex A. Rich.) C. B. Clarke

Litoral : Utonde, *Guinea 137-726* (MA-651835).

Previously recorded from Río Muni (CORISCO) (CLARKE 1902 : 442).

**6. – *Bulbostylis densa*** (Wall.) Hand.-Mazz.

*Isolepis trifida* Nees

*Bulbostylis capillaris* Ness

*Bulbostylis capillaris* var. *trifida* (Nees) C. B. Clarke

Bioko Norte : Malabo-Pico Basilé, km 22-23, *Carvalho 3655* (MA-651541) ; cumbre de Pico Basilé, *Fernández Casas 10326* (MA-558521), *11214* (MA-558531). Bioko Sur : Musola-Moca, km 14, *Carvalho 2763* (MA-558530). Litoral : Espigon, pradera de Baga (Réserve de Ndote), *Eneme & Lejoly 148* (BATA) ; Ndote Sud, Etembue, *Lisowski M-539* (BATA), *M-1088* (BATA). Wele Nzas : inselberg de Akuom, *Lisowski M-720* (BRLU) ; inselberg d'Asoc, *Parmentier & Esono 3701* (BRLU) ; Kukumankok, 13 km O de Aconibe, inselberg Mongum, *Esono & Lejoly 78* (BATA, BRLU) ; Mongomo, Dumu, *Porembski & al. 3601* (BATA) ; inselberg Piedra Nzas, *Lejoly 99/178* (BATA).

Previously recorded from Bioko (HOOKER 1862 : 22, sub *Isolepis trifida*, HOOKER 1864 : 225, sub "*Isolepis capillaris* Roem. & Schult.", CLARKE 1902 : 438, sub *Bulbostylis capillaris* var. *trifida*,

MILDBRAED 1922 : 178, sub *B. capillaris* var. *trifida*, HUTCHINSON 1936 : 477-478, GUINEA 1946 : 239, sub *B. capillaris*, HOOPER & NAPPER 1972 : 318, sub *B. densa* var. *densa*, CEBOLLA & RIVAS PONCE 1995 : 29-30), and Río Muni (GUINEA 1946 : 176).

**(7). – *Bulbostylis erratica*** (Hook. f.) C. B. Clarke  
*Schoenus erraticus* Hook. f.

This species has been recorded from Bioko (HOOKER 1862 : 22-23, sub *Schoenus erraticus*, 1864 : 225, sub *Isolepis schoenoides* Kunth, CLARKE 1902 : 434-435, MILDBRAED 1922 : 178, HUTCHINSON 1936 : 477, GUINEA 1946 : 239, HOOPER & NAPPER 1972 : 316, CEBOLLA & RIVAS PONCE 1995 : 29). We found no herbarium material of this species from Equatorial Guinea in BATA, BM, BRLU, K and MA. *B. erratica* has been recorded from Sierra Leone, Nigeria and on Mount Cameroon (HOOPER & NAPPER 1972 : 316). The distribution range of the species suggests that it also occurs in Equatorial Guinea.

**8. – *Bulbostylis hispidula*** subsp. ***brachyphylla*** (Cherm.) Haines

Centro Sur : inselberg de Bicurga, *Parmen-tier & Esono 3258* (BRLU). Litoral : Asonga, *Carvalho 4634* (MA-597322) ; Bata, fleuve Ecucu, *Lisowski M-1198* (BATA), Bolondo, *Guinea 27* (MA-651836) ; Corisco, Endote, *Pérez Viso 1942* (MA-651546) ; Ndote Nord, Senge, *Lisowski M-146* (BATA) ; réserve de Río Campo, Niuma, *Lisowski M-995* (BATA). Wele Nzas : inselberg de Akuom, *Lisowski M-725* (BRLU), inselberg Dumu, *Parmentier & Esono 3616* (BRLU).

Previously recorded from Annobón (MILDBRAED 1922 : 160, sub *Fimbristylis exilis* (Kunth) Roem. & Schult.) and Río Muni (GUINEA 1946 : 178, sub *F. exilis*, LEJOLY & LISOWSKI 1999 : 104).

**9. – *Bulbostylis laniceps*** C. B. Clarke

Litoral : aeródromo, *Guinea 649* (MA-651748) ; Bata, fleuve Ecucu, *Lisowski M-1588* (BATA) ; Bata-Bome, *Carvalho 4768* (MA-

597680); Bolondo, *Guinea* 28 (MA-651749), 696-700-701-702-703-704 (MA-651751); Bome, *Pérez Viso* 173 (MA-651549), 1729 (MA-651549); Corisco, Endote, *Pérez Viso* 1934 (MA-651553); Diádive-Punta Mbonda, *Guinea* 39 (MA-651753); Punta Mbonda, *Guinea* 139-785 (MA-651754); Ndoté Nord, Senge, *Lisowski M-45* (BRLU), *M-1321* (BRLU); Ndoté Sud, *Lisowski M-526* (BATA), *M-1090* (BATA); Utonde, *Guinea* 744 (MA-651752). Unknown province: Río Muni, *Lisowski M-1593* (BRLU).

Previously recorded from Río Muni (GUINEA 1946: 178, 239, LEJOLY & LISOWSKI 1999: 104).

**10. – *Bulbostylis pusilla*** (Hochst. ex A. Rich.) C. B. Clarke

Litoral: Bata-Pembe, km 31-32, *Carvalho* 5173 (MA-599473).

Not previously recorded from Equatorial Guinea. Widespread in tropical Africa, *B. pusilla* has been recorded from Sierra Leone, Chad, Mali, Nigeria, Central Africa Republic and Ethiopia (HOOPER & NAPPER 1972: 318), Kenya, Tanzania and Uganda (HAINES & LYE 1983: 116).

**CAREX L.**

**11. – *Carex chlorosaccus*** C. B. Clarke

Bioko Norte: Pico Basilé, *Boughey* 126 (K), *Mann* 653 (K), *Wrigley & Melville* 663 (K).

Previously recorded from Bioko (HOOKER 1864: 225, sub *Carex walhenbergiana* Boott, CLARKE 1902: 519, MILDBRAED 1922: 178, HUTCHINSON 1936: 495, GUINEA 1946: 241, CUFODONTIS 1971: 1491, HOOPER & NAPPER 1972: 349).

HOOKER (1864) published a catalogue of the Mann collections in West tropical Africa, in which the genus *Carex* was identified by Dr. Boott. In this catalogue *Carex walhenbergiana* was recorded from Bioko, indicating month of collection (December) and altitude (8000 ft). The specimen *Mann* 653 (K) seems to be the voucher supporting this record since month and altitude are identical and Boott's label is also included. In 1899 the sheet was renamed by C. B. Clarke and selected as the type of *C. chlorosaccus*, currently an accepted species.

**12. – *Carex echinoclöë*** Kunze

Bioko Norte: Malabo-Pico Basilé, km 18-19, río Cope, *Carvalho* 3681 (MA-512426).

Previously recorded from Bioko (FERNÁNDEZ CASAS 1992: 41).

**13. – *Carex mannii*** E. A. Bruce

Bioko Norte: Malabo-Pico Basilé, km 18-19, río Cope, *Carvalho* 3677 (MA-512419); cúspide del pico de Basilé, *Guinea* 2682, 2683 (MA-386428).

Previously recorded from Bioko (HOOKER 1862: 22, sub *Carex boryana* Schkuhr, CLARKE 1902: 523, sub *C. boryana*, MILDBRAED 1922: 178, HUTCHINSON 1936: 495, GUINEA 1946: 241, 1950: 355, 1968: 131, HOOPER & NAPPER 1972: 349, FERNÁNDEZ CASAS 1992: 41).

HOOPER & NAPPER (1972: 349) include the specimens recorded from Equatorial Guinea in CLARKE's (1902) Flora of tropical Africa, under *C. mannii*.

**CYPERUS L.**

**14. – *Cyperus articulatus*** L.

Bioko: Malabo-Riaba, *Carvalho* 3003 (MA-558499). Litoral: Bata-Asonga, *Carvalho* 4694 (MA-597333).

Previously recorded from Bioko (CLARKE 1902: 356, MILDBRAED 1922: 178, HUTCHINSON 1936: 485, GUINEA 1946: 238, HOOPER & NAPPER 1972: 285, CEBOLLA & RIVAS PONCE 1995: 30) and Río Muni (GUINEA 1946: 176, 238).

**15. – *Cyperus atroviridis*** C. B. Clarke

Bioko Norte: Pico Basilé, *Mann* 1466 (K).

Previously recorded from Bioko (HOOKER 1864: 225, sub *Cyperus adoensis* Hochst. ex A. Rich., CLARKE 1902: 359, MILDBRAED 1922: 178, HUTCHINSON 1936: 483, GUINEA 1946: 238, HOOPER & NAPPER 1972: 288, CEBOLLA & RIVAS PONCE 1995: 30).

CLARKE (1902: 359) examined *Mann* 1466 (K), that supports HOOKER's record (1864: 225, sub, *C. adoensis*), and selected it as the type of *Cyperus atroviridis*.

**16. – *Cyperus baronii* C. B. Clarke***Cyperus mannii* C. B. Clarke

Bioko Norte : Pico Basilé, *Carvalho* 3687 (MA-558498), 4546 (MA-558497), *Fernández Casas* 11212 (MA-558496), *Guinea* 2916 (MA-386323), 2919 (MA-386322). Unknown province : *Guinea* 1802 (MA-386321).

Previously recorded from Bioko (HOOKER 1864 : 224, sub *Cyperus ingratus* Kunth, CLARKE 1902 : 342, sub *C. mannii*, MILDBRAED 1922 : 178, HUTCHINSON 1936 : 483, sub *C. mannii*, GUINEA 1946 : 238, sub *C. mannii*, 1950 : 346, sub *C. mannii*, 1968 : 131, sub *C. mannii*, HOOPER & NAPPER 1972 : 289, sub *C. mannii*, CEBOLLA & RIVAS PONCE 1995 : 30).

**17. – *Cyperus compressus* L.**

Bioko Norte : Pico Basilé, *Carvalho* 2111 (MA-558506). Litoral : Bata, *Lisowski M-240* (BATA), *M-1179* (BATA), *Nguema* 1249 (BRLU).

Previously recorded from Annobón (EXELL 1944 : 357), and Bioko (CEBOLLA & RIVAS PONCE 1995 : 30).

Not previously recorded from Río Muni. *C. compressus* is a pantropical species that has been frequently recorded from tropical and subtropical Africa (CLARKE 1902 : 347-348, HAINES & LYE 1983 : 266, VANDEN BERGHEN 1988 : 177).

**18. – *Cyperus crassipes* Vahl***Cyperus maritimus* Poir.

Litoral : pr. Corisco, barra de arena de Hoco, *Pérez Viso* 2002 (MA-652522).

Not previously recorded from Equatorial Guinea. *C. crassipes* is a species of coasts of tropical Africa, Madagascar and S. Africa, it has been recorded from Senegal, Gambia, Sierra Leone, Liberia, Ivory Coast, Ghana, Togo, Dahomey and Nigeria (HOOPER & NAPPER 1972 : 292, sub *Cyperus maritimus*), Kenya and Tanzania (HAINES & LYE 1983 : 263).

**19. – *Cyperus cuspidatus* Kunth**

Annobón : Annobón, *Wrigley & Melville* 148 (K). Previously recorded from Annobón (EXELL 1973 : 398).

**20. – *Cyperus cyperoides* (L.) Kuntze***Mariscus alternifolius* Vahl*Mariscus umbellatus* Vahl*Cyperus umbellatus* (Vahl) Benth.

Annobón : Lago A Pot, *Carvalho* 3121 (MA-558517); N shore of Crater Lake, *Wrigley & Melville* 81 (MA-189625). Bioko Norte : Malabo, *Guinea* 583 (MA-387019), 621 (MA-387020), *Guinea s.n.* (MA-651834); Malabo, Las Carbo-neras, *Carvalho* 2102 (MA-558513); Malabo-Punta Hermosa, km 11.4, *Fernández Casas* 12092 (MA-558516); Pico Basilé, *Lope del Val s.n.* (MA-500344). Bioko Sur : Malabo-Luba, km 32, *Fernández Casas* 11315 (MA-558514); Malabo-Riaba, Baó Pequeño, *Fernández Casas* 10224 (MA-558507); Luba-Veiga y Avendaño, límite entre Batete y Luba, *Fernández Casas* 12033 (MA-558515). Centro Sur : Bata-Niefang, Nhogo Ebaiñ, *Pérez Viso* 2673bis (MA-651562); P. N. Monte Alén, transect de Monte Alén, *Van Reeth* 338 (BRLU); Niefang, Bindeng, *Pérez Viso* 2364 (MA-651560). Litoral : Ayamiken, Río Campo, *Pérez Viso* 2839 (MA-651839); Bata, *Lisowski M-1312* (BATA); *Pérez Viso* 1416 (MA-651563), 1443 (MA-651559), 1449 (MA-651564); Bata-Ngolo, *Heras s.n.* (BATA); Corisco, Endote, *Pérez Viso* 1967 (MA-651561); Engong, *Eneme* 224 (BRLU); Ndote, *Eneme* 285 (BRLU), *Lisowski M-258* (BATA); Río Campo, Niuma, *Lisowski M-1022* (BRLU). Wele Nzás : Nsum Esangüi, *Pérez Viso* 3625 (MA-651558). Unknown province : El Muni, (MA-15886).

Previously recorded from Annobón (MILDBRAED 1922 : 160, sub *Cyperus umbellatus*, EXELL 1973 : 399, sub *Mariscus alternifolius*, CEBOLLA & RIVAS PONCE 1995 : 35, sub *M. alternifolius*), Bioko (MILDBRAED 1922 : 178, sub *Mariscus umbellatus*, GUINEA 1950 : 351, sub *M. umbellatus*, HOOPER & NAPPER 1972 : 296, sub *M. alternifolius*, CEBOLLA & RIVAS PONCE 1995 : 35, sub *M. alternifolius*), and Río Muni (GUINEA 1946 : 184i, sub *M. umbellatus*).

**21. – *Cyperus difformis* L.**

Litoral : Bata-Bolondo, km 35-36, *Carvalho* 5937 (MA-609953). Kie Ntem : Ngong Mocomo-Ovong (Nsork), *Lejoly* 99/083 (BATA).

Not previously recorded from Equatorial Guinea. *C. difformis* is a pantropical species that has been frequently recorded in tropical Africa from Senegal to Tanzania (HOOPER & NAPPER 1972 : 290, HAINES & LYE 1983 : 166, VANDEN BERGHEN 1988 : 183).

**22. – *Cyperus dilatatus* K. Schum. & Thonn.**

Bioko Norte : Malabo, Lamper, *Carvalho 2095* (MA-558504).

Previously recorded from Bioko (CEBOLLA & RIVAS PONCE 1995 : 30).

**23. – *Cyperus distans* L. f**

*Mariscus longibracteatus* Cherm.

Bioko : Bioko *Boughey 108* (K), *Mann 121* (K), *Vogel 218* (K). Bioko Norte : Punta Europa, *Lope de Val s.n.* (MA-650642). Bioko Sur : Moca, *Carvalho 2401* (MA-558505). Centro Sur : Evinayong, *Guinea 123* (MA-651816), *462* (MA-651815). Litoral : Ayamiken, *Lisowski M-410* (BATA, BRLU). Wele Nzas : Nsum Esangüi, *Pérez Viso 3626* (MA-651557).

Previously recorded from Annobón (SOBRINHO 1953 : 188, EXELL 1956 : 50), Bioko (CLARKE 1902 : 350, MILDBRAED 1922 : 178, HUTCHINSON 1936 : 483, GUINEA 1946 : 238, HOOPER & NAPPER 1972 : 287, 295, sub *Mariscus longibracteatus*, CEBOLLA & RIVAS PONCE 1995 : 30, 1995 : 37, sub *Mariscus tomaiophyllus* (K. Schum.) C. B. Clarke) and Río Muni (GUINEA 1946 : 157, 176).

**24. – *Cyperus dubius* Rottb.**

*Mariscus dubius* (Rottb.) Kük.

Litoral : Ayamiken, Río Campo, *Pérez Viso 2833* (MA-651840) ; Bata, Asonga, *Pérez Viso 1419* (MA-651594) ; Bata, fleuve Ecu, *Lisowski M-1235* (BRLU), *M-1604* (BATA).

Previously recorded from Annobón (SOBRINHO 1953 : 188, EXELL 1956 : 50). Paleotropical species, *C. dubius* has been recorded from Guinée to Nigeria (HOOPER & NAPPER 1972 : 295, sub *M. dubius*), and from Kenya, Uganda and Tanzania (HAINES & LYE 1983 : 222). Recorded for the first time from Río Muni.

**25. – *Cyperus esculentus* L.**

Litoral : Bata-Bome, río Boara, *Carvalho 4703* (MA-597835) ; desembocadura del río Campo, *Pérez Viso 2476* (MA-652504).

GUINEA (1946 : 238) mentioned this species in Equatorial Guinea, but without a precise locality.

**26. – *Cyperus fertilis* Boeck.**

Centro Sur : Bata-Niefang, km 35, Comayá, *Carvalho 5644* (MA-598572) ; Ebian, *Pérez Viso 2620* (MA-652509) ; Monte Chime, *Guinea 284* (MA-651813) ; Mosumu, *Pérez Viso 3477* (MA-652508) ; P. N. Monte Alén, *Ngomo 195* (BATA), *Ngomo & Ndong 414* (BATA) ; P. N. Monte Alén, Moca-Bong, *Pérez Viso 740* (MA-652510). Litoral : Bata-Monte Alén, río Oton-Asok, *Carvalho 5312* (MA-598224) ; Mandjani, *Nguema 95* (BATA) ; Ndote Sur, espigón, *Lisowski M-1083* (BATA). Wele Nzas : Ebo-Ngoo Nsomo, Añisok Mongola-Niefang, *Pérez Viso 3173* (MA-652507).

Previously recorded from Río Muni (GUINEA 1946 : 151, 184i, 238).

**27. – *Cyperus haspan* L.**

Centro Sur : P. N. Monte Alén, Moca, *Pérez Viso 4105* (MA-652513). Litoral : Bata-Asonga, km 2, *Carvalho 4711* (MA-597508) ; desembocadura del río Campo, *Pérez Viso 2483* (MA-652505) ; Ndote Sur, Etembue, *Lisowski M-1103* (BATA) ; Mbini, Senge, río Wele, *Lisowski M-1261* (BATA) ; Yengüe, Río Campo, *Pérez Viso 2789* (MA-652518). Kie Ntem : Ngong Mocomo-Ovong (Nsork), *Lejoly 98/88* (BATA).

Not previously recorded from Equatorial Guinea. *C. haspan* is a pantropical species that has been frequently recorded from tropical and subtropical Africa (HOOPER & NAPPER 1972 : 291, HAINES & LYE 1983 : 168, VANDEN BERGHEN 1988).

**28. – *Cyperus koyaliensis* Cherm.**

*Cyperus immanis* Nelmes

Bioko Norte : Malabo-Pico Basilé, km 12-

13, *Carvalho 3255* (MA-558518), *Fernández Casas 10301* (MA-558519).

Previously recorded from Bioko (CEBOLLA & RIVAS PONCE 1995 : 30-31, sub *Cyperus immanis*).

**29. – *Cyperus laxus* subsp. *buchholzii* (Boeck.)**

Lye

*Cyperus buchholzii* Boeck.

*Cyperus diffusus* subsp. *buchholzii* (Boeck.) Kük.

Centro Sur : Bata-Niefang, Nhogo Ebañ, *Pérez Viso 2672bis* (MA-652515) ; Bicurga, *Lejoly 99/489* (BRLU) ; inselberg de Bicurga, *Parmentier 1810, 1817* (BRLU), *Parmentier & Esono 3108, 3174, 3291* (BRLU) ; P. N. Monte Alén, Engong, *Lejoly 99/132* (BATA) ; Nfing Ntagan, alrededores de Mosumu, *Pérez Viso 2741* (MA-651843) ; P. N. Monte Alén, Engong, *Pérez Viso 2660* (MA-652516). Litoral : Bata-Kogo, km 12, Masamabe, *Pérez Viso 3903* (MA-652514) ; Ndote, *Eneme 281* (BRLU) ; Ndote Nord, Senge, *Lisowski M-30* (BRLU) ; Ndote Sud, espigon, *Lisowski M-1082* (BATA). Unknown province : Río Muni, *Lisowski M-1327* (BRLU).

Previously recorded from Bioko (MILDBRAED 1922 : 178, HUTCHINSON 1936 : 483, sub *Cyperus diffusus* Vahl, GUINEA 1946 : 159, 238, sub *C. diffusus*, HOOPER & NAPPER 1972 : 289, sub *C. diffusus* subsp. *buchholzii*, CEBOLLA & RIVAS PONCE 1995 : 30, sub *C. diffusus* subsp. *buchholzii*) and Río Muni (GUINEA 1946 : 159, sub *C. diffusus*).

**30. – *Cyperus ligularis* L.**

*Mariscus ligularis* (L.) Urb.

*Mariscus rufus* Kunth

*Cyperus rufus* Kunth

Annobón : Ambo, cerca de la costa, *Wrigley & Melville 62* (MA-189638). Bioko Norte : Bahía de Venus, *Carvalho 2084* (MA-558508), *Guinea 207* (MA-387024), *261* (MA-387023), *Fernández Casas 11255* (MA-558509). Centro Sur : Evinayong, *Guinea 237* (MA-651937). Litoral : Bata N, *Lisowski M-241* (BATA) ; Mayang, Mitong, *Lisowski M-873* (BATA) ; Miwala, 5 km de Kogo, *Pérez Viso 3963* (MA-651565) ; Utonde, *Guinea 125-813* (MA-651746). Wele Nzas : Nsung Fandong, a 65 km de Nkue, *Pérez Viso 3125* (MA-652168).

Previously recorded from Annobón (MILDBREAD 1922 : 160, sub *C. rufus*, EXELL 1944 : 359-360, 1973 : 399), Bioko (CLARKE 1902 : 396, sub *Mariscus rufus*, MILDBRAED 1922 : 178, sub *C. rufus*, HUTCHINSON 1936 : 485, sub *Mariscus ligularis*, GUINEA 1946 : 240, sub *M. ligularis*, 1950 : 350, sub *M. rufus*, HOOPER & NAPPER 1972 : 295, sub *M. ligularis*, CEBOLLA & RIVAS PONCE 1995 : 35, sub *M. ligularis*), and Río Muni (GUINEA 1946 : 159 and 178, sub *M. rufus*).

**31. – *Cyperus odoratus* L.**

*Torulinium odoratum* (L.) Hooper

Bioko Sur : Musola-Malabo, km 14, *Carvalho 2791* (MA-558535). Litoral : Bata-Asonga, alrededores de aeropuerto, *Carvalho 5446* (MA-599445).

Previously recorded from Bioko (CEBOLLA & RIVAS PONCE 1995 : 39, sub *Torulinium odoratum*). Pantropical species already known from Senegal, Ghana, Dahomey, Ivory Coast and Nigeria (HOOPER & NAPPER 1972 : 297, sub *T. odoratum*), recorded for the first time from Río Muni.

**32. – *Cyperus penzoanus* Pic.-Serm.**

Centro Sur : Evinayong, *Guinea 122-90* (MA-651838).

*Guinea 122-90* has been identified as this species by the purple lines in the axis of the inflorescence (a lax pseudoumbel), obtuse margin glumes with clear nerves, reddish brown coloration, and the immature three-angled fruit with acute angles (LYE 1997 : 443). This specimen has only two young inflorescences with greenish involucre bracts, without stem or other elements that could help for identification.

**33. – *Cyperus renschii* Boeck.**

Bioko Norte : Ulle Balea, *Guinea* (MA-387120). Bioko Sur : Belebú Balachá, *Fernández Casas 12124* (MA-558502) ; Moca, camino de Ureca, *Fernández Casas 11769* (MA-558500) ; Musola, *Guinea 1190* (MA-387125), *Guinea 1191* (MA-387118). Centro Sur : P. N. Monte Alén, *Ngomo 474* (BATA). Wele Nzas : Acosa-

kira, 3 km au Sud de Nsork, *Obama & Lejoly 573* (BATA); Alum, entre Mikomeseng y Nkue, *Pérez Viso 3033* (MA-652512). Unknown province: *Guinea s.n.* (MA-387119).

Although this species has been recorded from Bioko (GUINEA 1950 : 345-346, CEBOLLA & RIVAS PONCE 1995 : 31), it has not previously been recorded from Río Muni. Recorded from Guinée, Sierra Leone, Liberia, Ivory Coast, Ghana, Nigeria and Cameroon (HOOPER & NAPPER 1972 : 289).

### 34. – *Cyperus rotundus* L.

Litoral : Bata quartier Nord, *Lisowski M-192* (BATA).

Not previously recorded from Equatorial Guinea. Widespread in tropical and subtropical regions of Africa, from Senegal to Tanzania (HOOPER & NAPPER 1972 : 285-286, HAINES & LYE 1983 : 187, VANDEN BERGHEM 1988 : 210).

### 35. – *Cyperus sphaclatus* Rottb.

Bioko Norte : Malabo, *Guinea 582* (MA-386413). Bioko Sur : Malabo-Luba, kms 44-45, río Tiburones, *Carvalho 3732* (MA-558503). Centro Sur : P. N. Monte Alén, río Vog-yii, *Pérez Viso 3223* (MA-652506). Litoral : Ayamiken, *Lisowski M-402* (BATA); Bata, *Lisowski M-235* (BATA); Etembue, *Guinea 903* (MA-651830).

Previously recorded from Annobón (MILDBRAED 1922 : 160, SOBRINHO 1953 : 188, EXELL 1944 : 361-362, 1956 : 50) and Bioko (CLARKE 1902 : 347, MILDBRAED 1922 : 178, HUTCHINSON 1936 : 485, GUINEA 1946 : 238, 1950 : 347-348, HOOPER & NAPPER 1972 : 286, CEBOLLA & RIVAS PONCE 1995 : 31). This pantropical species is known in Africa from Mauritania to Tanzania. It is recorded for the first time from Río Muni (HOOPER & NAPPER 1972 : 286, HAINES & LYE 1983 : 196).

### 36. – *Cyperus tenax* Boeck.

Litoral : Ayamiken, Río Campo, *Pérez Viso 2829* (MA-651841); Bata, *Carvalho 4679* (MA-597452), *Lisowski M-18* (BATA), *Pérez Viso 1450* (MA-652517); Corisco, Endote, *Pérez Viso 1935* (MA-652520); desembocadura del río Ecucu,

*Guinea 124-574* (MA-651814), *Lisowski M-1215* (BATA); réserve de Río Campo, Niuma, *Lisowski M-994* (BATA).

Previously recorded from Río Muni (GUINEA 1946 : 178).

### 37. – *Cyperus tenuiculmis* Boeck.

Annobón : Pagalú, márgenes del lago a Pot, *Carvalho 3076* (MA-558501). Litoral : praderas de Baga, *Eneme 356* (BRLU); Bata, *Lisowski M-230* (BATA, BRLU), *Pérez Viso 1448* (MA-652519); Bata, fleuve Ecucu, *Lisowski M-1236* (BATA, BRLU); Corisco, Endote, *Pérez Viso 1952* (MA-652511); Diádive-Punta Mbonda, *Guinea 38* (MA-651832), *Guinea 782* (MA-651831); Niuma, Río Campo, *Lisowski M-1005*, *M-1011* (BRLU); Río Campo, desembocadura del río Campo, *Pérez Viso 2477* (MA-652521). Unknown province : *Nosti & Abad s.n.* (MA-687699).

Previously recorded from Annobón (CEBOLLA & RIVAS PONCE 1995 : 31). Known throughout tropical Africa (HOOPER & NAPPER 1972 : 286), *C. tenuiculmis* is recorded for the first time from Río Muni.

### 38. – *Cyperus tenuis* Sw.

*Mariscus luridus* C. B. Clarke  
*Mariscus flabelliformis* Kunth

Annobón : Crater lake, *Wrigley & Melville 181* (MA-189504). Bioko Norte : Malabo-aeropuerto, km 5, *Carvalho 2559* (MA-558512); Malabo-Pico Basilé, caldera de Bonyoma, *Carvalho 3715* (MA-651566); Malabo-Cupapa, km 20-21, *Carvalho 3896* (MA-558511); Malabo-Luba, km 22, *Carvalho 2177* (MA-559435); Malabo-Riaba, Bilelipa, *Fernández Casas 11556* (MA-559436). Litoral : Bata-Bolondo, km 35-36, *Carvalho 5947* (MA-610003); Mbini, Senge, río Wele, *Lisowski M-1243* (BATA); Miwala, 5 km de Kogo, *Pérez Viso 3948* (MA-651555); Ndote, pradera de Baga, *Eneme & Lejoly 179* (BATA); km 10 de la carretera del puerto de Bata, Ondo, *Pérez Viso 3529* (MA-651554). Kie Ntem : Ebibeyin-Mongomo, Eloan, *Pérez Viso 4278* (MA-651556); Woleu Ntem, *Dibata & Mbouissou 972* (MA-556634).



Wele Nzas : inselberg Piedra Nzas, *Lejoly 99/266* (BATA, MA-621774).

Previously recorded from Bioko (CUFODONTIS 1970 : 1452, sub *Mariscus flabelliformis*, HOOPER & NAPPER 1972 : 296, sub *M. flabelliformis* var. *flabelliformis*, CEBOLLA & RIVAS PONCE 1995 : 35, sub *M. flabelliformis*, and 1995 : 37, sub *Mariscus luridus*), and Río Muni (CUFODONTIS 1970 : 1452, sub *M. flabelliformis*).

Newly recorded from Annobón, this species is widely recorded from West tropical Africa (HOOPER & NAPPER 1972 : 296, sub *Mariscus luridus*).

### 39. – *Cyperus tomaiophyllus* K. Schum.

*Mariscus tomaiophyllus* (K. Schum.) C. B. Clarke

Bioko Sur : lago Biaó, *Guinea 2193* (MA-387022) ; Moca, subida al pico Serrano, *Guinea 1988* (MA-387021).

Previously recorded from Bioko (GUINEA 1950 : 351-352, sub *Mariscus tomaiophyllus*, HOOPER & NAPPER 1972 : 295, sub *M. tomaiophyllus*, CEBOLLA & RIVAS PONCE 1995 : 37, sub *M. tomaiophyllus*).

### ELEOCHARIS R. Br.

#### 40. – *Eleocharis geniculata* (L.) Roem. & Schult. *Eleocharis caribaea* (Rottb.) Blake

Bioko Sur : Ureca, *Guinea 2426* (MA-386379), 2351 (MA-386380). Litoral : Bata, río Ecucu, *Carvalho 5162* (MA-599481), *Lisowski M-1230* (BRLU) ; Bata-Punta Mbonda, *Carvalho 4748* (MA-597964) ; Elende, *Lisowski M-1044* (BATA).

Previously recorded from Bioko (GUINEA 1950 : 338, sub *Eleocharis caribaea*, HOOPER & NAPPER 1972 : 313, CEBOLLA & RIVAS PONCE 1995 : 31). Subcosmopolitan species occurring mainly in the tropics but also appearing in the Mediterranean region (CLARKE 1902 : 407, HOOPER & NAPPER 1972 : 313, HAINES & LYE 1983 : 70-71, VANDEN BERGHEN 1988 : 226). Recorded for the first time in Río Muni.

#### 41. – *Eleocharis mutata* (L.) Roem. & Schult.

Litoral : Bata-Pembe, *Carvalho 4852* (MA-597913).

Previously recorded from Bioko (CEBOLLA & RIVAS PONCE 1995 : 31). Amphiatlantic species (VANDEN BERGHEN 1988 : 227), recorded for the first time in Río Muni.

### FIMBRISTYLIS Vahl.

#### 42. – *Fimbristylis cymosa* R. Br.

*Scirpus obtusifolius* Lam.

*Fimbristylis obtusifolia* (Lam.) Kunth

Litoral : Ebongo, *Guinea 119-793* (MA-651825) ; Ecucu, *Guinea 138* (MA-651828) ; Utonde, *Guinea 132-816* (MA-651827).

Previously recorded from Río Muni (GUINEA 1946 : 178, sub *Scirpus obtusifolius*, 239, sub *Fimbristylis obtusifolia*).

#### 43. – *Fimbristylis dichotoma* (L.) Vahl

Bioko Norte : Malabo, *Guinea 581* (MA-386374), *Carvalho 3736* (MA-687684). Centro Sur : P. N. Monte Alén, Esamalang, carretera de Mosumu, *Pérez Viso 1181* (MA-651586) ; P. N. Monte Alén, Misergue-Churu, *Pérez Viso 1635* (MA-651593) ; P. N. Monte Alén, Monte Alén-Moca, *Velayos & al. 9474* (MA-651603). Litoral : Ayamiken, *Lisowski M-401* (BATA) ; Bata, *Nguema 1071* (BRLU), *Pérez Viso 1407* (MA-651592) ; Bata-aeropuerto, *Carvalho 5199* (MA-598215) ; Mayang, *Lisowski M-892* (BATA) ; Ndote, *Eneme 247* (BRLU) ; Río Campo, cerca de Bongoro, *Pérez Viso 2222* (MA-651584) ; Río Campo, San Joaquín de Adjikom-Ayamiken, km 14, *Pérez Viso 2493* (MA-651585). Wele Nzas : Ngong Mocomo, *Lejoly 98/84* (BATA).

Previously recorded from Annobón (EXELL 1944 : 355-356, 1956 : 50, SOBRINHO 1953 : 188), Bioko (CLARKE 1902 : 415, sub *Fimbristylis diphylla* Vahl, MILDBRAED 1922 : 178, sub *F. diphylla*, HUTCHINSON 1936 : 476, GUINEA 1946 : 239, 1950 : 342, CUFODONTIS 1970 : 1475, HOOPER & NAPPER 1972 : 320-321, sub *F. dichotoma* var. *dichotoma*, CEBOLLA & RIVAS PONCE 1995 : 31). Pantropical species frequently recorded from tropical Africa (HOOPER & NAPPER 1972 : 321, HAINES & LYE 1983 : 85, SIMPSON & INGLIS 2001 : 317), recorded for the first time from Río Muni.

**44. – *Fimbristylis ferruginea* (L.) Vahl**

Bioko Sur : Ureca, *Guinea* 2353 (MA-386375), 2427 (MA-386376) , 2429 (MA-386377). Litoral : Bata-río Ecucu, *Carvalho* 5202 (MA-598154), *Lisowski M-1234* (BATA).

Previously recorded from Bioko (GUINEA 1950 : 344, CEBOLLA & RIVAS PONCE 1995 : 31). Frequently recorded from tropical and subtropical Africa (HOOPER & NAPPER 1972 : 323, HAINES & LYE 1983 : 83, VANDEN BERGHEN 1988 : 240, SIMPSON & INGLIS 2001 : 317), *F. ferruginea* is recorded for the first time from Equatorial Guinea.

**45. – *Fimbristylis littoralis* Gand.**

Litoral : Bata-Río Campo, km 33-34, Aandom, *Carvalho* 4722 (MA-597967).

Not previously recorded from Equatorial Guinea. Pantropical species, known in tropical Africa from Senegal, Ivory Coast, Ghana, Nigeria (HOOPER & NAPPER 1972 : 323), and Tanzania (HAINES & LYE 1983 : 81).

**46. – *Fimbristylis miliacea* (L.) Vahl**

Litoral : Benito, *Guinea* 942 (MA-651823) ; Ete mbue, *Guinea* 128-900 (MA-651824). Unknown Province : *Guinea* 750 (MA-651822).

Not previously recorded from Equatorial Guinea. Pantropical species occurring in tropical Africa from Senegal to Tanzania (HAINES & LYE 1983 : 81, VANDEN BERGHEN 1988 : 241, SIMPSON & INGLIS 2001 : 317).

**47. – *Fimbristylis pilosa* (Poir.) Vahl**

*Scirpus pilosus* Poir.

Litoral : Bata, Asonga, *Pérez Viso* 1405 (MA-651601).

Not previously recorded from Equatorial Guinea. Distributed throughout tropical Africa, *F. pilosa* has been recorded from Senegal, Guinée, Sierra Leone, Ivory Coast, Burkina Faso, Ghana, Nigeria, Congo and Uganda (HOOPER & NAPPER 1972 : 321).

**48. – *Fimbristylis splendida* C. B. Clarke**

Litoral : Bata, *Lisowski M-1607* (BATA) ;

Bata-Bome, río Boara, *Carvalho* 4697 (MA-597330) ; Bata, fleuve Ecucu, *Eneme & Lejoly* 144 (BATA) ; Ndote, *Eneme* 294 (BRLU), *Lisowski M-1085* (BATA) ; Ndote Nord, Senge, *Lisowski M-187* (BRLU). Unknown province : Río Muni, *Lisowski M-1335* (BRLU).

Previously recorded from Río Muni (LEJOLY & LISOWSKI 1999 : 106).

**FUIRENA Rottb.****49. – *Fuirena umbellata* Rottb.**

Centro Sur : Evinayong, *Guinea* 133-100-102 (MA-651826). Litoral : Ayamiken, Río Campo, *Pérez Viso* 2841 (MA-652166) ; Bata, *Nguema* 1140 (BRLU) ; *Pérez Viso* 1451 (MA-651551) ; Bata-Asonga, *Carvalho* 4649 (MA-597924) ; Bata-Bolondo, km 35-36, *Carvalho* 5944 (MA-610006) ; Bolondo, *Guinea* 40 (MA-651820) ; *Guinea* 712, 713 (MA-651821) ; Bome, *Pérez Viso* 1741 (MA-651552) ; Ndote, *Eneme* 296 (BRLU), *Eneme & Lejoly* 131 (BATA) ; Ndote S, Ete mbue, *Lisowski M-1101* (BATA). Kie Ntem : Ngong Mocomo-Ovong (de Nsork), *Lejoly* 98/82 (BATA).

Previously recorded from Río Muni (GUINEA 1946 : 178, 184i, 239, LEJOLY & LISOWSKI 1999 : 106).

**HYPOLYTRUM Rich. ex Pers.****50. – *Hypolytrum heteromorphum* Nelmes**

Litoral : Ondo, *Pérez Viso* 3818 (MA-651545). Wele Nzás : Añisok Mongola-Niefang, Ebo-Ngoo Nsomo, *Pérez Viso* 3198 (MA-651544).

Not previously recorded from Equatorial Guinea. Widespread throughout tropical Africa from Senegal to Uganda including the islands S. Tomé and Príncipe (NELMES 1955 : 76-77).

**51. – *Hypolytrum heterophyllum* Boeck.**

*Hypolytrum purpurascens* Cherm.

Bioko Sur : Moraca, entre la desembocadura del río Olé y punta Sagres, *Carvalho* 4281 (MA-558520) ; Ureca, *Guinea* 2530 (MA-386378).

Centro Sur : Monte Alén, subida al mirador, *Cabezas 2* (MA-652167), *Lisowski M-1553* (BRLU) ; Niefang-Mosumu, Miyobo, *Pérez Viso 2547* (MA-651543). Litoral : Bata, fleuve Ecucu, *Lisowski M-1197a* (BRLU) ; pradera de Baga, *Eneme 333* (BRLU) ; Bolondo, *Guinea 667* (MA-651818) ; Etembue, *Eneme & Lejoly 31* (BATA, BRLU) ; Miwala, 5 km de Kogo, *Pérez Viso 3962* (MA-651542) ; Ndoté Nord, Senge, *Lisowski M-261* (BRLU) Utonde, *Guinea 804* (MA-651819). Wele Nzás : Kukumankok, 13 km O de Aconibe, inselberg Mongum, *Esono & Lejoly 96* (BATA, BRLU) ; inselberg Piedra Nzás, *Lejoly 99/219* (BRLU).

Previously recorded from Bioko (CLARKE 1902 : 487, sub *Hypolytrum nemorum* Spreng., MILDBRAED 1922 : 178, sub *H. nemorum*, HUTCHINSON 1936 : 472, GUINEA 1950 : 341-342, NELMES, 1955 : 70, HOOPER & NAPPER 1972 : 336, sub *Hypolytrum purpurascens*, CEBOLLA & RIVAS PONCE 1995 : 31-33, sub *H. purpurascens*) and Río Muni (GUINEA 1946 : 178, 240, NELMES 1955 : 70, sub *H. purpurascens*).

#### 52. – *Hypolytrum lancifolium* C. B. Clarke

Centro Sur : P. N. Monte Alén, Monte Chocolate, *Van Reeth 166* (BRLU). Kie Ntem : Ngong Mocomo, *Nguema 473* (BRLU).

Not previously recorded from Equatorial Guinea. Known from Cameroon, Gabon and Cabinda (NELMES 1955 : 67).

#### 53. – *Hypolytrum scaberrimum* Boeck.

Litoral : Ayamiken, réserve de Río Campo, *Obama 84* (BRLU) ; Mayang, *Lisowski M-789, M-853* (BRLU) ; Ncó-Cogo, *Obama 295* (BRLU).

Not previously recorded from Equatorial Guinea. Species described from Gabon (NELMES 1955 : 82).

#### KYLLINGA Rottb.

#### 54. – *Kyllinga alata* Nees

Centro Sur : P. N. Monte Alén, 5 km NW Engong, *Lejoly 99/56* (BATA, MA-621792).

Not previously recorded from Equatorial Guinea. Distributed throughout tropical Africa, *K. alata* has been recorded from Ivory Coast, Ghana, Nigeria (HOOPER & NAPPER 1972 : 304), Uganda, Kenya and Tanzania (HAINES & LYE 1983 : 249).

#### 55. – *Kyllinga appendiculata* K. Schum.

Bioko Norte : Malabo, *Guinea* (MA-651833) ; Malabo-Pico Basilé, km 8, *Carvalho 2234* (MA-558537). Litoral : Utonde, *Guinea 735* (MA-651829).

Previously recorded from Bioko (CLARKE 1902 : 283, sub *Kyllinga cylindrica* Nees, MILDBRAED 1922 : 178, sub *K. cylindrica*, HOOPER & NAPPER 1972 : 307, CEBOLLA & RIVAS PONCE 1995 : 33). Species distributed by Uganda, Kenya and Tanzania (HAINES & LYE 1983 : 242-243), and Cameroon (HOOPER & NAPPER 1972 : 307), newly recorded from Río Muni.

#### 56. – *Kyllinga brevifolia* Rottb.

Litoral : Bata, *Lisowski M-247* (BATA).

Not previously recorded from Equatorial Guinea. Pantropical and pansubtropical species recorded from Liberia, Nigeria, Cameroon, Uganda, Kenya and Tanzania (HOOPER & NAPPER 1972 : 307, HAINES & LYE 1983 : 236, SIMPSON & INGLIS 2001 : 322).

#### (57). – *Kyllinga bulbosa* P. Beauv.

*Kyllinga macrocephala* A. Rich.

This species has been recorded from Bioko (HOOKER 1862 : 22, sub *K. macrocephala* ; 1864 : 225, sub *K. macrocephala*). We found no herbarium material of *Kyllinga bulbosa* in BATA, BM, BRLU, K and MA. *K. bulbosa* is widespread throughout tropical Africa, and has been recorded from Mali, Guinée, Sierra Leone, Burkina Faso, Ghana, Nigeria, Cameroon, Uganda, Kenya and Tanzania (HOOPER & NAPPER 1972 : 304, HAINES & LYE 1983 : 227). The distribution range of the species suggests it may also occur in Equatorial Guinea.

#### 58. – *Kyllinga elatior* Kunth

Bioko Sur : Moca-Ureca, *Fernández Casas*

11742 (MA-558539); lago Biaó, *Fernández Casas 11967* (MA-558540).

Previously recorded from Bioko (HOOPER & NAPPER, 1972 : 305-307, CEBOLLA & RIVAS PONCE, 1995 : 33).

**59. – *Kyllinga erecta* K. Schum.**

Bioko Sur : Malabo-Luba, km 36, río Agrifer, *Carvalho 2062* (MA-558538); Moca, Pico Serrano, *Guinea 2021* (MA-386329). Centro Sur : P. N. Monte Alén, *Lejoly 99/27*, *Lejoly 99/397* (BATA). Litoral : Bata, Bome, *Carvalho 4690* (MA-597465); Río Campo, *Pérez Viso 2488* (MA-654041). Wele Nzás : 3 km S Asoc, *Lejoly 99/321* (BATA); Nzuamayong, *Lisowski M-681* (BATA).

Previously recorded from Bioko (GUINEA 1950 : 352, CEBOLLA & RIVAS PONCE 1995 : 33), and Río Muni (GUINEA 1946 : 170, 178, 184i, LEJOLY & LISOWSKI 1999 : 101, 104).

**60. – *Kyllinga odorata* Vahl**

*Kyllinga cylindrica* Nees

Bioko Norte : Malabo, *Guinea 579* (MA-386330). Bioko Sur : Musola, *Guinea 1068* (MA-386326).

Previously recorded from Bioko (HUTCHINSON 1936 : 487, GUINEA 1946 : 239, 1950 : 355, sub *K. cylindrica*, CUFODONTIS 1970 : 1463, HOOPER & NAPPER 1972 : 304, CEBOLLA & RIVAS PONCE 1995 : 33, sub *K. appendiculata*).

**61. – *Kyllinga peruviana* Lam.**

Bioko Norte : Malabo-Luba, km 16, *Carvalho 2946* (MA-558541). Bioko Sur : Ureca, *Guinea 2327* (MA-386324), *2456* (MA-386328). Litoral : Diádive-Punta Mbonda, *Guinea 135* (MA-651745), *783* (MA-651817); reserva de Río Campo, Niuma, *Lisowski M-1012* (BATA).

Previously recorded from Bioko (GUINEA 1950 : 352-353, CEBOLLA & RIVAS PONCE 1995 : 33). Pantropical species frequently recorded from tropical Africa (HOOPER & NAPPER 1972 : 305, VANDEN BERGHEN 1988 : 259, SIMPSON & INGLIS 2001 : 324), recorded for the first time from Río Muni.

**62. – *Kyllinga pumila* Michx.**

Bioko Norte : Bahía de Venus, *Guinea 280* (MA-386327); Malabo, *Guinea 580* (MA-386325). Centro Sur : Bata-Niefang, km 35, Comayá, *Carvalho 6031* (MA-609783); P. N. Monte Alén, río Vog-yii, *Pérez Viso 3224* (MA-652160); P. N. Monte Alén, Monte Alén-Moca, *Velayos & al. 9479* (MA-652163). Litoral : Río Campo, Bongoro, *Pérez Viso 2237* (MA-652161); San Joaquín de Adjikom-Ayamiken, km 14, *Pérez Viso 2505* (MA-652164).

Previously recorded from Bioko (CLARKE 1902 : 282, MILDBRAED 1922 : 178, HUTCHINSON 1936 : 487, GUINEA 1946 : 239, 1950 : 353-354, CUFODONTIS 1970 : 1465, HOOPER & NAPPER 1972 : 305, CEBOLLA & RIVAS PONCE 1995 : 33). Pan-tropical and pansubtropical species, *K. pumila* has been recorded from Cape Verde Islands to Tanzania (HOOPER & NAPPER 1972 : 305, HAINES & LYE 1983 : 244, VANDEN BERGHEN 1988 : 259, SIMPSON & INGLIS 2001 : 324). This species has not been previously recorded from Río Muni.

**63. – *Kyllinga robusta* Boeck.**

Bioko Norte : Malabo, Elá Nguema, estuario del río Borabecho, *Carvalho 4164* (MA-558536). Previously recorded from Bioko (CLARKE 1902 : 282, sub *Kyllinga pumila* Michx., MILDBRAED 1922 : 178, sub *K. pumila*, HOOPER & NAPPER 1972 : 305, CEBOLLA & RIVAS PONCE 1995 : 33).

**64. – *Kyllinga tenuifolia* Steud.**

*Kyllinga triceps* Rottb.

Centro Sur : P. N. Monte Alén, *Lejoly 99/055* (BATA); P. N. Monte Alén, Bong, *Pérez Viso 258* (MA-652165); P. N. Monte Alén, Moca, *Pérez Viso 4114* (MA-652162). Wele Nzás : inselberg d'Akuom, Nzuamayong, *Parmentier & Nguema 158* (BRLU); 3 km S Asoc, *Lejoly 99/293*, *99/298* (BATA).

GUINEA (1946 : 238, sub *Kyllinga triceps*) mentioned this species, but without a precise locality.

**KYLLINGIELLA** R. W. Haines

**65. – *Kyllingiella microcephala* (Steud.) Haines & Lye**

*Scirpus microcephalus* (Steud.) Dandy

Bioko Sur : Malabo-Moca, km 76, junto a Moca, *Carvalho 3580* (MA-558528).

Previously recorded from Bioko (CEBOLLA & RIVAS PONCE 1995 : 37, sub *Scirpus microcephalus*).

#### LIPOCARPHA R. Br.

#### 66. – *Lipocarpa chinensis* (Osbeck) Kern

*Lipocarpa senegalensis* (Lam.) T. Durand & H. Durand

Centro Sur : P. N. Monte Alén, *Parmentier 1506* (BRLU) ; P. N. Monte Alén, Bong, *Pérez Viso 256* (MA-651602), *318* (MA-651598) ; P. N. Monte Alén, 5 km NW Engong, inselberg, *Lejoly 99/057* (BATA ; MA-621791). Litoral : Bata-Senge, km 40, río Benito, *Carvalho 5177* (MA-599470). Kie Ntem : Ngong Mocomo, *Lejoly 98/90* (BATA).

GUINEA (1946 : 238, sub *L. senegalensis*) mentioned this species, but without a precise locality.

#### MAPANIA Aubl.

#### 67. – *Mapania amplivaginata* K. Schum.

*Mapania oblonga* C. B. Clarke

Bioko Sur : Gran Caldera de Luba, descenso en dirección a Moraca, *Carvalho 4275* (MA-558543) ; Balachá a Ureca, *Guinea 2292* (MA-386425). Litoral : Bata-Kogo, km 27, *Pérez Viso 4001* (MA-651600) ; Bonbon, *Esono 23* (BATA) ; Engong, *Eneme 444* (BRLU) ; Etembue, *Eneme 321* (BRLU) ; Mayang, rivièrre Mitong, *Lisowski M-819* (BRLU) ; Nco-Misobong, *Nguema & Lejoly 179* (MA-612045). Wele Nzas : inselberg Akuom, Nzuamayong, *Lisowski M-735* (BRLU).

Previously recorded from Bioko (GUINEA 1950 : 340, sub *Mapania oblonga*, CEBOLLA & RIVAS PONCE 1995 : 33), and Río Muni (HOOPER & NAPPER 1972 : 335).

#### 68. – *Mapania baldwinii* Nelmes

Centro Sur : inselberg de Bicurga, *Parmentier & Esono 3265* (BRLU), *Senterre 184*

(BRLU). Litoral : Mayang, *Lisowski M-852* (BRLU) ; Nc6-Misobong, *Nguema & Lejoly 181* (BRLU). Wele Nzas : Añisok-Mongola, *Pérez Viso 3719* (MA-651596).

Not previously recorded from Equatorial Guinea. According to SIMPSON (1992 : 146), it is distributed in western Africa (Liberia, Ivory Coast and Ghana).

#### (69). – *Mapania coriandrum* Nelmes

This species has been recorded from Bioko (GUINEA 1950 : 339, sub *Mapania deistelii* K. Schum., CEBOLLA & RIVAS PONCE 1995 : 35). We found no herbarium specimens of *Mapania coriandrum* in BATA, BM, BRLU, K and MA. *M. coriandrum* is spread over West Africa and has been recorded from Guinée, Sierra Leone, Liberia, Ivory Coast and Ghana (SIMPSON 1992 : 128). The distribution range of the species suggests it may occur in Equatorial Guinea.

#### 70. – *Mapania macrantha* (Boeck.) H. Pfeiff.

Centro Sur : P. N. Monte Alén, cataratas del río Wele, Mosumu, *Pérez Viso 1593* (MA-651590). Litoral : Bata-Bicomo, río Ecucu, *Carvalho 4939* (MA-597883) ; Río Campo, Bongoro, *Pérez Viso 2200* (MA-651591).

Not previously recorded from Equatorial Guinea. Distributed in West tropical Africa (SIMPSON 1992 : 131).

#### 71. – *Mapania mannii* C. B. Clarke subsp. *mannii*

Bioko Sur : Balachá-Ureca, *Guinea 2308* (MA-386427) ; Ruiché-Gran Caldera de Luba, *Carvalho 3836* (MA-558529).

Previously recorded from Bioko (GUINEA 1950 : 339, sub *Mapania deistelii* K. Schum., CEBOLLA & RIVAS PONCE 1995 : 35, sub *M. coriandrum* Nelmes).

#### 72. – *Mapania pubisquama* Cherm.

Centro Sur : P. N. Monte Alén, lago Atok, *Pérez Viso 1035* (MA-651595) ; P. N. Monte Alén, Engong, *Lejoly 99/149* (BRLU), *Pérez Viso 2683* (MA-651587) ; Monte Alén, subida al

mirador, *Velayos & Pérez Viso 9269* (MA-651597); P. N. Monte Alén, transect de Monte Alén, *Lejoly 94/179* (BRLU); P. N. Monte Alén, transect de Monte Chocolate, *Van Reeth 153* (BRLU); P. N. Monte Alén, transect de Mosumu, *Van Reeth 285* (BRLU). Litoral : Bata-Kogo, km 47, Senge, *Pérez Viso 2897* (MA-651588); Senge, *Pérez Viso 3376* (MA-651589).

Not previously recorded from Equatorial Guinea. Distributed in Cameroon, Gabon and Angola (SIMPSON 1992 : 122).

#### MICRODRACOIDES Hua

##### (73). – *Microdracoides squamosus* Hua

This species has been recorded from Equatorial Guinea (GUINEA 1946 : 241). We found no herbarium material of *Microdracoides squamosus* from Equatorial Guinea in BATA, BM, BRLU, K and MA. West african, *M. squamosus* has been recorded from Guinée, Sierra Leone, Nigeria and Cameroon (HOOPER & NAPPER 1972 : 347). The distribution area of the species suggests it also may occur in Equatorial Guinea.

#### PYCREUS P. Beauv.

##### 74. – *Pycereus niger* subsp. *elegantulus* (Steud.) Lye

*Pycereus elegantulus* (Steud.) C. B. Clarke

*Cyperus elegantulus* Steud.

*Pycereus cimicinus* (J. Presl & C. Presl) H. Pfeiff.

Bioko : Pico Basilé, *Mann 1470* (K).

Previously recorded from Bioko (HOOKER 1864 : 224, sub *Cyperus elegantulus*, CLARKE 1902 : 303, sub *Pycereus elegantulus*, MILDBRAED 1922 : 178, sub *P. elegantulus*, HUTCHINSON 1936 : 490, sub *P. cimicinus*, GUINEA 1946 : 241, sub *P. cimicinus*, CUFODONTIS 1970 : 1444, sub *Pycereus niger* (Ruiz & Pavón) Cufod., HOOPER & NAPPER 1972 : 300, sub *P. elegantulus*, CEBOLLA & RIVAS PONCE 1995 : 37, sub *P. elegantulus*).

##### 75. – *Pycereus polystachyos* (Rottb.) P. Beauv.

*Cyperus polystachyos* Rottb.

Bioko Sur : Ureca, *Guinea 2349* (MA-387034), *2361* (MA-386429), *2517* (MA-

387035). Litoral : Bata-Asonga, km 2, *Carvalho 4710* (MA-597841); Bata, quartier Nord, *Lisowski M-197* (BATA); Río Campo, desembocadura del río Campo, *Pérez Viso 2487* (MA-651568).

Previously recorded from Bioko (GUINEA 1950 : 348, sub *Cyperus polystachyos*, CEBOLLA & RIVAS PONCE 1995 : 37), and Río Muni (LEJOLY & LISOWSKI 1999 : 101-104).

##### 76. – *Pycereus smithianus* (Ridley) C. B. Clarke

Bioko Norte : Punta Europa, *Lope del Val s.n.* (MA-500346). Bioko Sur : Moca, río Iladyi, *Carvalho 4092* (MA-558542); camino de Las Costeras, *Guinea 2139* (MA-387036), *Guinea 2139* (MA-387037). Centro Sur : P. N. Monte Alén, Mosumu, río Laña, *Pérez Viso 1272* (MA-651567). Litoral : Bata-Río Campo, km 37, río Mbia, *Carvalho 4724* (MA-597969); Bata-Senge, km 40, río Benito, *Carvalho 5134* (MA-599712), *Lisowski M-571* (BRLU).

Previously recorded from Bioko (HUTCHINSON 1936 : 490, GUINEA 1946 : 241, 1950 : 345, sub *Cyperus compressus* L., HOOPER & NAPPER 1972 : 300, CEBOLLA & RIVAS PONCE 1995 : 37). Distributed in tropical Africa (HOOPER & NAPPER 1972 : 300), *P. smithianus* is recorded for the first time from Río Muni.

#### REMIREA Aubl.

##### 77. – *Remireia maritima* Aubl.

*Cyperus pedunculatus* (R. Br.) Kern

Litoral : Bata, *Carvalho 4652* (MA-597277), *Nguema 1151* (BRLU); Corisco, barra de arena de Hoco, *Pérez Viso 1999* (MA-651550); pradera de Baga, Ndote, *Eneme & Lejoly 92* (BATA), *Lisowski M-142* (BATA); Ndote Sud, espigon, *Lisowski M-1138* (BATA); Río Campo, Niuma, *Lisowski M-1034* (BATA); Utonde, *Guinea 136-810* (MA-651747).

Previously recorded from Annobón (MILDBRAED 1922 : 160, EXELL 1944 : 356, 1963 : 117, sub *Cyperus pedunculatus*), Bioko (GUINEA 1950 : 344, CEBOLLA & RIVAS PONCE 1995 : 37), and Río Muni (GUINEA 1946 : 169, LEJOLY & LISOWSKI 1999 : 101).

**RHYNCHOSPORA** Vahl**78. – Rhynchospora candida** (Nees) Boeck.

Litoral : Ayamiken, Río Campo, *Pérez Viso* 2838 (MA-654042) ; Bata-Bome, *Carvalho* 4672 (MA-597459) ; Bata, fleuve Ecucu, *Lisowski M-1609* (BATA) ; Etembue, Ndote, *Eneme* 348 (BRLU), *Obama & Lejoly* 597 (BATA, BRLU).

Previously recorded from Río Muni (LEJOLY & LISOWSKI 1999 : 105).

**79. – Rhynchospora corymbosa** (L.) Britt.

Bioko : Malabo-Luba, km 46, pantano de Luba, *Carvalho* 3769 (MA-558524). Centro Sur : P. N. Monte Alén, *Parmentier & Nguema* 206 (BRLU) ; P. N. Monte Alén, Esamalang, *Pérez Viso* 1188 (MA-651599). Litoral : Bata-Bolondo, *Carvalho* 4756 (MA-597318) ; Mbini, Senge, *Lisowski M-1240* (BATA) ; Ndote, pradera de Baga, *Eneme & Lejoly* 143 (BATA), 177 (BATA) ; Ngoma, SE Etembue, *Lejoly* 98/148 (BATA). Wele Nzás : Aconibe, *Nguema* 456 (BRLU).

Previously recorded from Bioko (CEBOLLA & RIVAS PONCE 1995 : 37). Pantropical species frequently recorded from tropical Africa, Madagascar and Australia (HOOPER & NAPPER 1972 : 331, SIMPSON & INGLIS 2001 : 332). *R. corymbosa* is recorded for the first time from Río Muni.

**80. – Rhynchospora holoschoenoides** (L. C. Rich.) Herter

Litoral : Bata, fleuve Ecucu, *Lisowski M-1626* (BATA) ; Bata-Asonga, *Carvalho* 4642 (MA-597916) ; pradera de Baga, Ndote, *Eneme & Lejoly* 145 (BATA) ; Mayang, *Lisowski M-822* (BATA).

Previously recorded from Río Muni (LEJOLY & LISOWSKI 1999 : 105).

**81. – Rhynchospora rubra** subsp. **africana** J. Raynal

Litoral : pradera de Baga, Ndote, *Eneme & Lejoly* 138 (BATA), 142 (BATA) ; Ndote Sud, Etembue, *Lisowski M-320* (BATA), *M-518* (BATA), *M-530* (BRLU), *M-1129* (BRLU).

Previously recorded from Río Muni (NELMES 1957 : 533, sub *Rhynchospora minor* Nelmes, HOOPER & NAPPER 1972 : 329).

**SCHOENOPLECTUS** (Rchb.) Palla**82. – Schoenoplectus corymbosus** (Roth ex Roem. & Schult.) J. Raynal

*Scirpus brachyceras* Hochst. ex A. Rich.

*Scirpus inclinatus* (Del. ex Barbey) Asch. & Schweinf.

Bioko Sur : Lago Biaó, *Guinea* 2206 (MA-386382), 2207 (MA-386381), *Lope del Val s.n.* (MA-386424) ; desembocadura del lago Biaó, *Fernández Casas* 11963 (MA-558527) ; Moca, *Lope del Val s.n.* (MA-500343).

Previously recorded from Bioko (HUTCHINSON 1936 : 467, sub *Scirpus brachyceras*, GUINEA 1946 : 239, sub *S. brachyceras*, 1950 : 336-338, sub *S. brachyceras*, CUFODONTIS 1970 : 1470, sub *Scirpus inclinatus*, HOOPER & NAPPER 1972 : 311, sub *S. brachyceras*, CEBOLLA & RIVAS PONCE 1995 : 37, sub *S. brachyceras*).

**83. – Schoenoplectus lateriflorus** (J. F. Gmel.) Lye

Litoral : Bata-Asonga, Bata, *Carvalho* 4658 (BRLU, MA-597283) ; Bata-Río Utonde, *Carvalho* 5230 (MA-599495) ; desembocadura del río Campo, *Pérez Viso* 2161 (MA-651572).

Not previously recorded from Equatorial Guinea. Paleotropical species occurring in Senegal, Mali, Ghana, Dahomey, Nigeria, Kenya, Tanzania, Madagascar and India (HOOPER & NAPPER 1972 : 310-311, HAINES & LYE 1983 : 63, VANDEN BERGHEN 1988 : 318).

**SCLERIA** Bergius**84. – Scleria aterrима** (Ridley) Napper

Centro Sur : P. N. Monte Alén, *Lejoly* 99/24 (BATA). Litoral : Ayamiken, Río Campo, *Pérez Viso* 2826 (MA-651842) ; Bata, *Nguema* 1076 (BRLU), *Carvalho* 4674 (MA-597457) ; Ndote Sud, Etembue, *Lisowski M-1130* (BATA).

Previously recorded from Río Muni (LEJOLY & LISOWSKI 1999 : 105).

**85. – *Scleria boivinii* Steud.***Scleria barteri* Boeck.

Bioko Norte : Malabo-Riaba, km 21-22, Cupapa, *Carvalho 3738* (MA-558525). Centro Sur : Evinayong, *Guinea 128-129-130* (MA-651756) ; *Lisowski M-1401a* (BATA) ; P. N. Monte Alén, Enkumekien, *Pérez Viso 1506* (MA-687176) ; P. N. Monte Alén, Esamalang, *Pérez Viso 512* (MA-651575) ; P. N. Monte Alén, Ocuam, *Pérez Viso 608* (MA-651582). Litoral : Ayamiken, Río Campo, *Lejoly 97/25* (BATA) ; Bata-Pembe, km 33-34, *Carvalho 4811* (MA-597734) ; Ondoa, *Pérez Viso 3510* (MA-687158). Kie Ntem : Ebebiyin-Mongomo, Eloan, *Pérez Viso 4245* (MA-651578). Wele Nzaz : Acurenam-Aconibe, Akok, *Pérez Viso 2008* (MA-651574) ; Nsum Esangüi, *Pérez Viso 3633* (MA-651581). Unknown province : Mofanchu, *Guinea 134-202-203* (MA-651810).

Previously recorded from Bioko (MILDBRAED 1922 : 178, sub *S. barteri*, HUTCHINSON 1936 : 493, sub *S. barteri*, GUINEA 1946 : 240, sub *S. barteri*, NELMES 1956 : 93, sub *S. barteri*, HOOPER & NAPPER 1972 : 340-342, CEBOLLA & RIVAS PONCE 1995 : 37), and Río Muni (GUINEA 1946 : 184i, 240 sub *S. barteri*, NELMES 1956 : 93, sub *S. barteri*).

**(86). – *Scleria foliosa* Hochst. ex A. Rich.**

This species has been recorded from Río Muni (GUINEA 1946 : 176, 176b, 184k). We found no herbarium specimens of *Scleria foliosa* from Equatorial Guinea in BATA, BM, BRLU, K and MA. This species is widespread throughout tropical Africa and Madagascar (HOOPER & NAPPER 1972 : 343, HAINES & LYE 1983 : 345, VANDEN BERGHEN 1988, SIMPSON & INGLIS 2001 : 341), and has frequently been collected in Senegal, Sierra Leone, Ivory Coast, Ghana and Nigeria. The distribution range of the species suggests it may occur in Equatorial Guinea.

**87. – *Scleria iostephana* Nelmès**

Litoral : Etembue, réserve de Ndote, *Eneme & Lejoly 57* (BATA).

Not previously recorded from Equatorial Guinea. Distributed throughout tropical Africa, *S.*

*iostephana*, has been recorded from Ivory Coast, Ghana, Nigeria, Congo, Uganda Zambia, Kenya and Tanzania (HOOPER & NAPPER 1972 : 342, HAINES & LYE 1983 : 354, SIMPSON & INGLIS 2001 : 341).

**88. – *Scleria melaleuca* Schlttdl. & Cham.***Scleria pterota* Presl

Bioko Norte : Malabo, barrio Alcalde, río Cónsul, *Carvalho 4111* (MA-558526).

Previously recorded from Bioko (CEBOLLA & RIVAS PONCE 1995 : 39, sub *Scleria pterota*).

**89. – *Scleria melanomphala* Kunth**

Litoral : Bata, fleuve Ecucu, *Lisowski M-1616* (BATA) ; Bata-Bome, *Carvalho 5564* (MA-598770).

Previously recorded from Río Muni (LEJOLY & LISOWSKI 1999 : 106).

**90. – *Scleria melanotricha* Hochst. ex A. Rich.**

Centro Sur : Monte Alén, mirador, *Cabezas 1* (MA-651884) ; P. N. Monte Alén, *Lejoly 99/77* (BATA, BRLU), *Parmentier & Esono 3016* (BRLU) ; P. N. Monte Alén, Bong, *Pérez Viso 319* (MA-651576). Wele Nzaz : inselberg Asoc, *Obama & Lejoly 479* (BATA, MA-612112), *Parmentier & Esono 3696* (BRLU) ; inselberg Dumu, *Obama & Lejoly 518* (MA-612103) ; inselberg Piedra Nzaz, *Lejoly 99/205* (BATA, BRLU), *Nguema 211* (BRLU).

Previously recorded from Río Muni (LEJOLY & LISOWSKI 1999 : 118, sub *Scleria hirtella* Sw.).

**(91). – *Scleria naumanianna* Boeck.**

This species has been recorded from Río Muni (GUINEA 1946 : 241). We found no herbarium specimens of *Scleria naumanianna* from Equatorial Guinea in BATA, BM, BRLU, K and MA. Recorded from Senegal, Mali, Guinée, Sierra Leone, Liberia, Ivory Coast, Ghana, Dahomey, Togo, Nigeria, Congo and Angola (HOOPER & NAPPER 1972 : 342, SCHOLZ & SCHOLZ 1983 : 116, VANDEN BERGHEN 1988 : 339). The distribution range of the species suggests it may occur in Equatorial Guinea.



**92. – *Scleria racemosa* Poir.**

Centro Sur : P. N. Monte Alén, Esamalang, *Pérez Viso* 528 (MA-651583). Litoral : Cabo San Juan, *Guinea* 127-868 (MA-651755) ; Miwala, 5 km de Kogo, *Pérez Viso* 3964 (MA-651577) ; Ndote, *Eneme* 247b (BRLU).

Not previously recorded from Equatorial Guinea. Widespread species recorded from Mauritania to Uganda and Madagascar (CLARKE 1902 : 508, HOOPER & NAPPER 1972 : 340, HAINES & LYE 1983 : 359, VANDEN BERGHEN 1988 : 342).

**93. – *Scleria spiciformis* Benth.**

Centro Sur : P. N. Monte Alén, Engong, *Lejoly* 99/062 (MA-621784) ; P. N. Monte Alén, *Lejoly* 99/409 (BATA). Litoral : Bata-Bome, *Carvalho* 5565 (MA-598769) ; Bome, *Pérez Viso* 1726 (MA-689157) ; Ndote, *Eneme* 291 (BRLU) ; Ndote Sud, Etembue, *Guinea* 911 (MA-651812), *Lisowski M-532* (BATA), *M-533* (BRLU), *M-1102* (BRLU), *M-1131* (BATA), *Obama & Lejoly* 598 (MA-612197). Wele Nzas : inselberg Acoak Banga, Ngong Mocomo (Nsork), *Lejoly & Elad* 99/068 (BATA) ; inselberg de Akuom, Nzuamayong, *Lisowski M-695* (BRLU) ; inselberg Asoc, *Obama & Lejoly* 490 (MA-612108) ; inselberg Dumu, Dumu, *Parmentier & Esono* 3624 (BRLU) ; inselberg n° 3, Mongomo, *Porembski & al.* 3568 (BATA) ; inselberg n° 4, Mongomo, Dumu, *Porembski & al.* 3607 (BRLU) ; inselberg Piedra Nzas, *Lejoly* 99/165 (BATA), 99/235 (BRLU) ; Kukumankok, *Guinea* 19 (MA-651811).

Previously recorded from Río Muni (LEJOLY & LISOWSKI 1999 : 119).

**94. – *Scleria verrucosa* Willd.**

Centro Sur : P. N. Monte Alén, Monte Chocolate, *Van Reeth* 59 (BATA, BRLU). Litoral : Ndote Nord, environs du Senge, *Lisowski M-50* (BATA).

GUINEA (1946 : 241) suggested the occurrence of this species in Equatorial Guinea, but without a precise locality.

**95. – *Scleria vogelii* C. B. Clarke**

Bioko : Luba-Malabo, *Carvalho* 2594 (MA-558534). Litoral : Bata-Bome, río Boara, *Carvalho* 4791 (MA-597870) ; Bata-Kogo, km 12, Nkinfala, *Pérez Viso* 3847 (MA-651579) ; Cabo San Juan, *Guinea* 867 (MA-687159) ; Corisco, Endote, *Pérez Viso* 1956 (MA-651573) ; Etembue, Ndote, *Eneme & Lejoly* 33 (BATA). Wele Nzas : Alum, entre Mikomeseng y Nkue, *Pérez Viso* 3031 (MA-651580).

Previously recorded from Bioko (CEBOLLA & RIVAS PONCE 1995 : 39). *S. vogelii* has been already recorded from Liberia, Ivory Coast, Ghana, Nigeria, Cameroon and Gabon (HOOPER & NAPPER 1972 : 340). Recorded for the first time from Río Muni.

## DOUBTFUL RECORDS

*Cyperus sublimis* (C. B. Clarke) Dandy

This species has been recorded from Annobón (SOBRINHO 1953 : 188, EXELL 1956 : 50, 1973 : 362). *Cyperus sublimis* is part of a very difficult complex with a pantropical distribution, but is recorded only from East Africa (CLARKE 1894 : 594, sub *Mariscus sublimis*, CLARKE 1902 : 390, sub *M. sublimis*). Therefore, its presence in Equatorial Guinea seems not very reliable. We have not been able to study the specimens supporting these records and, therefore, we cannot ascribe them to any accepted name.

*Fimbristylis polymorpha* Boeck.

This species has been recorded from Río Muni (GUINEA 1946 : 157). According to CLARKE (1902 : 415) *Fymbristylis polymorpha* Boeck. and *F. diphylla* Vahl. are synonymous. *F. diphylla* is not an accepted name by LEBRUN & STORK (1995 : 187), who considered the different infrageneric taxa under *F. diphylla* as synonyms of several taxa under *F. dichotoma*. *F. diphylla* var. *pluristrata* and var. *podocarpa* should be placed in *F. tomentosa*, and var. *tuberculata* in *F. alboviridis*. The name *F. polymorpha* was not mentioned by

LEBRUN & STORK (1995). We have not been able to study the voucher of this record and, at the moment, we cannot ascribe it to any accepted name.

*Scleria canaliculato-triquetra* Boeck.  
*Scleria lagöensis* Boeck.

Two varieties has been described under this species. LEBRUN & STORK (1995 : 211) placed each of them under a different accepted name. Var. *clarkeana* Piérart must be named *S. lagöensis*, whereas var. *adpresso-hirta* Kük. must be called *S. adpresso-hirta* (Kük.) Robinson. HOOPER & NAPPER (1972 : 342) consider *S. lagöensis* Boeck. and *S. canaliculato-triquetra* Boeck. as synonyms. We have not been able to study the vouchers of EXELL's records (1953a : 188, 1956 : 50, 1973 : 400, sub *Scleria lagöensis*) and SOBRINHO's (1953 : 188). Therefore, at the moment, we cannot ascribe these records to any accepted name.

**Note added in proof.** Since January 2004 more specimens from K and LISU have been studied. We can now confirm the presence of *Abildgaardia ovata* and *Bulbostylis erratica* in Equatorial Guinea.

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#### REFERENCES

- AEDO C., VELAYOS M. & TELLERÍA M. T., 1999. — *Bases documentales para la Flora de Guinea Ecuatorial. Plantas vasculares y hongos* : 414 p. Consejo Superior de Investigaciones Científicas & Agencia Española de Cooperación Internacional, Madrid, Spain.
- ANONYMOUS, 1988. — *List of vascular plants of Gabon with synonymy*. Institut français de recherche scientifique pour le développement en coopération, ORSTOM, Paris, France.
- CEBOLLA C. & RIVAS PONCE M. A., 1995. — Cyperaceae Guineae Aequatorialis nonnullae. *Fontqueria* **42** : 29-40.
- CLARKE C. B., 1894. — Cyperaceae. In : DURAND T. & SCHINZ H. (ed.), *Conspectus Florae Africae, ou énumération des plantes d'Afrique, vol. 5*, pp 526-692. Jardin Botanique de l'Etat, Bruxelles, Belgium.
- CLARKE C. B., 1902. — Cyperaceae. In : THISELTON W. T. & DYER K. C. (ed.), *Flora of Tropical Africa, vol. 8*, pp 266-524. Lovell Reeve & Co, London, U.K.
- CUFODONTIS G., 1970. — Enumeratio Plantarum Aethiopiae Spermatophyta (Sequentia). *Bull. Jard. Bot. Belg., suppl.* **40** : 1388-1482.
- CUFODONTIS G., 1971. — Enumeratio Plantarum Aethiopiae Spermatophyta (Sequentia). *Bull. Jard. Bot. Belg., suppl.* **41** : 1483-1578.
- EXELL A. W., 1944. — *Catalogue of the vascular plants of S. Tomé (with Principe and Annobon)*. The British Museum (Nat. Hist.), London, U.K.
- EXELL A. W., 1956. — *Supplement to the vascular plants of S. Tomé (with Principe and Annobon)*. The British Museum (Nat. Hist.), London, U.K.
- EXELL A. W., 1963. — Angiosperms of the Cambridge Annobon island expedition. *Bull. Brit. Mus. (Nat. Hist.), Bot.* **3** : 93-118.
- EXELL A. W., 1973. — Angiosperms of the islands of the gulf of Guinea (Fernando Po, Principe, S. Tomé, and Annobon). *Bull. Brit. Mus. (Nat. Hist.), Bot.* **4** : 325-411.
- FERNÁNDEZ CASAS F. J., 1992. — Ad Guineae Aequatorialis floram texendam inventa varia. *Fontqueria* **33** : 33-85.
- FERO M., CABEZAS F., AEDO C. & VELAYOS M., 2003. — Checklist of the Piperaceae of Equatorial Guinea. *Anales Jard. Bot. Madrid* **60** : 45-50.
- GOETGHEBEUR P., 1998. — Cyperaceae. In : KUBITZKI K. (ed.), *The families and genera of vascular plants. Flowering Plants. Monocotyledons : Alismatanae and Commelinanae (except Gramineae)*, pp 141-190. Springer-Verlag, Berlin, Germany.
- GOETGHEBEUR P. & COUDIJZER J., 1984. — Studies in Cyperaceae. *Fimbristylis* and *Abildgaardia* in Central Africa. *Bull. Jard. Bot. Natl. Belg.* **54** : 65-89.
- GUINEA E., 1946. — *Ensayo geobotánico de la Guinea Continental española*. Dirección General de Marruecos y Colonias, Madrid, Spain.

- GUINEA E., 1950. — Juncaceae, Cyperaceae, Fernandopoinae. *Anales Jard. Bot. Madrid* **9** : 335-360.
- GUINEA E., 1968. — Fernando Po. In : HEDBERG I. & HEDBERG O. (eds.), Conservation of vegetation in Africa South of the Sahara. *Acta Phytogeogr. Suec.* **54** : 130-132.
- HAINES R. W. & LYE K. A., 1983. — The Sedges and Rushes of East Africa. East African Natural History Society, Nairobi, Kenya.
- HERRERO A., AEDO C., VELAYOS M. & VIANE R. L., 2001. — A new species of *Asplenium* (Aspleniaceae, Pteridophyta) from Equatorial Guinea. *Ann. Bot. Fenn.* **38** : 175-180.
- HOOKE J. D., 1862. — On the vegetation of Clarence Peak, Fernando Poo ; with descriptions of the plants collected by Mr. Gustav Mann on the higher parts of that Mountain. *J. Linn. Soc., Bot.* **6** : 1-23.
- HOOKE J. D., 1864. — On the plants of the temperate regions of the Cameroons Mountains and Islands in the Bright of Benin ; collected by Mr. Gustav Mann, Government Botanist. *J. Linn. Soc., Bot.* **7** : 171-240.
- HOOPER S. S. & NAPPER F. N., 1972. — Cyperaceae. In : HEPPER F. N. (ed.), *Flora of West Tropical Africa*, edn. 2, vol. 3, pp 278-349. The Crown agents for Oversea Governments and Administrations, London, U.K.
- LEBRUN J. P. & STORK A. L., 1995. — *Énumération des plantes à fleurs d'Afrique tropicale*, vol. 3. *Monocotylédones : Limnocharitaceae à Poaceae*. Conservatoire et jardin botaniques de la Ville de Genève, Genève, Switzerland.
- LEJOLY J. & LISOWSKI S., 1999. — Novitates Guineae Aequatorialis. *Bull. Jard. Bot. Natl. Belg.* **67** : 99-121.
- LYE K. A., 1997. — Cyperaceae. In : EDWARDS S., DEMISSEW S. & HEDBERG I. (eds.), *Flora of Ethiopia and Eritrea*, vol. 6, pp 391-511. Addis Ababa, Ethiopia.
- MILDBRAED J., 1922. — *Wissenschaftliche Ergebnisse der Zweiten Deutschen Zentral-Afrika-Expedition 1910-1911, Band II : Botanik*. Verlag von Klinkhardt & Biermann, Leipzig, Germany.
- MUASYA A. M., SIMPSON D. A., CHASE M. W. & CULHAM A., 1998. — An assessment of suprageneric phylogeny in Cyperaceae using *rbcL* DNA sequences. *Pl. Syst. Evol.* **211** : 257-271.
- MUASYA A. M., SIMPSON D. A. & CHASE M. W., 2001. — Generic relationships and character evolution in *Cyperus* s.l. (Cyperaceae). *Syst. Geogr. Pl.* **71** : 539-544.
- NELMES E., 1955. — Notes on Cyperaceae : XXXIII. The African species of *Hypolytrum*. *Kew Bull.* **10** : 63-82.
- NELMES E., 1956. — Notes on Cyperaceae : XXXIX. African species of *Scleria* excluding sect. *Hypoporium*. *Kew Bull.* **11** : 73-111.
- NELMES E., 1957. — Notes on Cyperaceae : XLI. *Rhynchospora* in tropical East Africa. *Kew Bull.* **11** : 533.
- SCHOLZ H. & SCHOLZ U., 1983. — *Flore descriptive des Graminées et Cypéracées du Togo* : 360 p. J. Cramer, Vaduz, Liechtenstein.
- SIMPSON D. A., 1992. — *A revision of the genus Mapania*. Royal Botanic Gardens, Kew, U.K.
- SIMPSON D. A. & INGLIS C. A., 2001. — Cyperaceae of economic, ethnobotanical and horticultural importance : a checklist. *Kew Bull.* **56** : 257-360.
- SOBRINHO L. G., 1953. — Vascular plants from Ano Bom and Príncipe islands collected by F. Newton and J. de Souza Junior. *Portugaliae Acta Biol., Sér. B, Sist.* **4** : 177-190.
- VANDEN BERGHEN C., 1988. — Cyperaceae. In : BERHAUT J. (ed.), *Flore illustrée du Sénégal*, pp 139-347. Gouvernement du Sénégal, Ministère de la Protection de la Nature, Direction de Eaux et Forêts, Dakar, Senegal.
- VELAYOS M., AEDO C. & PÉREZ VISO R., 2001. — Checklist of the Pteridophytes of Equatorial Guinea. *Belg. Journ. Bot.* **134** : 145-191.

## APPENDIX 1

## INDEX TO SCIENTIFIC NAMES

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## LIST OF COLLECTIONS

Species are indicated by a number in parentheses corresponding to the number in the checklist.

**Boughey** 108 (23); 126 (11). **Cabezas** 1 (90); 2 (51). **Carvalho** 2062 (59); 2084 (30); 2095 (22); 2102 (20); 2111 (17); 2177 (38); 2234 (55); 2401 (23); 2559 (38); 2594 (95); 2763 (6); 2791 (31); 2946 (61); 3003 (14); 3076 (37); 3121 (20); 3255 (28); 3580 (65); 3655 (6); 3677 (13); 3681 (12); 3687 (16); 3715 (38); 3732 (35); 3736 (43); 3738 (85); 3769 (79); 3836 (71); 3896 (38); 4092 (76); 4111 (88); 4164 (63); 4275 (67); 4281 (51); 4546 (16); 4634 (8); 4642 (80); 4649 (49); 4652 (77); 4658 (83); 4672 (78); 4674 (84); 4679 (36); 4690 (59); 4694 (14); 4697 (48); 4703 (25); 4704 (4); 4710 (75); 4711 (27); 4722 (45); 4724 (76); 4748 (40); 4756 (79); 4768 (9); 4791 (95); 4811 (85); 4852 (41); 4939 (70); 5134 (76); 5162 (40); 5173 (10); 5177 (66); 5199 (43); 5202 (44); 5230 (83); 5312 (26); 5446 (31); 5564 (89); 5565 (93); 5644 (26); 5937 (21); 5944 (49); 5947 (38); 6031 (62). **Dibata & Mbouissou** 972 (38). **Eneme & Lejoly** 131 (49); 138 (81); 142 (81); 143 (79); 144 (48); 145 (80); 148 (6); 177 (79); 179 (38); 31 (51); 33 (95); 57 (87); 92 (77). **Eneme** 224 (20); 247 (43); 247b (92); 281 (29); 285 (20); 291 (93); 294 (48); 296 (49); 321 (67); 333 (51); 348 (78); 356 (37); 444 (67). **Esono & Lejoly** 77 (3); 78 (6); 96 (51). **Esono** 23 (67). **Fernández Casas** 10224 (20); 10301 (28); 10326 (6); 11212 (16); 11214 (6); 11255 (30); 11315 (20); 11556 (38); 11742 (58); 11769 (33); 11963 (82); 11967 (58); 12033 (20); 12092 (20); 12124 (33). **Guinea** 19 (93); 27 (8); 28 (9); 38 (37); 39 (9); 40 (49); 119-793 (42); 122-90 (32); 123 (23); 124-574 (36); 125-813 (30); 127-868 (92); 128-129-130 (85); 128-900 (46); 132-816 (42); 133-100-102 (49); 134-202-203 (85); 135 (61); 136-810 (77); 137-726 (5); 138 (42); 139-785 (9); 207 (30); 237 (30); 261 (30); 280 (62); 284 (26); 462 (23); 579 (60); 580 (62); 581 (43); 582 (35); 583 (20); 621 (20); 649 (9); 667 (51); 696-700-701-702-703-704 (9); 712 (49); 713 (49); 735 (55); 744 (9); 750 (46); 782 (37); 783 (61); 804 (51); 867 (95); 903 (35); 911 (93); 942 (46); 1068 (60); 1190 (33); 1191 (33); 1802 (16); 1988 (39); 2021 (59); 2139 (76); 2193 (39); 2206 (82); 2207 (81); 2292 (67); 2308 (71); 2327 (61); 2349 (75); 2351 (40); 2353 (44); 2361 (75); 2426 (40); 2427 (44); 2429 (44); 2456 (61); 2517 (75); 2530 (51); 2682 (13); 2683 (13); 2916 (16); 2919 (16). **Joffroy** 291 (2). **Lejoly** 94/179 (72); 97/25 (85); 98/148 (79); 98/82 (49); 98/84 (43); 98/88 (27); 98/90 (66); 99/24 (84); 99/27 (59); 99/55 (64); 99/56 (54); 99/57 (66); 99/62 (93); 99/77 (90); 99/83 (21); 99/84 (3); 99/132 (29); 99/149 (72); 99/165 (93); 99/178 (6); 99/204 (2); 99/205 (90); 99/219 (51); 99/234 (2); 99/235 (93); 99/265 (2); 99/266 (38); 99/280 (3); 99/281 (3); 99/293 (64); 99/298 (64); 99/321 (59); 99/397 (59); 99/409 (93); 99/489 (29); 99/493 (2). **Lejoly & Elad** 99/068 (93). **Lisowski** M-18 (36); M-30 (29); M-45 (9); M-50 (94); M-142 (77); M-146 (8); M-187 (48); M-192 (34); M-197 (75); M-230 (37); M-235 (35); M-240 (17); M-241 (30); M-247 (56); M-258 (20); M-261 (51); M-320 (81); M-401 (43); M-402 (35); M-410 (23); M-518 (81); M-526 (9); M-530 (81); M-532 (93); M-533 (93); M-535 (2); M-539 (6); M-571 (76); M-644 (3); M-681 (59); M-695 (93); M-720 (6); M-723 (2); M-725 (8); M-735 (67); M-789 (53); M-819 (67); M-822 (80); M-852 (68); M-853 (53); M-873 (30); M-892 (43); M-994 (36); M-995 (8); M-1005 (37); M-1011 (37); M-1012 (61); M-1022 (20); M-1034 (77); M-1044 (40); M-1082 (29); M-1083 (26); M-1085 (48); M-1088 (6); M-1090 (9); M-1101 (49); M-1102 (93); M-1103 (27); M-1129 (81); M-1130 (84); M-1131 (93); M-1138 (77); M-1179 (17); M-1197a (51); M-1198 (8); M-1215 (36); M-1230 (40); M-1234 (44); M-1235 (24); M-1236 (37); M-1240 (79); M-1243 (38); M-1261 (27); M-1312 (20); M-1321 (9); M-1327 (29); M-1335 (48); M-1401a (85); M-1553 (51); M-1588 (9); M-1593 (9); M-1604 (24); M-1607 (48); M-1609 (78); M-1616 (89); M-1626 (80). **Mann** 121 (23); 653 (11); 1466 (15); 1470 (74). **Ngomo** 195 (26); 474 (33). **Ngomo & Ndong** 414 (26). **Nguema** 95 (26); 211 (90); 456 (79); 473 (52); 1071 (43); 1076 (84); 1140 (49); 1151 (77); 1249 (17). **Nguema & Lejoly** 179 (67); 181 (68). **Obama** 84 (53); 295 (53). **Obama & Lejoly** 479 (90); 489 (2); 490 (93); 518 (90); 573 (33); 597 (78); 598

(93). **Parmentier** 1506 (66); 1662 (3); 1740bis (2); 1810 (29), 1817 (29). **Parmentier & Esono** 3016 (90); 3093 (2); 3108 (29); 3174 (29); 3258 (8); 3265 (68); 3291 (29); 3376 (2); 3616 (8); 3624 (93); 3696 (90); 3701 (6). **Parmentier & Nguema** 158 (64); 206 (79). **Pérez Viso** 173 (9); 256 (66); 258 (64); 318 (66); 319 (90); 512 (85); 528 (92); 608 (85); 740 (26); 1035 (72); 1181 (43); 1188 (79); 1272 (76); 1405 (47); 1407 (43); 1416 (20); 1419 (24); 1443 (20); 1448 (37); 1449 (20); 1450 (36); 1451 (49); 1506 (85); 1593 (70); 1635 (43); 1726 (93); 1729 (9); 1741 (49); 1934 (9); 1935 (36); 1942 (8); 1945 (4); 1952 (37); 1955 (4); 1956 (95); 1967 (20); 1999 (77); 2002 (18); 2008 (85); 2161 (83); 2200 (70); 2222 (43); 2237 (62); 2364 (20); 2476 (25); 2477 (37); 2483 (27); 2487 (75); 2488 (59); 2493 (43); 2505 (62); 2547 (51); 2620 (26); 2660 (29); 2672bis (29); 2673bis (20); 2683 (72); 2741 (29); 2789 (27); 2826 (84); 2829 (36); 2833 (24); 2838 (78); 2839 (20); 2841 (49); 2897 (72); 3031 (95); 3033 (33); 3125 (30); 3173 (26); 3198 (50); 3223 (35); 3224 (62); 3376 (72); 3477 (26); 3510 (85); 3529 (38); 3625 (20); 3626 (23); 3633 (85); 3719 (68); 3818 (50); 3847 (95); 3903 (29); 3948 (38); 3962 (51); 3963 (30); 3964 (92); 4001 (67); 4105 (27); 4114 (64); 4245 (85); 4278 (38). **Porembski, Biedinger & Nguema** 3566 (3); 3567 (2); 3568 (93); 3601 (6); 3607 (93). **Senterre** 184 (68). **Van Reeth** 59 (94); 153 (72); 166 (52); 285 (72); 338 (20). **Velayos** 9269 (72); 9474 (43); 9479 (62). **Vogel** 218 (23). **Wrigley & Melville** 62 (30); 81 (20); 148 (19); 181 (38); 663 (11).