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## Andropogoneae novae

propositus  
E. Hackel.

A n d r o p o g o n .

### A. Sect. *Schizachyrium* Nees.

1) *A. urceolatus*. Annuus; culmi erecti, graciles, 20—35 cm. alti, glaberrimi, superne parce florifero-ramosi. Vaginae carinatae, carina scaberulae, ceterum glaberrimae. Ligula brevis, rotundato-truncata, glabra. Laminae breves, infimae parvulae, mediae 4—5 cm. lg., 2—3 mm. lt., summae abbreviatae, omnes lineares, acuminatae, acutissimae, planae, supra pilis longis tuberculatis conspersae v. glabrae, margine scabrae, supra scaberulae, subtus excepta costa media tenui acute carinata scaberula laeves. Spathae propriae spicarum angustae, 2.5—3 cm. lg., rufidulae, glabrae, pedunculo spicae apice bractea magna calceoliformi coronato demum breviores. Spicae crassae, 2.5—3 cm. lg., subviolascentes, glabrescentes, 6—8-articulatae; articuli spiculâ & paullo breviores, apice et plus duplo crassiores bracteola profunde urceolata inaequaliter eroso-denticulata coronati, dorso marginibusque glabri, basi fasciculo pilorum articulo 3plo breviorum stipati, supra basin albi, superius rufescentes. Spiculae & 7 mm. lg., linearis.

laneeolatae, inferne pallidae superne rufescentes. Gluma Ima subcoriacea, subulato-lanceolata, in acumen bisetulosum attenuata, bicarinata, carinis scabris, praeter carinas tenuer 5-nervis, dorso glabra, scabro-punctata, callo glabro, II<sup>a</sup> lanceolata, acuminata, in setulam 2 mm. longam abiens, carina laevi; III<sup>a</sup> parum brevior, oblonga, glabra, enervis; IV<sup>a</sup> quam II<sup>a</sup> subdupo brevior, ad  $\frac{3}{4}$  usque fissa, aristam 14—16 mm. longam ex fissura emittens, cujus columna nigro-fusca subulam albam subaequat. Spiculae tabescentes pedicello spiculâ ♀  $\frac{1}{3}$  breviori crasso glabro insidentes, 3 mm. lg., subulato-lanceolatae; gluma Ima 5-nervis inter apicis dentes mucroniformes setam exserens ipsa breviorem; IV<sup>d</sup>a paullo brevior, uninervis, breviseta, III<sup>a</sup> pusilla.

Africa centralis: prope Matamma in ditione Gallabat leg. Schweinfurth (ann. 1865) nr. 1031.

Remote affinis *A. malacostachyo* Presl, qui differt foliis obtusissimis, spicis dense villosis vaginatis etc.

2) *A. nodulosus*. Annuus. Culmi erecti, graciles, 20—40 cm. alti, glabri v. ad nodos superiores minute puberuli, superne breviter florifero-ramosi. Vaginae et ligulae ut in praecedente. Laminae imae vix 1 cm. lg., mediae 3—4 cm. lg., 2 mm. lt., acutae, planae, supra scabrae et pilis mollibus conspersae, subtus glabrae, carina tenui scabrae, ceterum laeves. Spicarum spathae propriae angustae, 2—3 cm. lg., saepe laminam rudimentariam gerentes, pedunculum spicae bractea cyathiformi denticulata extus villosula coronatum primo superantes, dein subaequantes. Spicae crassae cc. 2 cm. lg., interrupte villosae, 6—8-articulatae; articuli spiculam ♀ subaequantes, eamque crassitudine plus duplo superantes, bracteola obliqua profunde urceolata eroso-denticulata coronati, dorso hirtuli, basi fasciculo pilorum articulo plus duplo breviorum vestiti, concolores, (rufescentes). Spiculae ♀ linear-lanceolatae rufescentes v. viridulæ; gluma Ima coriaceo-herbacea, in acumen integrum sensim acutata, praeter nervos carinales subenervis, in dorsi  $\frac{1}{3}$  inferiore longiuscule sericeo-villosa ceterum scabra, callo villoso; II<sup>a</sup> vix mucronulata, glabra; III<sup>a</sup> ut in praecedente; IV<sup>a</sup> vix ad medium usque fissa, ex fissura aristam 10—12 mm. lg. exserens, cujus columna fusca subulâ albida parum brevior est. Spiculae tabescentes pedicello spiculâ ♀ paullo breviori crasso toto dorso hirtulo insidentes,

2.5—3 mm. lg., linear-lanceolatae; gluma Ima 5-nervis, breviter (1 mm.) setigera, scaberrima; IIda Imam subaequans, reliqua 0.

Africa tropica: „Confluence“ ad fl. Niger leg. Barter in expeditione Baikieana.

Praecedenti valde affinis, sed notis litteris remotis expressis distincta.

3) *A. obliquiberbis*. Perennis; innovationes extravaginales, breves. Culmi graciles, erecti, 20—30 cm. alti, glaberrimi, simplices vel e nodo penultimo ramulum floriferum brevem procreantes. Folia glabra. Ligula brevis, truncata, ciliata. Laminae breves (3—5 cm. lg.) plerumque complicatae, explanatae 2 mm. latae, lineares, obtusae, rigidae, subtus laeves, supra margineque scaberulae, nervo medio vix prominulo. Spathae spicarum propriae 4—5 cm. lg., superne dilatatae, obtusiusculae, pedunculum spicae apice cupulatum sub cupula eleganter spiraliterque barbatum parum (vel in spicis lateralibus multo) superantes. Spicae laterales omnino vaginatae, terminales partim exsertae, graciles, 3—4 cm. lg., barbatae, multiarticulatae; articuli spiculâ  $\frac{1}{4}$ — $\frac{1}{3}$  breviores, crassiusculi, in  $\frac{1}{2}$ , inferiore marginis exterioris et secundum lineam hinc incipientem et fere ad apicem marginis oppositi oblique ascendentem dense longe que barbati, caeterum glabri, apice oblique cupulati, basi fasciculo pilorum ipsis 3-plo breviore stipati. Spiculae ♀ 6 mm. lg., anguste linear-lanceolatae; gluma Ima chartaceo-membranacea, breviter acutata, bimucronulata, carinis in  $\frac{1}{2}$  superiore subalato-marginatis laevissimis, praeter nervos carinales obscure virides enervis, dorso superne glaberrima, inferne a basi ad  $\frac{1}{5}$  usque villosa, callo breviter barbato; IIda lanceolata, acuta, carina scaberula, margine ciliata. IVa  $\frac{1}{4}$  brevior, fere ad basin usque fissa, ciliolata; aristae 9 mm. lgae columna vix e glumis exserta subulam flavidam tota longitudine laxe tortam subsuperans. Spiculae tabescentes pedicello articulum aequanti eoque parum tenuiori margine interiore cirro subapicali vestito, exteriore a basi ad apicem usque ciliato insidentes, ad glumam Imam subulato-lanceolatam 1.5—2 mm. longam villosam in setam 3—4 mm. longam excurrentem redactae.

Nova Caledonia: prope Balade leg. Vieillard nr. 1506.

*A. Petitianus* Rich., ad quem cl. Balansa in Bull. Soc. bot. France XIX. p. 322 numerum 1506 Vieillardi citat, est species annua, articulis et pedicello spiculae tabescens a basi ad  $\frac{1}{2}$ , v.  $\frac{2}{3}$  dorsi aequaliter sericeo-villosis, spiculae ♀ gluma Ima longe acuminata.

4) *A. Schweinfurthii*. Perennis?; culmi cc. 120 cm. alti, glaberrimi, superne paniculato-ramosi, ramis floriferis binis elongatis superioribus subfastigiatis, primariis 2—3-nodibus secundarios solitarios v. binos simplices agentibus. Vaginae teretes glaberrimae; ligulae brevissimae, truncatae, glabrae. Laminae lineares, longe acuminatae 20—30 cm. lg., 3—4 mm. lt., planae, rigidae, glaucescentes, subtus glaberrimae, supra scabrae et pilis basi tuberculatis hinc inde adspersae, costa media carinante lateralibusque prominulis percursae. Spicarum spathae propriae 5—6 cm. lg., angustae, laminae rudimentum gerentes, pedunculo spicae apice glaberrimo breviores. Spicae subgraciles, 4 cm. lg., extus glabrescentes; articuli spiculae ♀ plus duplo breviores, crassiusculi, sed spiculâ angustiores, clavati, bracteola profunde ac inaequaliter bifida (lobo altero acuto) coronati, margine exteriore parce accrescendo-ciliati, ciliis articulo brevioribus, interiore glabri. Spiculae ♀ lanceolatae, 6 mm. lg.; gluma Ima coriaceo-herbacea, acuta, integra, praeter carinas submarginatas seabras obsolete 5-nervis, dorso convexo glabra, laeviuscula, callo parvo pilis ipso brevioribus vestito; II<sup>a</sup> late lanceolata, in setam ipsa duplo breviorem abiens, carina infra apicem sinuata, ciliolata; IV<sup>a</sup> ovali-oblonga,  $\frac{1}{4}$  brevior, ad medium fissa, ciliolata; arista cc. 20 mm. lg., cuius columna subulam aequat. Spiculae tabescentes pedicello articulo paullo longiori, linearis, margine articulo contiguo eodem modo ut articolus ciliato insidentes, linearis-lanceolatae, 5 mm. lg., gluma I<sup>a</sup> acuta brevisepta obsolete 5-nervis; II<sup>a</sup> 1-nervis; III<sup>a</sup> brevior, hyalina, reliqua 0.

*Africa centralis*: ad flumen Tokulo in terra Djur leg. Schweinfurth (1870) nr. 4271.

*A. scabifloro* Rupr. apud Hack. in Mart. Fl. Bras. Vol. II. pars III p. 299 subaffinis; hic vero differt gluma Ima spiculae sessilis linearis-oblonga obtusissima tuberculis elevatis exasperata etc.

5) *A. cirratus*. Perennis. Innovations extravaginales. Culmi cc. 50 cm. alti, erecti, glaberrimi, e nodo penultimo ramulum brevem floriferum agentes v. simplices. Vaginae teretes, glaberrimae, ligula oblonga, 2 mm. lg., rotundato-truncata, glabra. Laminae e basi angustata sublanceolato-lineares longissime setaceo-acuminatae, 8—12 cm. lg., 3—4 mm. lt., glabrae v. innovationum basi fimbriatae, margine remote spinuloso-ciliatae, ceterum laeves. Spathae spicarum propriae 5—6 cm. lg., angustae, pedunculum spicae apice subdilatatum glabrum subaequantes. Spicae graciles cc. 5 cm. lg., glabrescentes, virides; articuli (cc. 10) spicula  $\frac{1}{3}$ — $\frac{1}{4}$  breviores, subgraciles, apice oblique cupulati, margine exteriore infra apicem breviter ciliati, ceterum glaberrimi, basi fasciculo pilorum articulo 3-plo breviore muniti. Spiculae ♀ linearis-lanceolatae, 9 mm. lg.; gluma Ima coriacea, longe acutata, minute bimucronulata, carinis dense serrulato-scabra, manifeste 7—9-nervis, glaberrima callo breviter piloso; IIa obtusiuscula, carina scabra, margine ciliata; IVa ad  $\frac{3}{4}$  usque fissa, ciliolata; arista cc. 16 mm. lg., columnâ vix exsertâ subulam albida subaequante. Spiculae masculae pedicello gracili articulo paullo breviori margine exteriore cirro infraapicali denso longiusculo munito insidentes, linearis-lanceolatae, 7—8 mm. lg., muticæ; gluma Ima multinervis, IIa, IIIa et IVa subdecrecentes.

*America borealis*: Inter civitatem Texas orient. et El Paso in civit. Neo-Mexicana leg. Ch. Wright nr. 804 et 2105; prope Silver City (Greene).

Affinis *A. tenero*, qui differt articulis glabris spiculis ♀ lanceolatis 4—5 mm. longis, foliis margine scaberulæ etc.

6) *A. imberbis*. Perennis; innovationes (omnes?) intravaginales. Culmi graciles, 50—70 cm. alti, glaberrimi, simplices v. ramum unicum subfastigiatum agentes. Vaginae teretiusculæ, glaberrimæ; ligula rotundata, 1 mm. lg., glabra. Laminae e basi subangustata lineares, setaceo-acuminatae, 10—20 cm. lg., 1—2 mm. lt., planæ, subtus glaucescentes, glaberrimæ, etiam margine vix scaberulæ. Spathae spicarum propriae strictæ, 5—6 cm. lg., truncatae et saepe mucronatae v. lamina brevi instructæ, pedunculo spicae glaberrimo plerumque multo breviores. Spicae crassiusculæ, 5—6 cm. lg., glaberrimæ,

virides; articuli spiculâ paullo breviores, crassissimi, clavati, apice 1.9 mm. lati, oblique cupulati, dorso margine que glaberrimi, ima basi fasciculo pilorum brevissimo stipati. Spiculae sessiles linear-lanceolatae 8—9 mm. lg.; gluma Ima coriacea, a  $\frac{1}{3}$ , inferiore sensim angustata, acutissima, subintegra, apice leviter extus curvata, nervis 10—12 (nullo medio) aequalibus percursa, dorso glaberrima, carinis scaberrima, callo glabriuscule; II<sup>a</sup> obtusa, mucronulata, carina laevi; IV<sup>a</sup> ad  $\frac{1}{3}$  vel vix ad  $\frac{1}{2}$ , usque fissa, ciliata; aristae 10—14 mm. longae columna nunquam exserta subulâ tenerrima duplo brevior; Va quam II<sup>a</sup> 3-plo brevior, ovato-lanceolata, glabra. Spiculae masculae (?) pedicello crassiusculo spiculam sessilem aequanti apice profunde bidentato glaberrimo insidentes, linear-lanceolatae, 6 mm. lg., glabrae, muticae; gluma Ima acuminata v. mucronulata, multinervis, II<sup>a</sup>, III<sup>a</sup>, IV<sup>a</sup> vix breviores; antherae saepe ad rudimenta redactae.

Paraguay: Cerro Peron, lg. Balansa nr. 214.

Affinis *A. tenero*, qui differt pedicello spiculae masculae obsolete bidentulo altero margine ciliato vel circato, spiculae ♀ 4—5 mm. longae gluma Ima 5—7-nervi, spicis gracilioribus etc.

7) *A. gracilipes*. Perennis. Innovationes extravaginales, demum valde elongati, culmos floriferos aequantes, basi graciles, superne robusti, polyphylli. Culmi inferne valde gracieles, superne robusti, 50—60 cm. alti, valde foliosi, superne ramosi, ramis brevibus, erectis, congestis; primariis 2—3-nodibus secundarios brevissimos confertos agentibus, cunctis paniculam foliosam linearem cc. 8—12 cm. longam formantibus. Vaginae compressae, glaberrimae; ligula brevissima, truncata. Laminae lineares, acutiusculae, 5—7 cm. lg., 4 mm. lt, utrinque (marginе excepto) laeves, glabrae. Spathae spicarum propriae cc. 2 cm. lg., acutae, spicae pedunculum clavato-urceolatum glabrum plerumque triplo superantes. Spicae 4—6-articulatae, 1.5—2 cm. longae rhachi undulata; articuli spicula  $\frac{1}{3}$  breviores, crassiusculi, (apice 1 mm. lati), spiculam crassitudine subsuperantes, apice rectiuscule cupulati, dorso scaberrime punctati, marginibus a  $\frac{1}{3}$ , inferiori ad apicem usque laxiuscule accrescendo-ciliati, ciliis summis articulum subaequantibus. Spiculae sessiles linear-lanceolatae, 5 mm. lg., pallidae; gluma Ima coriaceo-chartacea ab  $\frac{1}{3}$ , v.  $\frac{1}{4}$  inferiore sensim angustata, acuta, subintegra, praeter nervos carinales scabros tenuiter

2—3-nervis, dorso toto scabro-punctata, callo glabro; II<sup>da</sup> acuta, carina scabra; IV<sup>a</sup> ad  $\frac{9}{10}$  usque fissa; aristae 9 mm. longae columna inclusa, subulam subaequans. Antherae 3, quarum 1 magis evoluta. Spiculae tabescentes pedicello articulo simillimo demum arcuato-patenti insidentes, linearisubulatae, 2.5—3 mm. lg.; gluma Ima acuminata breviter mucronata; reliqua 0.

Paraguay. St. Barbara pr. Villa Rica, in pratis uliginosis leg. Balansa n. 278.

Affinis *A. condensato* Kunth, qui differt spiculae sessilis gluma Ima laevi, callo breviberbi, articulis spicae gracilibus spiculam aequantibus innovationibus culmo multo brevioribus, culmo basi haud tenuiore.

8. *A. cubensis*. Perennis. Innovationes omnes extravaginales. Culmi graciles 50—70 cm. alti, glaberrimi, simplices vel ramos 1—2 filiformes elongatos simplices agentes. Vaginae teretes glaberrimae. Ligula brevissima, rotundata, longe barbata. Laminae inferiores 8—12 cm. lg., superiores sensim breviores, omnes filiformes, compressae, convolutae, (diametro 0.6—0.7 mm.) acutiusculae, glaberrimae (excepta basi saepissime villosa), virides, rigidulae, fere omnino e costa media crassa constantes. Spathea spicarum propriae angustissimae, cc. 5 cm. lg., absque laminae rudimento, pedunculo apice leviter cupulato-dilatato scaberulo plerumque duplo breviores. Spicae graciles 4—5 cm. lg., laxiflorae, subnutantes (?) pare pilosae, pallide virescentes, rhachi stricta v. levissime undulata; articuli spiculam subaequantes linearisfiliformes, parum dilatatae, apice subito incupulata 0.9 mm. latam a beantes, dorso minute hirtulae utroque margine a  $\frac{1}{4}$  inferiore ad apicem usque pilis laxiusculis patentibus accrescentibus, summis articulo plus duplo brevioribus, ciliati. Spiculae sessiles oblongo-lanceolatae 5—5.5 mm. lg.; gluma Ima breviter acutata, acutiuscula, integra, dorso plano minutissime hirtula, 5—7-nervis, nervis in  $\frac{1}{2}$ , superiore distinctioribus, callo breviberbi; II<sup>da</sup> acutissima, minute hirtula; IV<sup>a</sup> quam II<sup>da</sup> paullo brevior, linearis oblonga, infra apicem brevissime bidentulo aristam exserens circ. 7 mm. longam, cuius columna inter glumas occulta oligospira subulâ plus duplo brevior est. Spiculae tabescentes pedicello articulo simillimo arcuato-patenti insidentes, subulato-

lanceolatae, 2·5 mm. lg.; ad glumam Ima in acumen mucroniforme attenuatam 3-nervem, et II<sup>da</sup> pusillam redactae.

Cuba, lg. Wright nr. 3898.

Affinis *A. gracili* Spreng., qui differt spicis dense sericeo-villosis, spiculis lanâ suboccultis, gluma IV<sup>a</sup> ad  $\frac{1}{4}$ — $\frac{1}{2}$ , fissa.

B) Sect. *Heteropogon*.

9) *A. leptocladus*. Perennis. Innovationes extravaginales. Culmi graciles, 50—60 cm. alti, e nodis inferioribus ramos floriferos elongatos fastigiatos simplices gracillimos agentes, superne simplices, sub spica longe nudi, ibique scaberuli, ceterum laeves, teretiusculi. Vaginae teretiusculae, glaberrimae; ligula oblonga 1·5 mm. lg., ciliolata. Laminae e basi subangustata lineares vel sublanceolato-lineares, e  $\frac{1}{3}$  v.  $\frac{1}{4}$  inferiore sensim in acumen setaceum attenuatae, 6—10 cm. lg., 2—3 mm. lt., vernatione convoluta, adultae planae, virides, glabrae, utrinque marginibusque scaberulae, nervo medio tenuissimo minime carinante percursae; summa brevis, setiformis. Spica subrobusta, erecta, 3·5—4·5 cm. (demtis aristis) longa, virescens, extus glabra. Spicularum paria 4—6 inferiora mascula, rhacheos articulis glabris scabris, paria reliqua heterogama, rhacheos articulis pedicellisque masculis linearibus, utrinque breviter rigideque albo-ciliatis. Spiculae sessiles ♂ cum callo rectiusculo pungente ante glabro, ad latera breviter albo- v. fulvescenti-barbato 2 mm. longo 7 mm. lg., semper (etiam maturae) virescentes; gluma Ima linear-oblonga, herbaceo-chartacea, truncatula, 6-nervis, loco nervi mediis sulco longitudinali exarata, toto dorso albo-hirtula; II<sup>da</sup> obtusiuscula, obtuse carinata, glabra; III<sup>a</sup> apice ciliata; IV<sup>a</sup> e basi angusta hyalina mox in aristam 40—50 mm. longam validam incrassata, cuius columna rufescens albo-hirtula supra medium geniculata subulam fulvam scabram  $\frac{1}{3}$ — $\frac{1}{2}$  superat; Va duplo brevior, linearis, ciliata; antherae 1—1·2 mm. longae; spiculae pedicellatae ♂ oblique lanceolatae, subtortae, e viridi et rufescente variegatae, glaberrimae v. pilis parcis adspersae; gluma Ima acuta margine altero latiuscule membranaceo-alata, 9-nervis; reliquae decrescentes ciliatae. Antherae 3 mm. lg.

Paraguay: in planicie Paraguai, in pasquis, Balansa nr. 222, in collibus incultis prope Itape, nr. 222a.

Ab *A. contorta* L. notis typis remotis expressis valde diversus.

10. *A. Bellariensis.* Perennis? (Partes inferiores desunt.) Culmi ultra 50 cm. alti, geniculato-ascendentes, glaberrimi, ex internodiis 1–2 superioribus ramos solitarios breves simplices agentes, ad apicem usque vaginati. Vaginae teretes, glaberrimae; ligulae loco series duae pilorum densiorum, altera brevior, altera longior. Lamina e basi aequaliter auguste lineares, setaceo-acuminatae, cc. 20 cm. lg. et 3 mm. lt., planae, (siccae convolutae), virides, subtus margineque laevissimae, supra minute puberulae, costa media tenuissima haud carinante percurseae. Spicae basi vagina summa spathiformi primo omnino teciae, demum basi tantum inclusae, 5–6 cm. lg., graciliores, compressiusculae, flavo-virescentes, extus glabrescentes, e spicula-rum paribus 2–4 inferioribus masculis, superioribus heterogamis formatae; articuli rhacheos lineares. etiam inter spiculas ♂ albo-ciliati, apice obliquissime secedentes. Spiculae ♀ cum callo recto pungente 1.5 mm. longo breviter albo-barbato 8 mm. lg., lineari-oblongae semper pallidae; gluma Ima chartacea, obtusiuscula, margine angustissime implicata, carinis scabris, ceterum glaberrima, 6-nervis, loco nervi medii sulco profundo angusto exarata; II<sup>a</sup> obtusa, 5-nervis; III<sup>a</sup> parum brevior, enervis; IV<sup>a</sup> III<sup>a</sup> aequans, e basi hyalina lineari in aristam validam 35–40 mm. longam incrassata, ad hujus insertionem saepe denticulis 2 aucta; aristae columna spadicea supra medium obsolete geniculata secundum spiras longiuscule albo-ciliata, subulâ glabrâ parum brevior; Va 0; antherae 3 mm. lg. Spiculae pedicellatae lanceolatae 8 mm. lg., acutissimae, gluma 7-nervis, glabra; II<sup>a</sup> I<sup>a</sup> aequans, acutissima, 5-nervis, reliquae decrescentes.

India orientalis in planicie alta Dekhan ad castellum Ghooty-hill-Fort prope Bellari, Herb. Wight nr. 2321. (In herb. Neesii *A. contorto* admixtum inveni, a quo characteribus litteris remotis expressis maxime differt.)

#### C. Sect. *Cymbopogon.*

11) *A. diplandrus.* Perennis; culmi usque 3 m. alti, robusti, inferne simplices, superne paniculatim ramosi, glabri v. ad nodos breviter pubescentes. Vaginae glaberrimae vel ad oras fimbriatae; ligula brevissima, truncata, ciliolata. Laminae e basi aequilatae lineares, longissime setaceo-acuminatae, 40–50 cm. lg., 5–7 mm. lt., rigidae, pallide virides, margine serrulato-scaberrimae ceterum laeves v. scaberulae, supra prope basin pilis longiusculis stipatae, costa media crassiuscula obtuse

carinata lateralibusque prominulis percursae. Panicula foliosa elongata 50—60 cm. lg., linearis, laxiuscula; rami bini, primarii 4—5-nodes, secundarii bini 1—2-nodes, omnes erecti, v. leviter incurvi, ad nodos rectos barbulati angulisque superne ciliati. Spathae propriae anguste lanceolatae 2.5—4 cm. lg., glabrae, pedunculum spicarum communem rectum apice breviter villosum sub anthesi duplo superantes. Spicae erecto-patulæ crassiusculæ, 1—1.5 cm. lg., singulae spiculas fertiles 2—4 continentæ, utraque basi paribus duobus spiculæ muscularum stipata, altera subsessilis, altera pedicello vix 1 mm. longo setuloso fulta; articuli rhacheos pedicelli que ♂ spicula duplo breviores, pennato-ciliati, ciliis articulo 3—4-plo brevioribus. Spiculae ♀ linearis-oblongæ 5—6 mm. lg., viridulæ v. violascentes; gluma Ima obtusa, 7-nervis, (nervis inferne subobsoletis) versus apicem spinuloso-ciliata ceterum glabra, scabra, dorso esulca, callo acutiusculo 1 mm lg. pilis spicula 4-plo brevioribus vestito; IIa obtusissima, 3-nervis, carina superne ciliato-scabra; IVa breviter bidentata, glabra; aristæ validæ 45 mm. longæ columna pallide fusco-hispida geniculata subulam aequans. Spiculae pedicellatae ♂ sessiles aequantes linearis-lanceolatae viridulæ: gluma Ima mucronata v. mutica, superne spinuloso-ciliata, 9-nervis; reliquæ decrescentes. Antheræ 3 mm. lg. Spiculae infimæ paullo longiores, aliae sessiles muticæ, obtusiusculæ, aliae breviter pedicellatae saepe mucronulatae.

Africa centralis: ad Seriba Ghattas in terra Djur leg. Schweinfurth. nr. 2002 (forma nodis puberulis); prope Tondj in terra Bongo nr. 2094 (forma nodis glabris, vaginae oris fimbriatis).

Affinis *A. arrhenobasi* Hochst. qui differt spicarum pari imo (nec dñobus paribus) masculo etc.

12) *A. Barteri* Annuus. Culmi graciles, cc. 80 cm. alti, simplices, erecti. Vaginae dorso carinatae, laevissimæ. Ligula brevissima truncata. Laminae e basi aequilata lineares longissime setaceo acuminatae (20—25 cm. lg., 2—3 mm. lt.), planæ utrinque margineque scaberrimæ glabrae v. inferne ciliatae, costa media angusta acute carinata percursae. Panicula foliosa linearis, densiuscula, 15—20 cm. lg.; rami omnes filiformes, erecti, scaberrimi, inferiores 2—3ni, primarii 1—2-nodes, secundarios fasciculatos uninodes ferentes, nodis glabris, rectis. Spathae propriae anguste lineares, 4—5 cm. lg., carinatae,

*carina scabrae*, *glabrae* v. *inferne pilis adspersae*, *pedunculum spicarum communem rectum filiformem superne laxe barbatum* (pilis haud papillosis) primo pluries superantes, demum aequantes. *Spicae brevissimae*, 6—8 mm. lg., altera subsessili altera pedicello 5—7 mm. longo filiformi glaberrimo recto insidens, utraque spiculam ♀ unam adstantibus 2 masculis continens et spicularum muscularum pari uno stipata; articulus infra spiculam ♀ brevissimus, oblique secedens, glaber; pedicelli spicularum neutrarum 2·5 mm. longi, linearifiliformes, albo-ciliati. *Spicula ♀* cum callo stipitiformi 2 mm. longo tenuiter albo-sericeo-barbato 5·5 mm. lg., lineario-oblonga, pallide viridula; gluma Ima chartaceo-membranacea, anguste truncata, 7-nervis, nervis infra medium evanescentibus extus plus minusve prominulis, glabra, margine superne scabra, exsulca; II<sup>a</sup> oblonga, obtusiuscula, mutica, 3-nervis; IV<sup>a</sup> 1/3 brevior, breviter acuteque bifida, glabra; aristae fere e basi glumae nascentis validiusculae 42 mm. lgae, columna pilis fulvis 4 mm. longis (i. e. diametrum columnae sexies-octies superantibus) vestita in 1/3 superiore geniculata subulam scabram aequans. *Spiculae* pedicellatae terminales neutrae 4 mm. lg., linear-lanceolatae, sordide violascentes; gluma Ima 5-nervis, glabra, breviter aristulata, II<sup>a</sup> 3-nervis, ciliata; reliqua 0. *Spiculae* involucrantes masculae lineario-oblongae obtusiusculae sordide rubentes; gluma I<sup>a</sup> et II<sup>a</sup> ut in pedicellatis, III<sup>a</sup> et IV<sup>a</sup> lineares, muticae, retro-ciliatae. *Antherae* 1 mm. lg. *Spiculae ♂* altera sessilis altera pedicello 1·5 mm. longo glabriusculo insidens.

*Africa tropica*: ad fl. Quorra in expeditione Baikieana leg. Barter (1857—9).

Affinis *A. filipendulo* Hochst. qui differt culmis a basi ramosis, spiculis ♀ 7—8 mm. longis, aristae columna breviter rufo-hispida.

13) *A. macrolepis*. Perennis. Culmi 1·5—2·5 m. alti, erecti, inferne simplices, ab 1/3 inferiore florifero-ramosi. glaberrimi. Vaginae teretes, glaberrimae. Ligula ovata, fusco-membranacea, 2—3 mm. lg., glabra. Laminae e basi subcontracta lineares, 20—30 cm. lg., 4—5 mm. lt., setaceo-acuminatae, planae, obscure virides, subtus scaberulae, supra laeves, margine scabrae, glabrae, costa media crassiuscula subtus valde prominente percursae. Panicula foliosa 30—40 cm. lg., laxiuscula, erecta; rami in nodo secundo 5ni (primarii 1—2, secundarii 3—4),

uninodes, breves, erecti, firmuli, glabri, nodis rectis. Spathae propriae 5—7 cm. lg., anguste lanceolatae, setaceo-acuminatae, glabrae, subherbaceae, pedicellum spicarum communem rectum superne barbatum (pilis epapillosis) demum aequantes vel paullo superantes. Spicae 1.5—2 cm. lg., altera brevissime pedicellata, altera pedicello 4 mm. longo glaberrimo insidens, utraque spiculam ♀ unam continens bractea linearis-oblonga v. linearis-lanceolata 9—12 mm. longa acuta violacea 5—7-nervi glabra fultam, spiculisque 2 masculis pedicellatis (pedicellis breviter pennato-ciliatis) superatam. Spicula ♀ cum callo 5 mm. longo subcurvulo pungentissimo dense breviterque fulvescenti-piloso 12—13 mm. lg., linearis-oblonga, demum viridula: Gluma Ima demum coriaceo-indurata, semicylindrica, apice bidentata inter dentes spinulosos scariosa, dorso sulco profundo exarata, superne punctulato-scabra; II<sup>a</sup> triangulari-acuta apice scariosa submocronata, 3-nervis, scabra; IV<sup>a</sup>  $\frac{1}{3}$  brevior, oblonga, e basi hyalina in aristam inter apicis lobos breves ciliatos, exsertam validissimam cc. 90 mm. longam abiens, cuius columna demum nigrescens brevissime hirtula in  $\frac{1}{3}$  superiore geniculata subulam scaberrimam subsuperat. Spiculae pedicellatae ♂ linearis-lanceolatae 14—15 mm. lg.; gluma I<sup>a</sup> herbacea, plana, 9-nervis, glabra, superne aculeolato-scabra, in aristulam v. mucronem abiens; II<sup>a</sup> acutissima, 3-nervis ut III<sup>a</sup> et IV<sup>a</sup> (lineares) retrorsum ciliata. Spiculae 2 imae spicae subsessilis ♂, ambae sessiles, pedicellatis similes, paullo latiores, muticae.

*Africa tropica*: ad Seriba Ghattas in terra Djur leg. Schweinfurth nr. 2361 et 2411; ad latus orientale lacus Tanganika prope Gonda leg. Dr. Böhm (nr. 130); Angola ad Malange lg. Dr. Buchner (nr. 35); prope Teba ad fl. Niger leg. Barter in exped. Baikiana.

Affinis *A. Ruprechtii* mihi = *Hyparrhenia Ruprechtii* Fourn. (Mexico Galeotti nr. 5697), qui differt vaginis hirsutis, spathis propriis cano-villosis, spicula ♀ bracteola 5 mm. longa fulta, aristae columna subulam subdupo superante.

14) *A. Cornucopiae*. Perennis? Culmi arundinacei 2—4 m. alti, simplices, laevissimi. Vaginae teretes glaberrimae; ligula rotundata 3—4 mm. lg., fusco-membranacea glabra. Laminae e basi angustata lanceolato-lineares acuminatissimae 30—50 cm. lg., 6—10 mm. lt., planae, rigidulae, subtus scaberulae, margine scabrae, costa media crassa subtus carinante percursae. Panicula foliosa elongata (20—40 cm. lg.) laxiuscula, erecta;

rami 4—6ni, primarii plerumque 2-nodes, fasciculum secundariorum quinorum agentes; secundarii uninodes, tenues, interdum arcuato-deflexi, ad nodos haud geniculati. Spathae propriae elongato-lanceolatae 5—7 cm. lg., setaceo-acuminatae, virides, herbaceae, glabrae, pedunculum spicarum communem superne incurvum et e spatha emergentem prope curvaturam pilis albis longiusculis barbatum 2—3-plo superantes. Spicae 2·5 cm. lg., obsolete pedicellatae, pedicellis nempe ad pulvina valde epinastica superne villosula redactis, angulo recto patentes v. deflexae, spiculam ♀ unam basi bractea cornucopiaeformi 1 cm. longa albo-membranacea apice truncato crenulata glaberrima ful-tam, adjectis spiculis 2 masculis continentis. Spiculae ♀ cum callo subcurvato pungente dense fulvo-sericeo-piloso 5 mm. longo 15 mm. lg., linearis-oblunga subcylindrica brunneo-virides apice adustae; gluma Ima coriacea, demum valde indurata, apice breviter membranaceo angustato retusa v. bidenticulata, dorso toto hispidula, obsolete 7-nervis, nervo medio in sulco profundo latente; II<sup>a</sup> Imam subsuperans, coriacea, involuta, linearis-oblunga, triangulare-obtusiuscula, ecarinata, in aristam rectam tenuem subaequantem excurrens; IV<sup>a</sup>  $\frac{1}{4}$  brevior, ad  $\frac{1}{3}$  usque in lobos 2 acutos glabros fissa ceterum jam a basi in aristam validissimam 100—110 mm. longam abiens, cuius columna (diam. 1·3 mm.) dense aureo-hirta supra medium geniculata subulam tenuem scaberrimam subaequat; Va parvula. Antherae 3 mm. lg. Spiculae masculae alterius spicae 2 infimae subsessiles, 12 mm. lg., lanceolatae, muticae, reliquae (ad latera spiculae ♀) pedicellatae, pedicello brevi gilvo-sericeo-villoso, linearis-lanceolatae, 20—26 mm. lg.; gluma Ima plana, livida, plus quam viginti-nervis, glabra, superne ad margines scabra, in aristam ipsa 2—3-plo breviorem abiens; II<sup>a</sup> setaceo-acuminata, 5-nervis; III<sup>a</sup> II<sup>a</sup> similis, IV<sup>a</sup> subulata; stam. 3, antheris 5 mm. lg.

*Africa centralis*: ad Seriba Ghattas in terra Djur leg. Schweinfurth nr. 2331.

Species maxime insignis, praecipue bractea magna cyathiformi; nullae nisi praecedenti affinis.

15) *A. grandiflorus*. Culmi arundinacei, erecti, teretes, glaberrimi, simplices. Vaginae teretes, striatae, glaberrimae, summa laminam brevem setiformem ferens vel aphylla. Ligula . . . . Lamineae . . . . Spicae binae robustissimae, demis aristis

10—12 cm. lg., a vagina summa linear-lanceolata acuminatissima 20—30 cm. longa parum remota vel basi inclusae, virescentes, altera subsessilis, altera breviter pedicellata. Spicularum paria 7—9 inferiora homogama, mascula, mutica, superiores heterogama. Rhachis inter spiculas masculas satis tenax, articulis pedicellisque spicularum ♂ ipsarum duas partes aequantibus, glaberrimis oblique secedentibus; articuli inter spiculas ♀ has subaequantes, obliquissime secedentes, bracteola cupuliformi postice longiori coronati, a basi ad  $\frac{3}{4}$  utriusque marginis albo-ciliati, ciliis summis articulo 3—4-plo brevioribus. Spiculae ♀ cum callo acuto apice curvato dense albo-sericeo-barbato 4—5 mm. longo 12 mm. longae, obovato-oblongae, pallide virescentes; gluma Ima coriacea, obtusa, marginibus late inflexa, flexuris parum manifestis laevibus, praeter nervos in flexuris latentes enervis, glaberrima, dorso planiuscula; II<sup>da</sup> ovali-oblonga obtusa mucronata dorso rotundata 1-nervis, praeter margines hyalinos ciliatos glaberrima; IV<sup>a</sup>  $\frac{1}{4}$  brevior, breviter bifida, glabra, e basi hyalina mox in aristam-longissimam (120—160 mm. lg.) validissimam subconcolorem (fulvam) incrassata, cujus columna hirtula medio flexuosa subulam scabram rectam aequat; V<sup>a</sup> quam II<sup>a</sup> duplo brevior, obovato-oblonga, enervis, ciliata. Spiculae ♂ pedicellatae 18—20 mm. lg., subconvolutae glabrae: glumia Ima herbacea, acuta, marginibus angustissime implicatis, carinis inaequaliter alatis; ultra 30-nervis, laevis interdum versus margines obsolete scrobiculata; II<sup>da</sup> acutissima, 7-nervis; III<sup>a</sup> 3-nervis, IV<sup>a</sup> enervis; Antherae 10 mm. lg. Spiculae ♂ sessiles (inferiores) 10 mm. lg., glumis ut in spiculis ♀, sed callo nudis et muticis.

*Africa tropica*: ad flumen Niger prope Teba leg. Barter (nr. 1373) in expedit. Baikieana.

Transitum facit a sect. *Cymbopogone* in sect. *Heteropogonem*, cui spicularum fabrica proximus; sed spicae binae. Spiculae, praesertim pedicellatae, maxima generis.

(Schluss folgt.)

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