

## Phylogenetic position and revised classification of *Acacia s.l.* (Fabaceae: Mimosoideae) in Africa, including new combinations in *Vachellia* and *Senegalia*

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### Abstract

Previous phylogenetic studies have indicated that *Acacia* Miller *s.l.* is polyphyletic and in need of reclassification. A proposal to conserve the name *Acacia* for the larger Australian contingent of the genus (formerly subgenus *Phyllodineae*) resulted in the retypification of the genus with the Australian *A. penninervis*. However, *Acacia s.l.* comprises at least four additional distinct clades or genera, some still requiring formal taxonomic transfer of species. These include *Vachellia* (formerly subgenus *Acacia*), *Senegalia* (formerly subgenus *Aculeiferum*), *Acaciella* (formerly subgenus *Aculeiferum* section *Filicinae*) and *Mariosousa* (formerly the *A. coulteri* group). In light of this fragmentation of *Acacia s.l.*, there is a need to assess relationships of the non-Australian taxa. A molecular phylogenetic study of *Acacia s.l.* and close relatives occurring in Africa was conducted using sequence data from *matK/trnK*, *trnL-trnF* and *psbA-trnH* with the aim of determining the placement of the African species in the new generic system. The results reinforce the inevitability of recognizing segregate genera for *Acacia s.l.* and new combinations for the African species in *Senegalia* and *Vachellia* are formalized.

Numerous phylogenetic studies of *Acacia* Mill. *s.l.* over the last 10 years have shown that *Acacia* is not monophyletic and it is now widely agreed that *Acacia s.l.* needs to be divided into at least five genera corresponding to the former *Acacia* subgenus *Phyllodineae* (DC.) Ser., *Acacia* subgenus *Acacia*, *Acacia* subgenus *Aculeiferum* Vassal section *Aculeiferum* Vassal, *Acacia* subgenus *Aculeiferum* section *Filicinae* (Benth.) Taub. and a group of species from North and Central America related to *A. coulteri* Benth. (Luckow *et al.*, 2003; Miller *et al.*, 2003; Maslin, Miller & Seigler, 2003a; Maslin, Orchard & West, 2003b; Seigler & Ebinger, 2005; Bouchenak-Khelladi *et al.*, 2010; Miller & Seigler, 2012).

However, despite the clear resolution of five independent lineages in *Acacia s.l.*, some taxa still remain unplaced in the molecular phylogenetic analyses. A good example is *Senegalia visco* (Lorenz ex Griseb.) Seigler & Ebinger which, although having been transferred to *Senegalia* Raf., does not show a close relationship to other members of the former *Acacia* subgenus *Aculeiferum* (Seigler, Ebinger & Miller, 2006). Inclusion of such species could still result in the recognition of additional genera in the future.

Although the above-mentioned groups correspond to previously established infrageneric groups in *Acacia*, with generic names available for all, the Australian *Acacia* subgenus *Phyllodineae* (*Acacia* s.s.) comprises the largest number of species (c. 1021 species; Thiele *et al.*, 2011). In order to preserve nomenclatural stability according to the International Code of Botanical Nomenclature, Orchard & Maslin (2003, 2005) proposed retypification of the genus from *A. nilotica* (L.) Willd. ex Del. (= *Acacia scorpioides* (L.) W.Wight), a species widely distributed from Africa to India, to *A. penninervis* Sieb. ex DC., an Australian species. This proposal was adopted at the 2005 International Botanical Congress (IBC) in Vienna (McNeill *et al.*, 2006). However, the original proposal and its subsequent adoption sparked controversy, calling into question the basis of the proposal and the legitimacy of the procedures followed (because it was prior to the Committee's consideration) and the validity of the decision (Moore *et al.*, 2010). The 2011 IBC meeting in Melbourne finally ratified the previous decision, despite the long-standing controversy, paving the way for name changes as proposed by Orchard & Maslin (2005), who recommended recognition of the following genera: *Acacia* s.s. (formerly *Acacia* subgenus *Phyllodineae*), *Vachellia* Wight & Arn. (formerly *Acacia* subgenus *Acacia*), *Senegalia* (formerly *Acacia* subgenus *Aculeiferum* section *Aculeiferum*), *Acaciella* (formerly *Acacia* subgenus *Aculeiferum* section *Filicinae*) and *Mariosousa* Seigler & Ebinger (species belonging to the *Acacia coulteri* group; Murphy *et al.*, 2010; Thiele *et al.*, 2011).

Of the five newly recognized genera, *Senegalia* and *Vachellia* are found in Africa (including Madagascar) and are represented by c. 69 and 73 species, respectively (Lewis, 2005). These are trees and shrubs, many with wide geographical ranges from South Africa north to the Mediterranean mainly restricted to dry savannas and semi-desert scrub habitats (Ross, 1979; Dharani, 2006).

Macromorphological characters important in assigning African taxa of *Senegalia* and *Vachellia* to the appropriate genus include the presence and type of prickles and/or stipular spines (Miller & Bayer, 2003; Seigler *et al.*, 2006). *Senegalia* spp. can be unarmed or armed with prickles, but always lack stipular spines. When armed, the prickles are mainly scattered, sometimes grouped in twos or threes near the nodes (Ross, 1979). *Senegalia* spp. possess bipinnate leaves with sessile or stipitate glands in variable positions on the petioles and leaf rachis. Furthermore, they have porate pollen without columellae, whereas *Vachellia* spp. have colporate pollen with columellae (Miller & Bayer, 2003; Maslin *et al.*, 2003a; Thiele *et al.*, 2011). Unlike *Vachellia*, members of *Senegalia* do not have a true inflorescence involucre (Seigler *et al.*, 2006). Inflorescences in *Senegalia* are either capitate or spicate. Bouchenak-Khelladi *et al.* (2010) reported that the most recent common ancestor of *Senegalia* probably originated in the late Oligocene-early Miocene about 27.9-16.8 Mya, most likely in American forests. They hypothesized that two separate dispersal events from the Americas to Africa occurred in the late Miocene, coupled with a shift from closed to open habitats, probably in Africa. *Vachellia* spp. are armed with paired stipular spines at the nodes that can either be straight, deflexed or weakly falcate. In some species they are enlarged, forming ant domatia [e.g. *Vachellia*

*luederitzii* Engl., *V. collinsii* (Saff.) Seigler & Ebinger, *V. cochliacantha* Humb. & Bonpl. and *V. drepanolobium* Sjöstedt; Ross, 1979, Maslin *et al.*, 2003a]. The presence of spinescent stipules is the key diagnostic character distinguishing *Vachellia* from *Senegalia*. Nearly all of the species with spinescent stipules have capitate inflorescences (Ross, 1979), with the majority having pale yellowish–white flowers. However, some have bright golden or orange–yellow or, rarely, pinkish or purple flowers (Ross, 1979).

Morphological characters considered important in defining major groups of *Acacia s.l.* were reviewed by Maslin *et al.* (2003a) and Seigler *et al.* (2006). Despite the major macro- and micromorphological differences between *Senegalia* and *Vachellia* (see Table 1), it remains difficult to demarcate monophyletic lineages within these genera based only on morphological traits (Ross, 1979; Miller & Bayer, 2003).

Following the results of the above-mentioned studies demonstrating the disintegration of *Acacia s.l.* into five segregate genera and the recent decision from the 2011 IBC meeting in Melbourne, there is a clear need to determine the generic placements of all the African species and to formalize new name combinations for these species. We expect that a wider sampling covering the African species would provide a plausible picture of the true relationships within the genera. This will facilitate the implementation of the new classification in Africa, particularly in herbaria, by providing names for the African taxa of *Senegalia* and *Vachellia*. In this study, we determined the position of the African *Acacia* spp. in the new generic classification using a comprehensive sampling covering the African species based on molecular data from three plastid regions, *matK/trnK*, *trnL-trnF* and *psbA-trnH*.

**Table 1.** Morphological differences between *Vachellia* and *Senegalia* (Maslin *et al.*, 2003b)

Character	<i>Vachellia</i>	<i>Senegalia</i>
Prickles	Absent	Present
Stipular spines	Present	Absent
Pollen aperture type	Colporate	Porate
Pollen collumelae	Present	Absent
Involucre on peduncle	Present	Absent

## Material and methods

### DNA extraction, amplification and sequencing

Sequences of the following plastid loci were generated in this study: *trnK/matK* (42 taxa); *trnL-trnF* (57 taxa); and *psbA-trnH* (44 taxa). These were combined with existing sequence data from GenBank to represent all major lineages in Mimosoideae, resulting in 36 African *Vachellia* spp. and 32 African *Senegalia* spp. Voucher information and GenBank numbers for sequences for all taxa used in this study are listed in the Appendix.

Laboratory protocols for DNA extraction, PCR amplification and sequencing of the three DNA regions in this study followed Bouchenak-Khelladi *et al.* (2010).

## Sequence editing, alignment and phylogenetic analyses

Complementary strands of the sequenced genes were assembled and edited using Sequencher v.4.8 (Gene Codes Corp., Ann Arbor, MI, USA), aligned using Multiple Sequence Comparison by Log-Expectation (MUSCLE v.3.8.31; Edgar, 2004) and the alignment adjusted manually in PAUP\* (v.4.0b.10; Swofford, 2002). We coded gaps (insertions/deletions) as missing characters, and we excluded sections of ambiguous alignment from the analysis (265 characters from the *trnL-trnF*, 107 from *psbA-trnH* and 167 from *trnK/matK*).

Cladistic analyses for the individual (*trnL-trnF*, *trnK/matK*, *psbA-trnH*) and combined matrices were performed using maximum parsimony (MP) in PAUP\* v.4.0b10 (Swofford, 2002). Heuristic tree searches employed 1000 random sequence additions, keeping ten trees per replicate using tree bisection–reconnection (TBR) branch swapping with MulTrees in effect, with all character transformations treated as equally likely. Trees generated in the initial 1000 replicates were then used as starting trees for a second search with no tree limit to ascertain whether the shortest trees were obtained in the initial search. Delayed transformation (DELTRAN) character optimization was used to calculate branch lengths instead of accelerated transformation (ACCTRAN) because of its reported errors in PAUP v.4.0b10 (<http://paup.csit.fsu.edu/problems.html>).

As all three plastid regions could not be amplified for all taxa included in the study, the effects of the missing data on patterns of relationships and support in the combined matrix were investigated by performing two different combined analyses: (1) a subset of the taxa for which all three loci were sequenced; and (2) all taxa including those for which some loci were missing sequences. Thus, the combined analyses were conducted with all taxa for which any sequence was available and included.

Internal support was estimated using bootstrap analyses (Felsenstein, 1985) implemented in PAUP\* v.4.0b10 (Swofford, 2002) based on 1000 bootstrap replicates performed with equal weights using TBR branch swapping with ten trees held at each step and simple taxon addition. The following scale for boot-strap support percentages (BP) was used: 50-74%, low; 75-84%, moderate; 85-100%, strong.

The individual gene trees were assessed for congruence by visual inspection of the individual bootstrap consensus trees to look for any areas of strongly supported incongruence (Seelanan, Schnabel & Wendel, 1997).

A hierarchical likelihood ratio test implemented in MODELTEST v.3.06 (Posada & Crandall, 1998) was used to determine the appropriate substitution model for each of the three plastid gene sequences based on the Akaike information criterion (AIC; Sugiura, 1978). The optimal models identified were GTR +I +G for *trnK/matK*, TVM +I +G for *trnL-trnF* and TVM +G for *psbA-trnH* (Yang, 1994) with number of rate parameters = 6, rate = gamma, base frequency = empirical, clock = unconstrained and number of



generations = 3 000 000. The combined matrix was analysed using Bayesian inference (BI) by partitioning the sequences according to DNA region to allow independent estimation of parameters for each partition. Site-specific rates of substitution were allowed to vary across partitions as implemented in MRBAYES v.3.1.2 (Huelsenbeck & Ronquist, 2001). Two parallel Markov chain Monte Carlo (MCMC) runs were made for 3 000 000 generations, with trees sampled every 1000 generations, resulting in 3000 trees. The first 1500 trees were discarded as 'burn-in'. The following scale was used to evaluate the posterior probability values (PP): below 0.95, weakly supported; 0.95-1.0 strongly supported.

## Results

The individual plastid gene trees (not shown) were largely congruent (negligible to zero incongruence) and were concatenated for a combined analysis of all three loci. Of the 4718 included characters, 2982 were constant, 1736 (36.8%) were variable and 897 (19%) were potentially parsimony informative. The combined MP analysis resulted in 142 equally parsimonious trees (tree length: 3552 steps; CI = 0.61; RI = 0.83, see Table 2). The combined MP trees are largely congruent with the BI trees, and the BI majority rule consensus tree is presented (Fig. 1) and used as the basis for interpreting and discussing the results. The tree was generally well resolved and major clades received moderate to strong support (Fig. 1).

**Table 2.** Results of parameters estimated from maximum parsimony (MP) analyses of individual and combined data sets

	<i>trnL-trnF</i>	<i>psbA-trnH</i>	<i>trnK/matK</i>	Combined
Number of included positions in matrix	1293	751	2674	4718
Number of variable sites	440 (34.0%)	266 (35.4%)	1590 (59.5%)	1736 (36.8%)
Number of potentially parsimony-informative sites	235 (18.2%)	137 (18.2%)	550 (20.6%)	897 (19.0%)
Number of trees	19	172	256	142
Number of steps (tree length)	831	514	2126	3552
Consistency index (CI)	0.63	0.66	0.64	0.61
Retention index (RI)	0.86	0.86	0.84	0.83
Average number of changes per variable site	1.8	1.9	1.3	2.04

### The *Senegalia* clade

With the exception of three species (*Senegalia visco*, *S. muricata* Britton & Rose and *S. angustifolia* Britton & Rose), *Senegalia*, although not supported in the MP analysis (0.85 PP, Fig. 1A), is monophyletic and sister to a large clade comprising *Mariosousa* + *Acaciella* + Ingeae + *Acacia s.s.* in *Senegalia* two well-defined groups are apparent, that are together sister to *S. vogeliana* (A and B, Fig. 1A). Several African *Acacia s.l.* taxa lacking name combinations in *Senegalia* are placed in this clade.

### The *Mariosousa* + *Acaciella* + ingeae + australian *Acacia s.s.* clade

This clade includes the genera *Mariosousa* (63 BP/1.0 PP), *Acaciella* (75 BP/0.95 PP), and Australian *Acacia s.s.* (70 BP/1.0 PP, Fig. 1A), the last of which is nested in tribe Ingeae. *Faidherbia albida* (Delile) A.Chev. forms a clade with *Zapoteca tetragona* (Willd.) H.M.Hern. (56 BP/0.63 PP), which is sister to the Ingeae + *Acacia s.s.* clade. *Albizia*

Durazz., as currently circumscribed, is potentially non-monophyletic, but the relationships among the three distinct lineages and other genera in tribe Ingeae are too poorly resolved and weakly supported to draw any firm conclusions. *Mariosousa* and *Acaciella* are both robustly supported as monophyletic, as found in previous studies (Clarke, Downie & Seigler, 2000; Miller *et al.*, 2003; Bouchenak-Khelladi *et al.*, 2010; Miller & Seigler, 2012) and form successive sister groups to the Ingeae + *Acacia* s.s. clade.

### **The *Vachellia* clade**

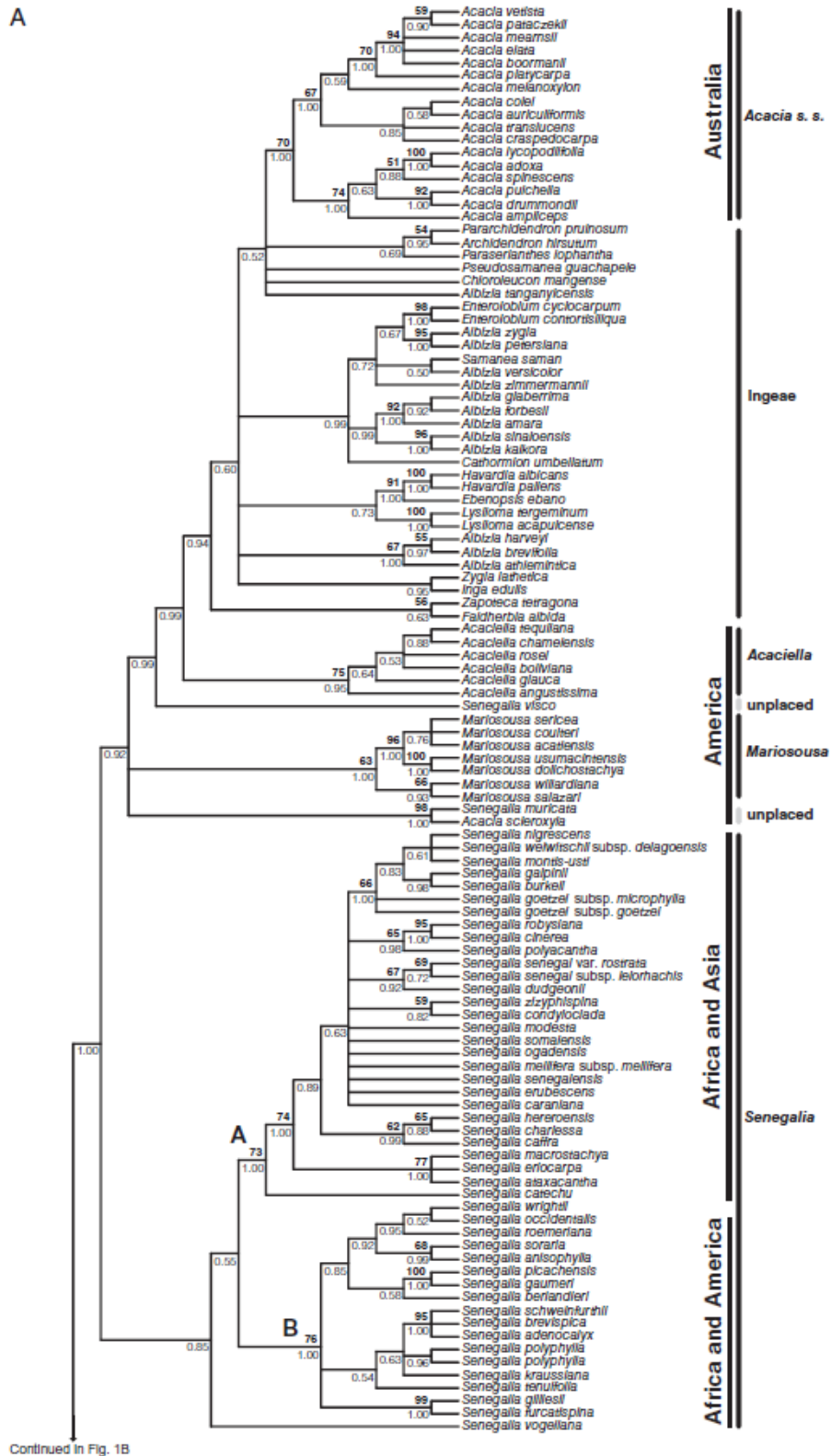
The monophyly of *Vachellia* receives high support (86 BP/1.0 PP; Fig. 1B) and it is embedded in a larger grade of former tribe Mimoseae lineages. *Vachellia natalitia* (E.Mey.) Kyal. & Boatwr. and *V. montana* (P.P.Swartz) Kyal. & Boatwr. form a clade (79 BP/1.0 PP) that is sister to the rest of *Vachellia*. Lack of robustly supported resolution within *Vachellia* precludes detailed discussion of relationships and formal recognition of subclades in the genus. Many of the African *Acacia* s.l. taxa currently lacking combinations in *Vachellia* are placed in this clade. The American taxa (C, Fig. 1B) form a weakly supported monophyletic group nested in the African taxa.

### **Discussion**

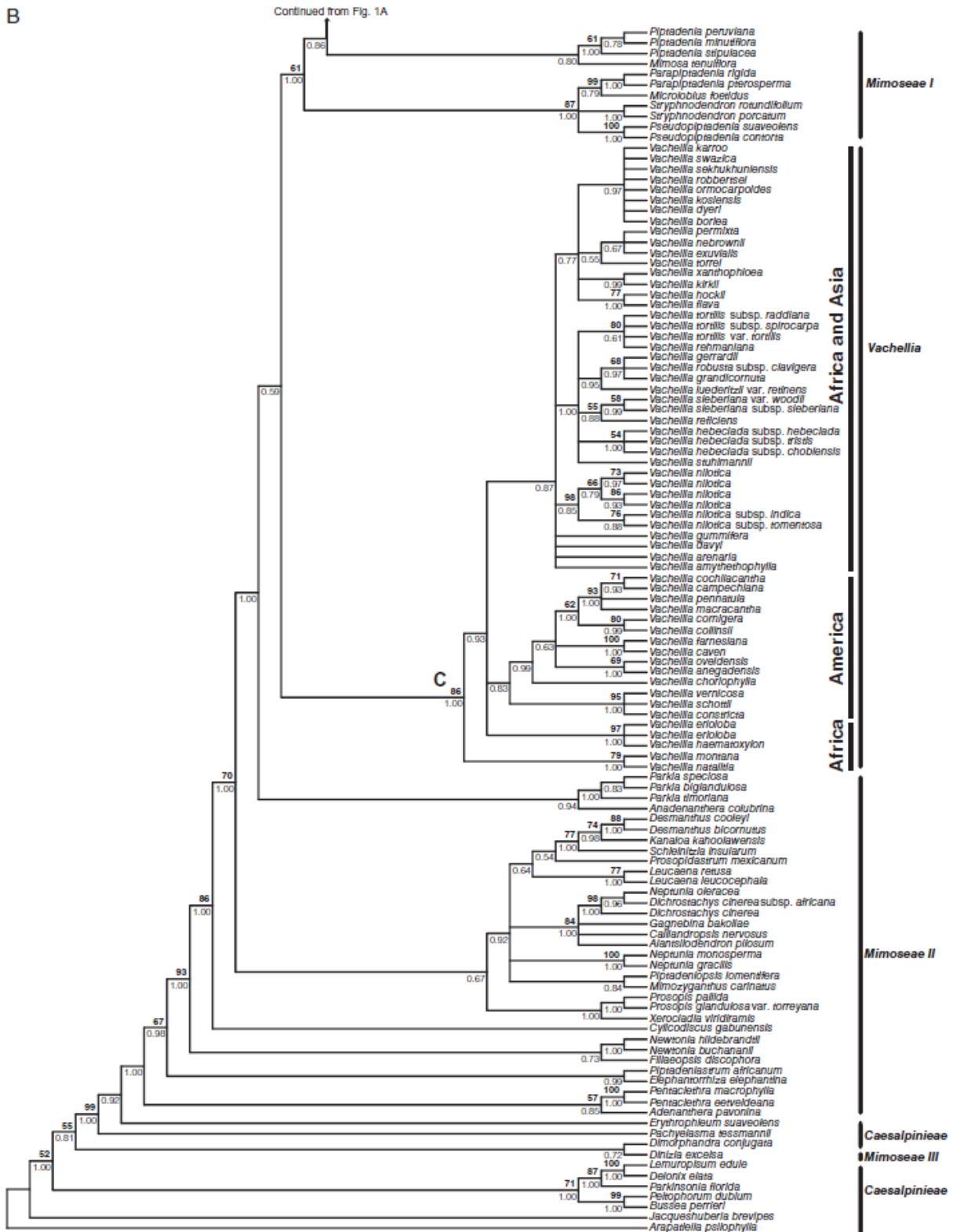
In the interest of clarity, all species discussed here are referred to by their *Vachellia* and *Senegalia* names, even although in some cases the combinations are only effected in this paper. In general, the results are in line with previous studies that demonstrated the non-monophyly of all five traditionally recognized tribes (Clarke *et al.*, 2000; Luckow, White & Bruneau, 2000; Miller *et al.*, 2003; Lavin, Herendeen & Wojciechowski, 2005; Catalano *et al.*, 2008; Bouchenak-Khelladi *et al.*, 2010; Miller & Seigler, 2012).

### **The *Senegalia* clade**

*Senegalia* is represented in Africa, Central and South America and Asia and is sister to a large clade comprising *Senegalia muricata* and *S. angustifolia* + *Senegalia visco* + *Mariosousa* + *Acaciella* + Ingeae + Australian *Acacia* s.s. Our results suggest that the phylogeny of *Senegalia* is strongly structured geographically with African taxa found in the two subclades containing *Acacia nigrescens* Oliv. And *A. brevispica* Harms, whereas taxa from America (e.g. *Senegalia wrightii* Britton & Rose and *S. berlandieri* Britton & Rose) and Asia (*S. modesta* (Wall.) P.J.H.-Hurter and *S. catechu* (L.f.) P.J.H.Hurter & Mabb.) are found in separate subclades. However, relationships between the Asian species are still unclear. Lack of resolution and support for many subclades in *Senegalia* and sparse taxon sampling, especially of Asian and American species, at this point preclude definitive biogeographical conclusions.



**Figure 1.** Topologies of the 50% majority-rule consensus tree obtained from Bayesian inference (BI) analyses based on *trnL-trnF*, *trnK/matK* and *trnH-psbA* plastid DNA sequences generated for *Acacia s.l.* A few missing taxa were augmented with sequences from GenBank. Numbers above branches are maximum parsimony (MP) bootstrap support and those below are BI posterior probabilities.



Although the majority of *Senegalia* spp. form a single clade with moderate support, the placement of two American species, *S. muricata* and *S. angustifolia* outside the main *Senegalia* clade represents a novel finding. These two species lack prickles, which provide an important diagnostic character for the rest of *Senegalia* and are in line with their



placement outside *Senegalia*. This novel clade is strongly supported as part of the *Mariosousa* + *Acaciella* + Ingeae + *Acacia* s.s. clade. These findings, although not affecting the African species of *Acacia* s.l., suggest placement of these two species in a genus separate from *Senegalia*, but increased taxon sampling is required to determine the extent of this new clade; for the time being, this clade remains unplaced in the generic system of Mimosoideae.

One other species currently placed in *Senegalia*, *S. visco*, is also placed outside the main *Senegalia* clade (Fig. 1B), in line with previous findings (Seigler *et al.*, 2006), further confirming the non-monophyly of *Senegalia* as currently circumscribed. In this study, *S. visco* is robustly supported as sister to the *Acaciella* + Ingeae + *Acacia* s.s. clade, rather than the *Mariosousa* + *Acaciella* + Ingeae + *Acacia* s.s. clade as suggested by Seigler *et al.* (2006).

### **The *Mariosousa* + *Acaciella* + Ingeae + Australian *Acacia* S.S. clade**

*Mariosousa* comprises 13 species of unarmed erect shrubs and small trees (never lianas) with herbaceous stipules restricted to seasonally dry tropical and subtropical regions of Central America and Mexico. Flowers are arranged in cylindrical spikes. In *Acaciella*, most species are shrubs or small trees, except two taxa (*Acaciella tequilana* (S.Wats.) Britton & Rose var. *tequilana* and *A. hartwegii* (Benth.) Britton & Rose), which are perennial herbs. They are unarmed, have no nectaries on their leaves, and the inflorescence is typically capitulum-like, which often elongates into a short raceme (Rico & Bachman, 2006).

### **The *Vachellia* clade**

*Vachellia* is monophyletic and sister to a larger clade comprising Mimoseae I, the rest of *Acacia* s.l. and the Ingeae, in line with previous studies (Clarke *et al.*, 2000; Miller *et al.*, 2003; Bouchenak-Khelladi *et al.*, 2010; Miller & Seigler, 2012). Relationships in *Vachellia* show high geographical structure, with a robustly supported New World clade nested in a wider old World clade, even although it is not yet clear how many subclades should be formally recognized in the genus. Increased taxon sampling, especially of New World species, will be crucial to assess this.

Finally, Ingeae and Australian *Acacia* s.s. form a monophyletic group, although only supported in BI. *Acacia* s.s. is monophyletic and Ingeae remain polyphyletic in accordance with previous studies (Miller *et al.*, 2003; Seigler *et al.*, 2006; Bouchenak-Khelladi *et al.*, 2010; Miller & Seigler, 2012). This clade is known to be problematic, but there is as yet not enough resolution or a large enough sampling to remedy this. There are certainly several nomenclatural complications looming given that *Acacia* s.s. (the type of Acacieae) is embedded in Ingeae with Acacieae being the older of the two tribal names. The segregate genera *Acaciella*, *Mariosousa*, *Senegalia* and *Vachellia* are essentially left tribally unplaced. The boundaries of Ingeae should also be investigated to ascertain which genera should be included therein. The relationships of the different genera in this clade are also not well resolved (Fig. 1A, B). For example, in Ingeae, *Albizia* is not monophyletic as shown previously by Luckow *et al.* (2003). In their study, they included six *Albizia* spp.

(*Albizia adinocephala* (Donn.Sm.) Record, *A. harveyi* Fourn., *A. kalkora* Prain, *A. sinaloensis* Britton & Rose, *A. tomentosa* Standl. and *A. versicolor* Welw. ex Oliv.). Of these, only three species (*Albizia sinaloensis*, *A. adinocephala*, and *A. tomentosa*) form a monophyletic lineage. In the present study, although priority was given to typically African species, the number of included species was almost doubled (to 13), with only two species included from previous studies by Luckow *et al.* (2003) and Bouchenak-Khelladi *et al.* (2010). Bouchenak-Khelladi *et al.* (2010) suggested that this polyphyletic state could be interpreted as a rapid radiation of lineages of Ingeae. It can also, in part, be attributable to inadequate sampling and specimen misidentification. However, it is important to increase the sampling size to confirm the status of *Albizia* spp.

### **Nomenclatural implications: taxonomic changes**

Results presented in this study and previously published studies confirm the recognition of at least five genera in *Acacia* s.l., and the placement of the African taxa in the two reinstated genera *Senegalia* and *Vachellia*. Although some other African botanists (Smith & Figueiredo, 2011) have suggested the continued recognition of *Acacia* in Africa, pending wider sampling and further analyses, there is now overwhelming evidence to support these two clades, and provision of new nomenclatural combinations in *Senegalia* and *Vachellia* in Africa, alongside those for the New World (Seigler *et al.*, 2006), is much needed by the scientific, conservation, forestry and other applied research communities. Typification of names did not fall within the scope of this study and mainly follows Ross (1979) and those cited in the protologues of taxa published subsequent to this publication. The names in the list below have all been reconciled with those in Ross (1979), Lock (1989) and Roskov *et al.* (2005) and all accepted names appearing in these works have been accounted for. Synonymy (except for basionyms) is not given in this paper, but the information can be found in the above-mentioned references. The list also includes names of accepted taxa that have been published subsequent to those in Ross (1979), Lock (1989) and Roskov *et al.* (2005) and the International Legumes Database System (ILDIS). This compilation effectively represents a checklist of species of *Acacia* s.l. (= *Senegalia* and *Vachellia*) in Africa, which we have endeavoured to make as complete as possible. The list does not include species from Madagascar, which will be dealt with in a later publication.

**I *Senegalia*** Raf., *Sylva Tellur.*: 119. 1838. - Type: *Senegalia triacantha* Raf. [= *Senegalia senegal* (L.) Britton & P.Wilson].

1. ***Senegalia adenocalyx*** (Brenan & Exell) Kyal. & Boatwr., **comb. nov.** *Acacia adeno-* *calyx* Brenan & Exell, *Bol. Soc. Brot., Sér. 2*, 31: 115, t. 1 fig. D. 1957 - Type: Tanzania, Tanga Distr., Kange Estate, *Faulkner* 855 (K, holotype; BR, PRE, isotypes).
2. ***Senegalia andongensis*** (Welw. ex. Hiern.) Kyal. & Boatwr., **comb. nov.** *Acacia andon-* *gensis* Welw. ex. Hiern., *Cat. Afr. Pl. Welw.* 1: 314. 1896 - Type: Angola, Cuanza Norte, Pungo Andongo, *Welwitsch* 1814 (LISU, holo- type; BM, K, isotypes).
3. ***Senegalia ankokib*** (Chiov.) Kyal. & Boatwr., **comb. nov.** = *Acacia ankokib* Chiov., *Fl. Somala* 2: 190, fig. 116. 1932 - Type: Somalia, unlocalized, *Robecchi-Bricchetti* 529 (F); Migiurtinia, Bender Merajo, *Guidotti* 35 [not found Ross, (1979)].

4. ***Senegalia asak*** (Forssk.) Kyal. & Boatwr., **comb. nov.** ≡ *Mimosa asak* Forssk. Fl. Aegypt.-Arab.: 176. 1775. ≡ *Acacia asak* (Forssk.) Willd. Sp. Pl. 4: 1077. 1806 - Type: Arabia, *Forsskal* (C, holotype).
5. ***Senegalia ataxacantha*** (DC.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia ataxacantha* DC., Prodr. 2: 459. 1825 - Types: Senegal, *Bacle s.n.* (G-DC); Senegal, *Perrottet s.n.* (G-DC).
6. ***Senegalia brevispica*** (Harms) Seigler & Ebinger, Phytologia 92 (1): 93. 2010. *Acacia brevispica* Harms, Notizbl. Bot. Gart. Berl. 8: 370. 1923 - Type: Tanzania, Lushoto Distr., Kitivo, *Holst 606* (B<sup>†</sup>, holotype; BM, drawing). Two subspecies are recognized:
- 6a subsp. brevispica**
- 6b subsp. dregeana** (Benth.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia pennata* var. *dregeana* Benth., London J. Bot. 1: 516. 1842 - Type: Transkei, *Drège s.n.* (K, holotype; P, isotype).
- 7 *Senegalia burkei*** (Benth.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia burkei* Benth., London J. Bot. 5: 98. 1846 - Type: South Africa, Trans-vaal, Magaliesberg, *Burke s.n.* (K, holotype; BM, PRE, isotypes).
- 8 *Senegalia caffra*** (Thunb.) P.J.H.Hurter & Mabb., Plant Book: 1021. 2008. ≡ *Mimosa caffra* Thunb., Prodr. Fl. Cap.: 92. 1800. ≡ *Acacia caffra* (Thunb.) Willd., Sp. Pl. 4: 1078. 1806 - Type: Cape Prov., *Thunberg s.n. sub THUNB-UPS 23132* (UPS).
- 9 *Senegalia caraniana*** (Chiov.) Kyal. & Boatwr., **comb. nov.** □□ *Acacia caraniana* Chiov., Fl. Somala 1: 166, t. 18. 1929 - Type: Somalia, Migiurtini, Behèn, *Puccioni & Stefanini 704* (FI, holotype; BM, drawing, isotype).
- 10 *Senegalia chariessa*** (Milne-Redh.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia chariessa* Milne-Redh., Bull. Misc. Inform. Kew 1933: 143. 1933 - Type: Rhodesia, Bulawayo, *Borle 13* (K, holotype; PRE, isotype).
- 11 *Senegalia cheilanthifolia*** (Chiov.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia cheilanthifolia* Chiov., Fl. Somala 1: 168. 1929 - Syntypes: Somalia, Migiurtini, between Erèri Jellehò e Martisor Dinsai, *Puccioni & Stefanini 663* [727] (FI); valle di Bacba, *Puccioni & Stefanini 762* [843] (FI); Bacino del Darror, El Uncùd, *Puccioni & Stefanini 1010* [1115] (FI); Obbia, Magghiòle, *Puccioni & Stefanini 479* [531] (FI); Obbia, between Uarandi e Scillin-Bilhelli, *Puccioni & Stefanini 509* [562] (FI). Two varieties are recorded:
- a. **var. cheilanthifolia**
- b. **var. hirtella** (Chiov.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia cheilanthifolia* var. *hirtella* Chiov., Fl. Somala 1: 169. 1929. - Type: Somalia, Migiurtini between Dhur and Hossa Uein, *Puccioni & Stefanini 695* [769] (FI, holotype).
- 12 *Senegalia ciliolata*** (Brenan & Exell) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia ciliolata* Brenan & Exell in Consp. Fl. Angol. 2: 288. 1956; Bol. Soc. Brot., Sér. 2, 31: 132. 1957 - Type: Angola, Cabinda, Belize, *Gossweiler 7579* (BM, holotype; COI, K, LISU, isotypes).
- 13 *Senegalia cinerea*** (Schinz) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia cinerea* Schinz in Verh. Bot. Ver. Prov. Brandenb. 30: 240. 1888, non Spreng. 1826. - Type: South-west

Africa, Amboland, Omatope, *Schinz* 252 (Z, holo). = *Acacia fleckii* Schinz, Mém. Herb. Boissier 1: 108. 1900 - Type: Botswana, Ghanzi, *Fleck 412a* (Z, holotype).

**14 *Senegalia circummarginata*** (Chiov.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia circummarginata* Chiov., Ann. Bot. (Rome) 13: 394. 1915 - Types: Ethiopia, Ogaden, Paoli 794, 913 bis 920, 1010 (FI). (This species is sometimes regarded as a synonym of *Senegalia senegal*).

**15 *Senegalia condyloclada*** (Chiov.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia condyloclada* Chiov., Ann. Bot. (Rome) 13: 391. 1915 - Type: Ethiopia, Ogaden, between Sassaban and Car-baden, *Riva & Ruspoli 1079* (FI, holotype).

**16 *Senegalia densispina*** (Thulin) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia densispina* Thulin, Nordic J. Bot. 8(5): 460. 1989 - Type: Somalia, Galgaud Region, 5 km south-west of Dusa Mareb on road to Belet Uen, 9 Dec 1985, *Thulin 5647* fruiting (UPS, holotype; MOG, isotype).

**17 *Senegalia dudgeonii*** (Craib ex Holland) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia dudgeonii* Craib ex Holland, Kew Bull., Addit. Ser. 9, 291. Dec 1911, as '*dudgeoni*' - Types: Nigeria, Borgu, *Dudgeon 58* (K); Kontagora, *Dalziel 41* (K).

**18 *Senegalia eriocarpa*** (Brenan) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia eriocarpa* Brenan, Kew Bull. 12: 360. 1957 - Type: Rhodesia, Chirundu, *Goodier 81* (K, holotype; BM; LISC; SRGH, isotypes).

**19 *Senegalia erubescens*** (Welw. ex Oliv.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia erubescens* Welw. ex Oliv., Fl. Trop. Afr. 2: 343. 1871 - Type: Angola, Mocamedes Distr., between Bumbo and Bruco, *Welwitsch 1826* (LISU, holotype; BM, K, isotypes).

**20 *Senegalia erythrocalyx*** (Brenan) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia erythrocalyx* Brenan, Kew Bull. 32: 546. 1978 - Type: Nigeria, Kano Prov., Home Distr., near Kano Gata old motor road, *Onwundinjoh FHI 24020* (K, holotype, FHO, isotype).

**21 *Senegalia flagellaris*** (Thulin) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia flagellaris* Thulin, Nordic J. Bot. 8(5): 461. 1989 - Type: Somalia, Bari Region, escarpment south of Bunder Murayah, Buraha Dhaxsi, 11°38–39'N, 50°29–32'E, 16-17 Nov 1986, *Thulin & Warfa 5844* (UPS, holotype; FT, K, MOG, isotypes).

**22 *Senegalia fumosa*** (Thulin) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia fumosa* Thulin, Nordic J. Bot. 25: 272. 2007 - Type: Ethiopia, Somali National Regional State, Harerge, 22 km from Qarsonney along road to Kebri Dehar, *Thulin, Kaariye & Wilhelmi 11136* (ETH, holotype; K, UPS isotypes).

**23 *Senegalia galpinii*** (Burt Davy) Seigler & Ebinger, Phytologia 92 (1): 93. 2010. ≡ *Acacia galpinii* Burt Davy, Bull. Misc. Inform. Kew 1922: 326. 1922 - Type: South Africa, Transvaal, banks of Badzyn-loop River, Mosdene Estate, Naboomspruit, *Galpin 483 M* (K, holotype; BM, GRA, PRE, isotypes).

**24 *Senegalia goetzei*** (Harms) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia goetzii* Harms in Bot. Jahrb. Syst. 28: 395. 1900, nom. cons. - Type: Tanzania, Kilosa Distr., Kidodi, *Goetze 387* (B<sup>+</sup>, holotype; E, K, isotypes). Two subspecies are recognized:

a. **subsp. *goetzei***



- b. **subsp. *microphylla*** (Brenan) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia goetzii* subsp. *microphylla* Brenan, Kew Bull. 11: 204. 1956 - Type: Malawi, Mombera Distr., Njakwa to Fort Hill, *Greenway 6393* (K, holotype; EA, PRE, isotypes).
- 25 *Senegalia gourmaensis*** (A.Chev.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia gourmaensis* A.Chev., Bull. Soc. Bot. Fr. 58, Mém. 8d: 167. 1912 - Type: Benin/Upper Volta, Gourma Prov., between Konkobiri and Diagapa, *Chevalier 24364* (P, holotype; K, isotype).
- 26 *Senegalia hecatophylla*** (Steud. ex A.Rich.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia hecatophylla* Steud. ex A.Rich., Tent. Fl. Abyss. 1: 242. 1847 - Types: Ethiopia, without locality, *Schimper 628* (BM, FI, P, Z); *Schimper 884* (BM, FI, K, OXF, P, Z).
- 27 *Senegalia hereroensis*** (Engl.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia hereroensis* Engl., Bot. Jahrb. Syst. 10: 20. 1888 - Type: south-west Africa, Karibib Distr., Otjimbingwe, *Marloth 1331* (B<sup>†</sup>, holotype; GRA, *pro parte*; PRE, isotype).
- 28 *Senegalia kamerunensis*** (Gandoger) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia kamerunensis* Gandoger, Bull. Soc. Bot. Fr. 60: 459. 1913 - Type: Cameroon, between Victoria and Bota, *Winkler 447* (LY, holotype; K, photograph).
- 29 *Senegalia kraussiana*** (Meisn. ex Benth.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia kraussiana* Meisn. ex Benth., London J. Bot. 1: 515. 1842 - Type: South Africa, Natal Umlaas River, Durban, *Krauss 198* (K, holotype; BM, FI, OXF, PRE, TCD, Z, isotypes).
- 30 *Senegalia laeta*** (R.Br. ex Benth.) Seigler & Ebinger in *Phytologia* 91 (1): 27. 2009 ≡ *Acacia laeta* R.Br. ex Benth., London J. Bot. 1: 508. 1842 - Type: Ethiopia, prope montes Taranta, *Salt s.n.* (BM, holotype).
- 31 *Senegalia latistipulata*** (Harms) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia latistipulata* Harms, Bot. Jahrb. Syst. 51: 367. 1914 - Type: Tanzania, Kwa-Mkopo on the Rovuma River, *Busse 1031* (B<sup>†</sup>; BM, drawing; EA; isotype); Uzaramo Distr., *Sthulmann 7025* (B<sup>†</sup>) and *7048* (B<sup>†</sup>).
- 32 *Senegalia lujai*** (De Wild.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia lujai* De Wild., Bull. Soc. r. Bot. Belg. 39: 99. 1900, as 'lujae' - Type: Zaire (Democratic Republic of Congo), Kasai, Bena-Dibele, *Luja 273* (BR, holotype).
- 33 *Senegalia macrostachya*** (Reichenb. ex DC.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia macrostachya* Reichenb. ex DC., Prodr. 2: 459. 1825 - Type: Senegal, *Sieber 44* (K, MEL, OXF, BM, drawing).
- 34 *Senegalia manubensis*** (J.H.Ross) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia manubensis* J.H.Ross, *Bothalia* 11: 292. 1974 - Type: Somalia, Manúb, *Newbould 1080* (K, holotype).
- 35 *Senegalia mellifera*** (Vahl) Seigler & Ebinger, *Phytologia*. 92 (1): 94. 2010. ≡ *Mimosa mellifera* Vahl, *Symb. Bot.* 2: 103. 1791. ≡ *Acacia mellifera* (Vahl) Benth., London J. Bot. 1: 507. 1842 - Type: Arabia, Surdud and elsewhere, *Forsskål* (C, holotype). Two subspecies are recognized:
- a. **subsp. *mellifera***
- b. **subsp. *detinens*** (Burch.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia detinens* Burch., *Trav.* 1: 310. 1822. ≡ *Acacia mellifera* subsp. *detinens* (Burch.) Brenan, Bull. Misc.



Inform. Kew 11: 191. 1956 - Type: South Africa, Cape Province, Prieska Division, Zand Valley, *Burchell 1628* (K, holotype; PRE, isotype).

**36 *Senegalia moggii*** (Thulin & Tardelli) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia moggii* Thulin & Tardelli, *Willdenowia* 17: 125. 1988 -Type: Somalia, Hiran Region, 320 km on the Mogadisho-Belet Uein road, Moggi, Tardelli & Warfa 54 (FT, holotype; B, FT, UPS, isotypes).

**37 *Senegalia montigena*** (Brenan & Exell) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia montigena* Brenan & Exell, *Kew Bull.* 21: 480. 1968 -Type: Uganda, Kigezi Distr., Murole Hill, *Purseglove 2693* (K, holotype, EA, isotype).

**38 *Senegalia montis-usti*** (Merxm. & A.Schreiber) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia montis-usti* Merxm. & A.Schreiber, *Bull. Jard. Bot. État Brux.* 27: 270, t. 8. 1957 -Type: Namibia, Brandberg, Welwitsch-Tal, *Von Wettstein 95* (M, holotype).

**39 *Senegalia nigrescens*** (Oliv.) P.J.H. Hurter, *Plant book*: 1021. 2008. ≡ *Acacia nigrescens* Oliv., *Fl. Trop. Afr.* 2: 340. 1871 -Type: Malawi, near Mitonda, Shire River, *Kirk s.n.* (K, holotype).

**40 *Senegalia ochracea*** (Thulin & Hassan) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia ochracea* Thulin & Hassan, *Fl. Somalia* 1: 373. 1993 - Type: Somalia, Gedo and Bay, 7 km on the road between Awdiinle and Qansaxdheere, *Hassan 127* (FHO, holotype; MOG; isotype).

**41 *Senegalia ogadensis*** (Chiov.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia ogadensis* Chiov., *Ann. Bot. (Rome)* 13:393. 1915 -Syntypes: Somalia, Ogaden, *Robecchi-Brichetti 594* (FI); between Bardera and Marda, *Paoli 811* (FI), *Paoli 812* (FI).

**42 *Senegalia oliveri*** (Vatke) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia oliveri* Vatke, *Öesterr. Bot. Z.* 30: 274. 1880. excl. descr. leguminis. - Type: Ethiopia, Danakil territory, *Hildebrandt 729c* (BM, drawing).

**43 *Senegalia pentagona*** (Schumach.) Kyal. & Boatwr., **comb. nov.** ≡ *Mimosa pentagona* Schumach., *Beskr. Guin. Pl.*: 324. 1827. ≡ *Acacia pentagona* (Schumach.) Hook.f., *Nig. Fl.* 331. 1849 -Type: Ghana, Jadofa, *Thonning* (C, holotype; K, photograph).

**44 *Senegalia persiciflora*** (Pax) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia persiciflora* Pax, *Bot. Jahrb. Syst.* 39: 624. 1907 -Type: Ethiopia, West Shoa, Urga valley, *Rosen s.n.* (BRSL?, holotype).

**45 *Senegalia petrensis*** (Thulin) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia petrensis* Thulin, *Kew Bull.* 58: 495. 2003 -Type: Somalia, *Thulin 11000* (UPS, holotype; K, isotype).

**46 *Senegalia polyacantha*** (Willd.) Seigler & Ebinger, *Phytologia* 91(1): 28. 2009. ≡ *Acacia polyacantha* Willd., *Sp. Pl.* 4: 1079. 1806 - Type: Eastern India, *Herb. Willdenow 19166* (B, holotype; K; isotype). Two subspecies are recognized:

a. **subsp. *polyacantha***

b. **subsp. *campylacantha*** (Hochst. ex. A.Rich.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia campylacantha* Hochst. ex. A.Rich., *Tent. Fl. Abyss.* 1: 242. 1847. ≡ *Acacia polyacantha* Willd. subsp. *campylacantha* (Hochst. ex. A.Rich.) Brenan, *Kew Bull.* 11: 195. 1956 -Syntypes: Ethiopia, Mai Dogale, *Schimper 639* (BM, E, FI, K, OXF, P, Z); Dscheladscheranne, *Schimper 893* (BM, E, FI, K, OXF, P, Z).

- 47 *Senegalia pseudonigrescens*** (Brenan & J.H.Ross) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia pseudonigrescens* Brenan & J.H.Ross, *Bothalia* 11: 293. 1974. - Type: Ethiopia, 8 km west of Mustahil on western track to Kelafo, *M.G Gilbert 2129* (K, holotype).
- 48 *Senegalia robynsiana*** (Merxm. & A.Schreiber) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia robynsiana* Merxm. & A.Schreiber, *Bull. Jard. Bot. État Brux.* 27: 268, t. 7. 1957 - Type: Namibia, Outjo Distr., Grootberg-Hang, *Walter 2/197* (M, holotype).
- 49 *Senegalia rovumae*** (Oliv.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia rovumae* Oliv., *Fl. Trop. Afr.* 2: 353. 1871 - Type: Tanzania or Mozambique, Rovuma Bay, *Kirk s.n.* (K, holotype). = *Acacia macalusoi* Mattei, *Boll. Orto Bot. Giard. Col. Palermo* 7: 94. 1908. - Type: Somalia, Guimbo, *Macaluso 65 pro parte quoad specim. fructifera* (?PAL, lectotype).
- 50 *Senegalia schlechteri*** (Harms) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia schlechteri* Harms, *Bot. Jahrb. Syst.* 51: 367. 1967 - Type: Mozambique, Ressano Garcia, *Schlechter 11901* (B<sup>+</sup>, holotype; Z, isotype).
- 51 *Senegalia schweinfurthii*** (Brenan & Exell) Seigler & Ebinger, *Phytologia* 92 (1): 94. 2010. ≡ *Acacia schweinfurthii* Brenan & Exell, *Bol. Soc. Brot., Sér.* 2, 31: 128 1957 - Type: Sudan, Gubbiki, *Schweinfurth 2206* (BM, holotype; K, P, Z, isotypes). Two varieties are recognized:
- a. **var. *schweinfurthii***
  - b. **var. *sericea*** (Brenan & Exell) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia schweinfurthii* Brenan & Exell var. *sericea* Brenan & Exell, *Bol. Soc. Brot., Sér.* 2, 31: 131. 1957 - Type: Tanzania, Mpwapwa, *Mrs Hornby 56* (K, holotype; EA, isotype).
- 52 *Senegalia senegal*** (L.) Britton, *Sci. Surv. Porto Rico & Virgin Islands* 5: 538. 1930. ≡ *Mimosa senegal* L., *Sp. Pl.* 1: 521. 1753 - Type: Senegal, *Herb. Adanson 16899* (P, neotype, designated by Ross, 1979). Four varieties are recognized:
- a. **var. *senegal***
  - b. **var. *kerensis*** (Schweinf.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia senegal* var. *kerensis* Schweinf., *Bull. Herb. Boisier* 4, app. 2: 216. 1896 - Syntypes: Ethiopia, near Keren, *Schweinfurth 745* (B<sup>+</sup>; K); Bogu valley, *Schweinfurth 741* (B<sup>+</sup>); near Djuffa, *Schweinfurth 998* (B<sup>+</sup>).
  - c. **var. *rostrata*** (Brenan) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia senegal* var. *rostrata* Brenan, *Kew Bull.* 8: 99. 1953 - Type: South Africa, Transvaal, Soutpansberg Distr., Dongola Reserve, *Verdoon 2264* (K, holotype; PRE, isotype).
  - d. **var. *leiorachis*** (Brenan) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia senegal* var. *leiorachis* Brenan, *Kew Bull.* 8: 98. 1953 - Type: Tanzania, Tanga Prov., Pare Distr., Same, *Greenway 2192* (K, holotype; EA, FHO, isotypes).
- 53 *Senegalia senegalensis*** (Forssk.) Kyal. & Boatwr., **comb. nov.** ≡ *Mimosa senegalensis* Forssk., *Fl. Aegypt.-Arab.* 176. 1775, non Houtt. 1774 - Syntypes: from Arabia, *Forsskål* (C). = *Acacia hamulosa* Benth., Hook., *London. J. Bot.* 1: 509. 1842 - Type: Saudi Arabia, Jiddah (Gedda), *S. Fischer 72* (K, holotype).
- 54 *Senegalia somalensis*** (Vatke) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia somalensis* Vatke, *Österr. Bot. Z.* 30: 274. 1880 - Type: Somalia, near Meid, *Hildebrandt 1396* (BM; K, isotype).

**55** *Senegalia tanganyikensis* (Brenan) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia tanganyikensis* Brenan, Kew Bull. 11: 195. 1956 - Type: Tanzania, Shyanga Distr., unlocalized, *B.D. Burtt 6427* (K, holotype; BM; isotype).

**56** *Senegalia taylorii* (Brenan & Exell) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia taylorii* Brenan & Exell, Bol. Soc. Brot. Sér. 2, 31: 139. 1957 - Type: Tanzania, Lindi Distr., 6.5 km N. of Lindi, *Milne-Redhead & Taylor 7588* (K, holotype; BM, isotype).

**57** *Senegalia tephrodermis* (Brenan) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia tephrodermis* Brenan, Kew Bull. 32: 549. 1978 - Type: Tanzania, Bagamoyo Distr., Bana Forest Reserve, *Mgaza 779* (K, holotype).

**58** *Senegalia thomasii* (Harms) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia thomasii* Harms, Bot. Jahrb. Syst. 51: 366. 1914 -Types: Kenya, Kitui Distr., Ikhuta, *F. Thomas III 127* (B<sup>+</sup>, holotype; BM, drawing, isotype); Machakos Distr., mile 138 and 129 from Mombasa on main Nairobi road, near Kenani, *Verdcourt 2390* (K, neotype, designated by Ross, 1979; PRE; isotype).

**59** *Senegalia venosa* (Hochst. ex Benth.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia venosa* Hochst. ex Benth., London J. Bot. 5: 98. 1846 - Type: Ethiopia, Schire Prov., Dschogarti, *Schimper 524* (K, holotype; BM, E, FI, MEL, OXF, P, Z, isotypes).

**60** *Senegalia welwitschii* (Oliv.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia welwitschii* Oliv., Fl. Trop. Afr. 2: 341. 1871 -Type: Angola, Luanda Distr., Barra de Bengo, entre Mutolo e Cacuaco, prox. De Quicuxe, *Welwitsch 1806* (LISU, lectotype; BM, K, P, isotypes). Two subspecies are recognized:

a. **subsp. welwitschii**

b. **subsp. delagoensis** (Harms ex Burtt Davy) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia welwitschii* subsp. *delagoensis* (Harms) J.H.Ross & Brenan, Kew Bull. 21: 67. 1967 ≡ *Acacia delagoensis* Harms ex Burtt Davy, Bot. Jahrb. Syst. 51: 367. 1914 -Type: Mozambique, Umbulezi, *Schlechter 11718* (B<sup>+</sup>, holotype; BM, K, Z, isotypes).

**61** *Senegalia zizyphispina* (Chiov.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia zizyphispina* Chiov., Fl. Somalia 1: 167. 1929 -Types: Somalia, between Garass-Hebla-Aden and Jesomma, *Puccioni & Stefanini 152* (FI; BM, drawing); between Avorrei and Bulo-Burti, *Puccioni & Stefanini 171* (FI; BM, drawing, isotypes).

**II** *Vachellia* Wight & Arn., Prodr. Fl. Ind. Orient. 1: 272. 1834. - Type: *Vachellia farnesiana* (L.) Wight & Arn.

**1** *Vachellia abyssinica* (Hochst. ex Benth.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia abyssinica* Hochst. ex Benth., London J. Bot. 5: 97. 1846 - Type: Ethiopia, near Mendel, *Schimper*, Sect. 3, 1813 (K, holotype; BM, M, P, isotypes). Two subspecies are recognized:

a. **subsp. abyssinica**

b. **subsp. calophylla** (Brenan) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia abyssinica* Hochst. ex Benth. subsp. *Calophylla* Brenan, Kew Bull. 12: 82. 1957 - Type: Kenya, South Kavirondo Distr., Mugunga near Kisii, *Greenway 7860* (K, holotype; EA, PRE, isotypes).

- 2** *Vachellia amythethophylla* (Steud. ex A.Rich.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia amythethophylla* Steud. ex A.Rich., Tent. Fl. Abyss. 1: 245. 1847 - Type: Ethiopia, near Djeladjeranne, *Schimper 887* (P, holotype; BM, K, OXF, isotypes).
- 3** *Vachellia ancistroclada* (Brenan) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia ancistroclada* Brenan, Kew Bull. 13: 412. 1959 -Type: Kenya, Masai Distr., Amboseli, *Knight & Thomas H 344/58* (K, holotype).
- 4** *Vachellia antunesii* (Harms) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia antunesii* Harms, Bot. Jahrb. Syst. 30: 76. 1901 -Syntypes: Angola, Huila Distr., Huila, *Antunes 28* (B<sup>+</sup>, BM, LISC); Kamunguo, *Dekindt 219* (B<sup>+</sup>).
- 5** *Vachellia arenaria* (Schinz) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia arenaria* Schinz, Mém. Herb. Boissier 1: 105. 1900 - Types: south-west Africa, Ovamboland, Olukonda-Oshiheke, *Schinz 2071* (Z); Amboland, 'Omatope', *Schinz 2072* (Z).
- 6** *Vachellia bavazzanoi* (Pichi-Sermolli) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia bavazzanoi* Pichi-Sermolli, Miss. Stud. Lago Tana, Ric. Bot. 1: 54, tt.7, 8. 1951 - Type: Ethiopia, Gorgorà, *Pichi-Sermolli 2253* (FI, holotype; K, isotype).
- 7** *Vachellia borleae* (Burt Davy) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia borleae* Burt Davy, Kew Bull. 1922: 325. 1922 -Type: Mozambique, Maputo (Lourenco Marques), *Borle 271* (PRE, holotype; FHO, isotype).
- 8** *Vachellia bricchettiana* (Chiov.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia bricchettiana* Chiov., Ann. Bot. (Rome) 13: 396. 1915 -Type: Somalia, Ogaden, *Robecchi Bricchetti 533* (FI, holo).
- 9** *Vachellia bullockii* (Brenan) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia bullockii* Brenan, Kew Bull. 12: 77. 1957 -Types: Tanzania, Buha Distr., Kaberi mbuga, *Bullock 3144* (K, holotype). Two varieties are recognized:
- a. **var. bullockii**
- b. **var. induta** (Brenan) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia bullockii* Brenan var. *induta* Brenan, Kew Bull. 12: 78. 1957 -Type: Tanzania, Kigoma Distr., Tandala in Uvinza, *C.H.N. Jackson 117* (K, holotype; BM, isotype).
- 10** *Vachellia burttii* (Bak. f.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia burttii* Bak. f., J. Bot. 71: 342. 1933 -Type: Tanzania, Kahama Distr., 9 km along Shinyanga road, *B.D. Burt 4501* (BM, holotype; EA, FHO, K, isotypes).
- 11** *Vachellia bussei* (Harms ex Sjöstedt) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia bussei* Harms ex Sjöstedt, Schwed. Zool. Exped. Kilimanjaro 8: 117-118 1908 -Syntypes: Tanzania, Lushoto District, Mazinde, by Kisiwani road, *Busse 361* (B<sup>+</sup>, BM, K); Lushoto/Pare Districts, between Usambara Mts and Kihurio, Pare Districts, *Engler 1506* (B<sup>+</sup>, K, drawing); Pare District, between Kihurio and Gonja, *Zimmermann 1758* (B<sup>+</sup>, EA).
- 12** *Vachellia cernua* (Thulin & Hassan) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia cernua* Thulin & Hassan, Nordic J. Bot. 16: 303. 1996 -Type: Somalia, Sanaag Region, escarpment S of Laasqoary, *Thulin, Dahir & Hassan 9188* (UPS, holotype; FT, K, isotypes).
- 13** *Vachellia davyi* (N.E.Br.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia davyi* N.E.Br., Kew Bull. 1908: 161. 1908 -Syntypes: South Africa, Transvaal, Houtbosch, *Rehmann 6276* (BM, K, Z); *Burt Davy 5132* (PRE); Soutpansberg, *Junod sub Herb. T.D.A. no. 1323* (PRE), Swa- ziland, near Manzini, *Burt Davy 3024* (BM, holotype; FHO).



- 14 *Vachellia dolichocephala*** (Harms) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia dolichocephala* Harms, R. Ist. Bot. Roma 7: 86. 1897 -Type: Ethiopia, Galla Sidamo, between Rogono and Goba Duaya, *Riva 599* (FI, holotype; K, isotype).
- 15 *Vachellia drepanolobium*** (Harms ex Sjöstedt) P.J.H.Hurter, Plant book: 1021. 2008. ≡ *Acacia drepanolobium* Harms ex B.Y.Sjöstedt, Wissensch. Ergebn. Schwed. Zool. Exped. Kilimanjaro 8: 116–117. 1908 -Type: Tanzania, Kilimanjaro, between Kwagogo and Moshi, *Engler 1688* (B<sup>+</sup>, holotype; K, drawings, isotype).
- 16 *Vachellia dyeri*** (P.P.Swartz) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia dyeri* P.P.Swartz, Coates- Palgrave, Trees of southern Afr.: 19. 2002 -Type: South Africa, Eastern Cape, Butterworth District, Kei Mouth, *Robbertse 871* (PRE, holo- type; PRU, isotype).
- 17 *Vachellia ebutsiniorum*** (P.J.H.Hurter) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia ebutsiniorum* P.J.H.Hurter, Bothalia 34(1): 42. 2004 -Type: South Africa, Mpumalanga, Ebutsini tribal land, Farm Tothietoe 7 JT, *Hurter 133* (PRE, holotype; K, NBG, PRU, isotypes).
- 18 *Vachellia edgeworthii*** (T.Anders.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia edgeworthii* T.Anders., J. Linn. Soc. Bot. 5, suppl.: 18. 1860. - Syntypes: Aden, *Edgeworth, Hooker & Thomson s.n.* (K); *T. Anderson s.n.* (K).
- 19 *Vachellia elatior*** (Brenan) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia elatior* Brenan, Kew Bull. 12: 94. 1957 -Type: Kenya, Tana River, Garissa, *Greenway 8857* (K, holotype; FHO, isotype). Two subspecies are recognized:
- a. **subsp. *elatior***
  - b. **subsp. *turkanae*** (Brenan) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia elatior* Brenan subsp. *turkanae* Brenan, Kew Bull. 12: 95. 1957 -Type: Kenya, north-west Turkana, Lodwar, *Hemming CFH 250* (K, holotype; EA, FHO, isotypes).
- 20 *Vachellia erioloba*** (E.Mey.) P.J.H.Hurter, Mabberley's plant book: 1021. 2008. ≡ *Acacia erioloba* E. Mey., Comm 1: 171. 1836. -Type: South Africa, Namaqualand [not found by Ross, (1979)] Transvaal, Wolmaransstad Distr., between Kommandodrif and Makwassie, *J. W. Morris 1042* (K, neotype, designated by Ross, 1979; PRE, isotype). Note: *Vachellia erioloba* (E.Mey.) Seigler & Ebinger, *Phytologia* 92(1): 94. 2010 is an isonym of *Vachellia erioloba* (E.Mey.) P.J.H.-Hurter and has no nomenclatural status according to the Code (McNeill *et al.*, 2006), art. 6.3 note 2 'when the same name, based on the same type, has been published independently at different times by different authors, then only the earliest of these "isonyms" has nomenclatural status.'
- 21 *Vachellia erythrophloea*** (Brenan) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia erythrophloea* Brenan, Kew Bull. 12: 76. 1957 -Type: Tanzania, Tabora Distr., Kakoma, *Glover 186* (K, holotype; EA, isotype) ***Vachellia etbaica*** (Schweinf.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia etbaica* Schweinf, Linnaea 35: 330. 1867–1868 -Types: Sudan, Soturba Mts, *Schweinfurth 1994* (K) and 1995 (BM, K, P). Four subspecies are recognized:
- a. **subsp. *etbaica***
  - b. **subsp. *uncinata*** (Brenan) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia etbaica* Schweinf. subsp. *uncinata* Brenan, Kew Bull. 12: 91. 1957 -Type: Somalia, Erigavo, *McKinnon 8/220* (K, holotype).



- c. **subsp. australis** (Brenan) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia etbaica* Schweinf. subsp. *australis* Brenan, Kew Bull. 12: 92. 1957 -Type: Tanzania, Tanga Distr., Ngomeni, *Greenway 7034* (K, holotype; EA, FDHO, isotypes).
- d. **subsp. platycarpa** (Brenan) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia etbaica* Schweinf. subsp. *platycarpa* Brenan, Kew Bull. 12: 93. 1957 -Type: Kenya, Northern Frontier Province, Moyale, *Gillett 13641* (K, holotype; BM, EA, iso- types).
- 22 Vachellia exuvialis** (Verdoorn) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia exuvialis* Verdoorn, Bothalia 6: 154. 1951 -Type: South Africa, Transvaal, Nelspruit Distr., Kruger National Park, 25.6 km west of Skukuza, *Codd & Verdoorn 5464* (PRE, holotype).
- 23 Vachellia farnesiana** (L.) Wight & Arn., Prodr. Fl. Ind. Orient. 1: 272. 1834. ≡ *Mimosa farnesiana* L., Sp. Pl.: 521. 1753. ≡ *Acacia farnesiana* (L.) Willd., Sp. Pl. 4: 1083. 1806 - Type: Aldinus, Exactissima description rariorum plantarum Romae, Horto Franesiano 4. 1625. (lectotype, designated by Ross, 1979).
- 24 Vachellia fischeri** (Harms) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia fischeri* Harms, Bot. Jahrb. Syst. 51: 365. 1914 - Syntypes: Tanzania, without locality, *Fischer 157* (B<sup>+</sup>, BM); ‘Manjanga Bach’ (probably Manyonga River), *Stuhlmann 672* (B<sup>+</sup>); Kondoa Distr., near Salia, *B. D. Burtt 1131* (BM, neotype; FHO, K, isotypes).
- 25 Vachellia flava** (Forssk.) Kyal. & Boatwr., **comb. nov.** ≡ *Mimosa flava* Forssk., Fl. Aegypt.-Arab. 176. 1775 - Type: Arabia, *Forsskal* (C, holo). = *Acacia ehrenbergiana* Hayne, Arzneik. Gebr. Gewächse 10: t. 29. 1827 - Type: Sudan, Dongola, *Ehrenberg & Hemprich* [not found by Ross, (1979)].
- 26 Vachellia gerrardii** (Benth.) P.J.H.Hurter, *Mabberley’s plant book*: 1021. 2008. ≡ *Acacia gerrardii* Benth., Trans. Linn. Soc. London, Bot. 30: 508. 1875 - Type: South Africa, Natal, without locality, *Gerrard 1702* (K, holotype; BM, TCD, isotypes). Three varieties are recognized within the African *V. gerrardii* subsp. *gerrardii*:
- a. **subsp. gerrardii var. gerrardii**
- b. **subsp. gerrardii var. latisiliqua** (Brenan) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia gerrardii* Benth. subsp. *gerrardii* var. *latisiliqua* Brenan, Kew Bull. 12: 369. 1958 - Type: Kenya Machakos Distr., Sir F. Wilson’s farm near Machakos, *Trapnell 2215* (K, holotype).
- c. **subsp. gerrardii var. calvescens** (Brenan) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia gerrardii* Benth. subsp. *gerrardii* var. *calvescens* Brenan, Kew Bull. 12: 370. 1958 - Type: Tanzania, Mbulu Distr., near Mbulu, *Eggeling 6689* (K, holotype; EA, isotype).
- 27 Vachellia grandicornuta** (Gerstner) Seigler & Ebinger, Phytologia 92(1): 94. 2010. ≡ *Acacia grandicornuta* Gerstner in J. S. African Bot. 4: 55. 1938 - Syntypes: South Africa, Natal, ‘Flowered at Emkunuzana and Mkuzi Drift between Nongoma and Magidu’, 6 Jan 1936, *Gerstner 2870* (BOL); ‘fruits found at same place and at lower Pongola’, 13 May 1936, *Gerstner 2870* (BOL).
- 29 Vachellia gummifera** (Willd.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia gummifera* Willd. Sp. Pl. 4: 1056. 1806 - Type: Morocco, near Mogador, *Broussonet s.n. sub Herb. Willdenow 19125* (B, holotype).

- 30 *Vachellia haematoxylon*** (Willd.) Seigler & Ebinger, *Phytologia* 92(1): 94. 2010. ≡ *Acacia haematoxylon* Willd., *Enum. Hort. Berol.* 1056. 1809 - Type: South Africa, Cape Province, *Lichtenstein s.n. sub Herb. Willdenow 19186* (B, holotype).
- 31 *Vachellia hebeclada*** (DC.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia hebeclada* DC., *Cat. Hort. Monsp.* 73: 1813 - Type: South Africa, Cape Province, Kuruman Distr., between Kuruman and the Matlowing River, *Burchell 2267* (G, holotype; K, PRE, isotypes). Three subspecies are recognized:
- a. **subsp. *hebeclada***
- b. **subsp. *chobiensis*** (O.B.Miller) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia stolonifera* var. *chobiensis* O.B.Miller, *J. S. African Bot.* 18: 25. 1952. ≡ *Acacia hebeclada* subsp. *chobiensis* (O.B.Miller) A.Schreiber, *Mitt. Bot. Staatssamml. München* 6: 251. 1966 - Type: Botswana, Serondela, *O.B. Miller B/1069* (K, holotype).
- c. **subsp. *tristis*** (A.Schreiber) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia hebeclada* DC. subsp. *tristis* A.Schreiber, *Mitt. Bot. Staatssamml. München* 6: 251. 1966 - Type: Angola, Huila Distr., between Lopolo e Ferrão da Sola, *Welwitsch 1829* (LISU, holotype; BM, K, isotypes).
- 32 *Vachellia hockii*** (De Wild.) Seigler & Ebinger, *Phytologia* 92(1): 94. 2010. ≡ *Acacia hockii* De Wild., *Reprim nov. Spec. Regni veg.* 11: 502. 1913 - Type: Zaire (Democratic Republic of Congo), Katanga, Luafu valley, *Hock s.n.* (BR, holotype).
- 33 *Vachellia horrida*** (L.) Kyal. & Boatwr., **comb. nov.** ≡ *Mimosa horrida* L., *Sp. Pl.* 1: 521. 1753. ≡ *Acacia horrida* (L.) Willd., *Sp. Pl.* 4: 1082. 1806. *non sensu auct. mult.* - Type: *Plukenet*, *Phytographia* t. 121.1962 - holo: backed by the specimen drawn by Plukenet, *Herb. Sloane: 95, fol. 3* (BM). Two subspecies are recognized:
- a. **subsp. *horrida***
- b. **subsp. *benadirensis*** (Chiov.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia horrida* (L.) Willd. subsp. *benadirensis* (Chiov.) Hillcoat & Brenan, *Kew Bull.* 13: 40. 1958 ≡ *A. bussei* Harms ex Sjöstedt var. *benadirensis* Chiov., *Miss. Stefanini-Paoli Bot.* 72. 1916. - Type: Somalia, Mogadishu [Mogadiscio], *Paoli 94* (FI, lectotype; K, photograph, isotype).
- 34 *Vachellia karroo*** (Hayne) Banfi & Galasso, *Atti Soc. Ital. Sci. Nat. Mus. Civico Storia Nat. Milano* 149(1): 149. 2008. ≡ *Acacia karroo* Hayne, *Arzneyk. Gebr. Gewächse* 10: t. 33. 1827 - Type: South Africa, Cape Province, locality unknown, *Herb. Willdenow 19184 fol. 2* (B, lectotype; PRE, isotype).
- 35 *Vachellia kirkii*** (Oliv.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia kirkii* Oliv., *Fl. Trop. Afr.* 2: 350. 1871 - Type: Zambia, Southern Prov., Batoka country, *Kirk s.n.* (K, holotype). Two subspecies are recognized, and two varieties in the typical subspecies:
- 35.a 35.a.1. **subsp. *kirkii* var. *kirkii***
- 35.a.2. **subsp. *kirkii* var. *sublaevis*** (Brenan) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia kirkii* subsp. *kirkii* var. *sublaevis* Brenan, *Kew Bull.* 12: 363. 1958 - Type: Uganda, Acholi Distr., Aswa River, Gulu-Kitgum road, *Eggeling 775* in F.H. 1161 (K, holotype; EA, isotype).
- 35.b. **subsp. *mildbraedii*** (Harms) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia mildbraedii* Harms, *Zentr. Afr. Exped. 1907-1908*, 2: 234. 1911. ≡ *Acacia kirkii* subsp. *mildbraedii* (Harms) Brenan, *Kew Bull.* 12: 364. 1958 - Types: Rwanda, between

Gisenyi and Mpororo, *Mildbraed* 343 (B<sup>+</sup>, BM, drawing); Zaïre (Democratic Republic of Congo), Kwenda, *Mildbraed* 1887 (B<sup>+</sup>); Tanzania, Bukoba Distr., between Itara and Kakindu, by the Kagera R., *Holtz* 1712 (B<sup>+</sup>).

**36** *Vachellia kosiensis* (P.P.Sw. ex Coates Palgr.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia kosiensis* P.P.Sw. ex Coates Palgr., Coates-Palgrave's Trees of southern Afr.: 19. 2002 - Type: South Africa, Kwa-Zulu Natal, Lake Sibayi, *Vorster* 2720 (PRE, holotype; K, isotype).

**37** *Vachellia lahai* (Steud. & Hochst. ex Benth.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia lahai* Steud. & Hochst. ex Benth., London J. Bot. 1: 506. 1842 -Type: Ethiopia, Tigré, near Adua (Adowa), *Schimper* 119 (K, holotype; BM, FI, OXF, P, Z, isotypes).

**38** *Vachellia lasiopetala* (Oliv.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia lasiopetala* Oliv., Fl. Trop. Afr. 2: 346. 1871 -Type: Malawi, Mpemba Mt, *Kirk s.n.* (K, holotype).

**39** *Vachellia latispina* (J.E.Burrows & S.M.Burrows) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia latispina* J.E.Burrows & S.M.Burrows, Bothalia 39: 222. 2009. - Type: Mozambique, Cabo Delgado Province, 14.8 km from the main Pemba–Metoro road, on road to Mecufi, 13°11'13"S, 40°33'10"E, 23 December 2006, *J.E. Burrows & S.M. Burrows* 9764 (PRE, holotype; BNRH, K, LMA, isotypes).

**40** *Vachellia leucospira* (Brenan) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia leucospira* Brenan, Kew Bull. 13: 407. 1959 -Type: Somalia, near Galkayu (Galcaio), *Bond & Pechanec* 65 (EA, holotype; K, isotype).

**41** *Vachellia luederitzii* (Engl.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia luederitzii* Engl., Bot. Jahrb. Syst. 10:23, t. 3B (July 1888) pro parte quoad specim. *Marloth* 1328 -Type: South West Africa, Otjimbingwe, *Marloth* 1328 (PRE, lectotype; GRA, M, OXF, isotypes). Two varieties are recognized:

a. **var. luederitzii**

b. **var. retinens** (Sim) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia retinens* Sim, For. Fl. P.E. Afr. 157, t. 40 fig. A. 1909. ≡ *Acacia luederitzii* Engl. var. *retinens* (Sim) J.H. Ross & Brenan, Kew Bull. 21: 72. 1967 -Type: Mozambique, 'Umbeluzi and Lebombo', *Sim* 6391 [not found by Ross, (1979) presumed lost].

**42** *Vachellia macrothyrsa* (Harms) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia macrothyrsa* Harms, Bot. Jahrb. Syst. 28: 396. 1900 -Type: Tanzania, Iringa, *Goetze* 653 (B<sup>+</sup>, holo- type;?BM, E, K, isotypes).

**43** *Vachellia malacocephala* (Harms) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia malacocephala* Harms, Bot. Jahrb. Syst. 51: 364. 1914 -Type: Tanzania, Shinyanga Distr., between Samuye and Kizumbi, *Holtz* 1548 (B<sup>+</sup>, holotype; BM, drawing, K, fragment and drawing, isotypes).

**44** *Vachellia mbuluënsis* (Brenan) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia mbuluënsis* Brenan, Kew Bull. 12: 79. 1957 - Type: Tanzania, Mbulu Distr., Ufana, between the rift wall and Dongobesh, *B.D. Burtt* 4936 (K, holo- type; BM, isotype).

**45** *Vachellia montana* (P.P.Swartz) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia montana* P.P.Swartz in Coates-Palgrave, Trees of southern Africa: 19. 2002, nom. illegit., non Benth. 1842. ≡ *Acacia theronii* P.P.Swartz, Bothalia 33: 164. 2003 - Type: South Africa, KwaZulu- Natal, Hlabisa District, *Swartz* 178 (PRE, holotype; PRU, isotype).

**46 *Vachellia natalitia*** (E.Mey.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia natalitia* E.Mey., Comm. 1: 167. 1836 -Types: South Africa, KwaZulu-Natal, Durban and Umgeni, *Drège s.n.* (K, P); South Africa, Eastern Cape, between Umganza and Umzimvubu, *Drège s.n.* (P).

**47 *Vachellia nebrownii*** (Burt Davy) Seigler & Ebinger, Phytologia. 92(1): 95. 2010. ≡ *Acacia nebrownii* Burt Davy, Kew Bull. 1921: 50. 1921. pro parte excl. specim. *Burt Davy 3045 et 5230*. - Syntypes: Botswana, Kwebe Hills, *Mrs E. J. Lugard 14* (K) and 16 (K).

**48 *Vachellia negrii*** (Pichi-Sermolli) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia negrii* Pichi-Sermolli, Miss. Stud. Lago Tana, Ric. Bot. 1: 55, tt.9, 10. 1951 - Syntypes: Ethiopia, Gande Cabanna, *Negri 335* (FI); Addis Ababa, *Senni 383* (FI); *Senni 1589* (FI, K).

**49 *Vachellia nilotica*** (L.) P.J.H.Hurter & Mabb., Plant Book: 1021. 2008. ≡ *Mimosa nilotica* L., Sp. Pl. 1: 521. 1753. ≡ *Acacia nilotica* (L.) Willd. ex Del., Fl. Aegypt. Ill. 79. 1813 - Type: Egypt, *Herb. Linnaeus 1228.28* (LINN, lectotype). Seven subspecies are recognized:

49.a. **subsp. *nilotica***

49.b. **subsp. *indica*** (Benth.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia arabica* var. *indica* Benth., London J. Bot. 1: 500. 1842. ≡ *Acacia nilotica* subsp. *Indica* (Benth.) Brenan, Kew Bull. 12: 84. 1957 - Types: India, 'East India', *Roxburgh* (K); Oungein, *collector unknown in Herb. Bentham* (K).

49.c. **subsp. *tomentosa*** (Benth.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia Arabica* var. *tomentosa* Benth., London J. Bot. 1: 500. 1842., *Acacia nilotica* subsp. *Tomentosa* (Benth.) Brenan, Kew Bull. 12: 84. 1957 - Type: Senegambia, *Heudelot s.n.* (K, lectotype).

49.d. **subsp. *adstringens*** (Schumach. & Thonn.) Kyal. & Boatwr., **comb. nov.** ≡ *Mimosa adstringens* Schumach. & Thonn., Beskr. Guin. Pl. 327. 1827. ≡ *Acacia nilotica* subsp. *Adstringens* (Schumach. & Thonn.) Roberty, Candollea 11: 150. 1948 - Type: 'Guinea', without locality, *Thonning 239* (C, holotype).

49.e. **subsp. *subalata*** (Vatke) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia subalata* Vatke, Öesterr. Bot. Z. 30: 276. 1880. ≡ *Acacia nilotica* subsp. *Subalata* (Vatke) Brenan, Kew Bull. 12: 85. 1957 - Type: Kenya, Teita Distr., Ndi, *Hildebrandt 2589* (B<sup>+</sup>?, holotype).

49.f. **subsp. *leiocarpa*** (Brenan) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia nilotica* subsp. *leiocarpa* Brenan, Kew Bull. 12: 84. 1957 - Type: Kenya, Lamu Distr., Patta Island, *Dale 3832* in C.M. 13988 (K, holotype; EA, isotype).

49.g. subsp. ***kraussiana*** (Benth.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia Arabica* var. *kraussiana* Benth., London J. Bot. 1:

500. 1842. ≡ *Acacia nilotica* subsp. *kraussiana* (Benth.) Brenan, Kew Bull. 12: 84. 1957 - Type: South Africa, KwaZulu-Natal, Durban, *Krauss 69* (K, holotype; FI, TCD, isotypes).

**50 *Vachellia nubica*** (Benth.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia nubica* Benth., London J. Bot. 1: 498. 1842. - Type: Sudan, Kordofan, *Kotschy 407* (K, holotype; FI, OXF, P, Z, isotypes).

**51 *Vachellia oeforta*** (Forssk) Kyal. & Boatwr., **comb. nov.** ≡ *Mimosa oeforta* Forssk, Fl. Aegypt.-Arab.: 177. 1775. ≡ *Acacia oeforta* (Forssk) Schweinf., Bull. Herb. Boissier 4, app. 2: 213. 1896 - Types: Yemen, Dahi, *Forsskal s.n.* (missing from C, comment based on Ross, 1979). Two varieties are recognized:



51.a. **var. oefforta**

51.b. **var. brevifolia** (Boulos) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia oefforta* (Forssk.) Schweinf. var. *brevifolia* Boulos, Kew Bull. 50: 334. 1995 - Type: Yemen, *J.R.J. Wood 3089* (K, holotype; BM, isotype). = *Acacia sarcophylla* Chiov., Fl. Somalia 1: 161. 1929 - Type: Somalia, Migiurtini, near Hordio, *Puccioni & Stefanini 630* (FI, holotype; BM, isotype).

**52 Vachellia ormocarpoides** (P.J.H.Hurter) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia ormocarpoides* P.J.H.Hurter, Bothalia 35(2): 167. 2005 - Type: Limpopo, Zwemkloof 283-KT, *Hurter 1983* (PRE, holotype; NBG, PRU, isotypes).

**53 Vachellia origena** (Hunde) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia origena* Hunde, Nordic J. Bot. 2(4): 337. 1982 - Type: Ethiopia, Eritrea West, Ad Rassi, *Pappi 4946* (FT, holotype; K, isotype).

**54 Vachellia paolii** (Chiov.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia paolii* Chiov., Ann. Bot. (Rome) 13: 395. 1915 - Types: Ethiopia, Ogaden, between Bardera and Mansur, *Paoli 578* (FI, K); Heima, *Paoli 611* (FI, BM, drawing K, photograph). Two subspecies are recognized:

54.a. **subsp. paolii**

54.b. **subsp. paucijuga** (Brenan) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia paolii* Chiov. subsp. *paucijuga* Brenan, Kew Bull. 17: 165. 1963 - Type: Kenya, Northern Frontier Prov., Mt Akoret, *Pratt MS 720* (K, holotype).

**55 Vachellia permixta** (Burt Davy) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia permixta* Burt Davy, Kew Bull. 1922: 330. 1922. *prop parte excl.* var. *glabra*. - Type: South Africa, Transvaal, Potgietersrust, *Burt Davy 5230* (PRE, holotype; K, isotype).

**56 Vachellia pilispina** (Pichi-Sermolli) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia pilispina* Pichi-Sermolli, Miss. Stud. Lago Tana, Ric. Bot. Bot. 1: 205, t. 43. 1951 - Type: Ethiopia, Atghebà Ghiorghis, *Pichi-Sermolli 2696* (FI, holotype).

**57 Vachellia prasinata** (Hunde) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia prasinata* Hunde, Nordic J. Bot. 2(4): 341. 1982 - Type: Ethiopia, Shewa region, Awash Nat. Park, *Thulin, Hunde & Tadesse 3865* (UPS, holotype; ETH, K, isotypes).

**58 Vachellia pseudofistula** (Harms) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia pseudofistula* Harms, Bot. Jahrb. Syst. 51: 363. 1914 - Syntypes: Tanzania, Tabora Distr., Goweko, *Holtz 2801* (B<sup>+</sup>, BM, K); Dodoma Distr., Kilimatinde, *Holtz 1358* (B<sup>+</sup>).

**59 Vachellia qandalensis** (Thulin) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia qandalensis* Thulin, Nordic J. Bot. 18: 513. 1998 - Type: Somalia, Bari Region, Cal Miskaat in Bahaya area, c. 20 km south-west of Qandala, *Thulin, Abdi Dahir & Ahmed Osman 9419* (UPS, holotype; K, isotype).

**60 Vachellia quintanilhae** (Torre) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia quintanilhae* Torre, Bol. Soc. Brot., Sér. 2, 36: 1, t. 1. 1962 - Type: Angola, Mocamedes Distr., km 10 do Apeadeiro do C.F. de Dois Irmãos, *Torre 8274* (LISC, holotype; BM, LUA, LUAI, isotypes).

**61 Vachellia reficiens** (Wawra) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia reficiens* Wawra, Sitzungsber. Akad. Wiss. Wien, Math.-Naturwiss. Kl., Abt. 1 38: 555. 1859 - Type: Angola, between Benguela and Catumbela, *Wawra 248* (W, holotype; K, fragment, isotype). Two subspecies are recognized:

61.a. **subsp. reficiens**



61.b. **subsp. misera** (Vatke) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia misera* Vatke, Österr. Bot. Z. 30: 275. 1880. ≡ *Acacia reficiens* Wawra subsp. *misera* (Vatke) Brenan, Kew Bull. 12: 90. 1957 - Type: Somalia, Meid, *Hildebrandt 1394* (B<sup>+</sup>, holotype; BM, K, isotypes).

**62 Vachellia rehmanniana** (Schinz) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia rehmanniana* Schinz, Bull. Herb. Boissier 6: 525. 1898 - Type: South Africa, Transvaal, Streydpoort, Makapansberge, *Rehmann 551* (Z, holotype).

**63 Vachellia robbertsei** (P.P.Swartz) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia robbertsei* P.P.Swartz, Coates-Palgrave's Trees of southern Africa: 19. 2002, as 'robbertsii' - Type: South Africa, Mpumalanga, Lydenburg District, 5 miles north-west of PO Morone, *Codd 10483* (PRE, holotype).

**64 Vachellia robusta** (Burch.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia robusta* Burch., Trav. 2: 442. 1824 - Type: South Africa, Northern Cape Province, Kuruman Distr., Takoon, *Burchell 2265* (K, holotype). Three subspecies are recognized:

64.a. **subsp. robusta**

64.b. **subsp. clavigera** (E.Mey.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia clavigera* E.Mey., Comm. 1: 168. 1836. ≡ *Acacia robusta* Burch. subsp. *clavigera* (E.Mey.) Brenan, Fl.Zambesiaca 3, 1: 104. 1970 - Type: South Africa, KwaZulu-Natal, near Durban, *Drège* (K, isotype; P, fragment).

64.c. **subsp. usambarensis** (Taub.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia usambarensis* Taub., Pflanzenw. Ost-Afrikas C: 195, t. 20H. 1895. ≡ *Acacia robusta* Burch. subsp. *usambarensis* (Taub.) Brenan, Fl. Zambesiaca 3, 1: 104. 1970 - Types: Tanzania, Lushot Distr., Simbili, *Holst 2362* (B<sup>+</sup>, K); Mashewa, *Holst 8820* (B<sup>+</sup>, K).

**65 Vachellia sekhukhuniensis** (P.J.H.Hurter) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia sekhukhuniensis* P.J.H.Hurter, Bothalia 34(2): 109. 2004 - Type: South Africa, Limpopo, Sekhukhuneland, Farm Schlickmannskloof 258KT, *Mukoma & Hurter 17* (PRE, holotype; NBG, PRU, isotypes).

**66 Vachellia seyal** (Del.) P.J.H.Hurter, Mabblerley's plant book: 1021. 2008. ≡ *Acacia seyal* Del., Fl. Egypt. Expl. Planches 286. 1813 - Syntypes: Egypt, between Nile and Red Sea, near Syene, *Delile s.n.* (?MPU); Medynet-Abou, *Delile s.n.* (?MPU). Two varieties are recognized:

66.a. **var. seyal**

66.b. **var. fistula** (Schweinf.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia fistula* Schweinf., Linnaea 35: 344: tt 11-14. 1867-68. ≡ *Acacia seyal* var. *fistula* (Schweinf.) Oliv., Fl. Trop. Afr. 2: 351. 1871 - Syntypes: Sudan, Gedaref region, and Mt Gule in the Sennar Prov., *Schweinfurth* (B<sup>+</sup>).

**67 Vachellia sieberiana** (DC.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia sieberiana* DC., Prodr. 2: 463. 1825. - Type: Senegal, *Sieber 43* (G, holotype; K, MEL, isotypes). Three varieties are recognized:

67.a. **var. sieberiana**

67.b. **var. villosa** (A.Chev.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia sieberiana* DC. var. *villosa* A.Chev., Bull. Soc. Bot. France 74: 959. 1927 - Type: Haute Volta (Burkina Faso), Ouré, *Chevalier 700* (P, holotype; K, isotype).

67.c. **var. woodii** (Burt Davy) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia woodii* Burt Davy, Kew Bull. 1922: 332. 1922. ≡ *Acacia sieberiana* DC. var. *woodii* (Burt Davy) Keay & Brenan, Kew Bull. 5: 364. 1951 - Type: South Africa, KwaZulu-Natal, Estcourt Distr., between Estcourt and Colenso, *Wood 3528* (K, holotype; MEL, NH, isotypes).

**68 Vachellia stuhlmannii** (Taub.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia stuhlmannii* Taub., Pflanzenw. Ost-Afrikas C: 194, t.21E, F. 1895 - Syntypes: Tanzania, Dar es Salaam, *Stuhlmann 6755* (B<sup>+</sup>, EA); Pangani, *Stuhlmann 282* (B<sup>+</sup>); Tanga, *Volkens 189* (B<sup>+</sup>); Amboni, *Holst 2202* (B<sup>+</sup>, K, Z); Tanzania/ Kenya, Lake Jipe, *Volkens 2383* (B<sup>+</sup>).

**69 Vachellia swazica** (Burt Davy) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia swazica* Burt Davy, Bull. Misc. Inform. Kew 1922: 332. 1922 - Type: Swaziland, near Manzini, *Burt Davy 3045* (PRE, holotype; K, fragment, BM, isotype).

**70 Vachellia tenuispina** (Verdoorn) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia tenuispina* Verdoorn, Bothalia 6: 156. 1951 - Type: South Africa, Transvaal, Waterberg Distr., Hoogbult Farm, Naboomspruit, *Galpin 475 M* (PRE, holotype; K, isotype).

**71 Vachellia tephrophylla** (Thulin) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia tephrophylla* Thulin, Nordic J. Bot. 18: 515. 1998 - Type: Somalia, Bari Region, Cal Miskaat, north of Dasan, *Thulin, Abdi Dahir & Ahmed Osman 9482* (UPS, holotype; K, isotype).

**72 Vachellia torrei** (Brenan) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia torrei* Brenan, Kew Bull. 21: 480. 1968 - Type: Mozambique, Manica e Sofala, between Inhaminga and Rio Urema, *Torre 4068* (LISC, holotype; BM, K, PRE, isotypes).

**73 Vachellia tortilis** (Forssk.) Galasso & Banfi, Atti Soc. Ital. Sci. Nat. Mus. Civico Storia Nat. Milano 149(1): 150. Jan. 2008. ≡ *Mimosa tortilis* Forssk., Fl. Aegypt-Arab 124: 176. 1775. ≡ *Acacia tortilis* (Forssk.) Hayne, Arzneik. Gebr. Gewächse 10: t. 31. 1827 - Type: Arabia, 'Mons Soudân prope Hás', *Forsskål* (C, holotype; K, isotype). Note: *Vachellia tortilis* (Forssk.) P.J.H.Hurter & Mabb., Pl.-Book 1021. 2008 [1 PubMed May 2008] is an isonym of *Vachellia tortilis* (Forssk.) Galasso & Banfi and has no nomenclatural status according to the Code (McNeill *et al.*, 2006), art. 6.3 note 2 'when the same name, based on the same type, has been published independently at different times by different authors, then only the earliest of these "isonyms" has nomenclatural status.' Four subspecies and three varieties are recognized:

**73.a. subsp. tortilis**

**73.b. subsp. raddiana** (Savi) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia raddiana* Savi, Alc. Acazie Egiz. 1. 1830. ≡ *Acacia tortilis* subsp. *raddiana* (Savi) Brenan, Kew Bull. 12: 87. 1957 - Type: Egypt, *Raddi* (K, isotype).

**73.b.1. var. raddiana**

**73.b.2. var. pubescens** (A.Chev.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia tortilis* (Forssk.) Hayne subsp. *raddiana* (Savi) Brenan var. *pubescens* A. Chev., Bull. Soc. Bot. France 74: 960. 1927 - Syntypes: Mali, Tombouctou (Timbuktu), *Chevalier 1186* (K, P); *1187* (P); *1188* (P).

**73.c. subsp. spirocarpa** (Hochst. ex. A.Rich.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia spirocarpa* Hochst. ex. A.Rich., Tent. Fl. Abyss. 1: 239. 1847. ≡ *Acacia tortilis* subsp. *spirocarpa* (Hochst. ex. A.Rich.) Brenan, Kew Bull. 12: 88. 1957 - Syntypes: Ethiopia, near

Djeladjeranne, *Schimper 502* (BM, FI, K, M, P, Z); *Schimper 612* (BM, FI, K, M, P); *Schimper 658* (BM, K, M, OXF, P, Z).

**73.c.1. var. *spirocarpa***

**73.c.2. var. *crinita*** (Chiov.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia tortilis* (Forssk.) Hayne subsp. *spirocarpa* (Hochst. ex. A.Rich.) Brenan var. *crinita* Chiov., Res. Sci. Miss. Stefanini-Paoli 1: 71. 1916 - Type: Somalia between Doriànale and Oneiátta, *Paoli 907* (FI, holotype; K, isotype).

**73.d. subsp. *heteracantha*** (Burch.) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia heteracantha* Burch., Trav. 1: 389. 1822. *Acacia tortilis* (Forssk.) Hayne subsp. *Heteracantha* (Burch.) Brenan, Kew Bull. 12: 88. 1957 - Type: South Africa, Northern Cape Province, Hay Distr., Spuigslang-fontein, between Griquatown and the Orange River, *Burchell 1710* (K, holotype).

**74 *Vachellia turnbulliana*** (Brenan) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia turnbulliana* Brenan, Kew Bull. 12: 370. 1958 - Type: Kenya, Northern Frontier Prov., 23 km northeast of Wajir, *Gillett 13364* (K, holo; EA, isotype).

**75 *Vachellia walwalensis*** (Gilliland) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia walwalensis* Gilliland, Kew Bull. 6: 140, t. 5. 1951 - Type: Ethiopia, Ogaden, between Wardere and Walwal, *Glover & Gilliland 392* (K, holotype; BM, FHO, PRE, isotypes).

**76 *Vachellia xanthophloea*** (Benth.) P.J.H- .Hurter, Mabblerley's plant book: 1021. 2008. ≡ *Acacia xanthophloea* Benth., Trans. Linn. Soc. London, Bot. 30: 511. 1875 - Syntypes: Malawi, E. end of Lake Shirwa, *Meller s.n.* (K); Mozambique, Sena, *Kirk s.n.* (K).

**77 *Vachellia zanzibarica*** (S.Moore) Kyal. & Boatwr., **comb. nov.** ≡ *Pithecolobium? Zanzibaricum* S.Moore, J. Bot. 15: 292. 1877. ≡ *Acacia zanzibarica* (S.Moore) Taub., Pflanzenw. Ost Afrikas C: 195. 1895 - Type: Kenya, Mombasa, *Hildebrandt 1939* (K, holotype; BM, isotype). Two varieties are recognized:

**77.a. var. *zanzibarica***

**77.b. var. *microphylla*** (Brenan) Kyal. & Boatwr., **comb. nov.** ≡ *Acacia zanzibarica* (S.Moore) Taub. var. *microphylla* Brenan, Kew Bull. 12: 75. 1957 - Type: Kenya, Northern Frontier Prov., Turbi, *Gillet 13803* (K, holotype; EA, isotype).

**Species insufficiently known:**

**1 *Acacia callicoma*** Meisn., London J. Bot. 2: 104. 1843 - Type: unknown.

**2 *Acacia balfouri*** G.M.Woodrow, J. Bombay Nat. Hist. Soc. 11: 420–430. 1898. – Type: not seen. This species is listed in Lock (1989), but not in Ross (1979); it is provisionally accepted in Roskov *et al.* (2005).

**3 *Acacia leucophaea*** Willd. is listed in Lock (1989) but not in Ross (1979); it is also listed in Roskov *et al.* (2005). We were unable to find any literature on the original publication of this name.

**Unvalidated names:**

**1 *Acacia firozei*** Najma Dh. in Dharani N. 2006. Field guide to acacias of the East Africa.

**2 *Acacia kenyensis*** Najma Dh. in Dharani N. 2006. Field guide to acacias of the East Africa.

**3 *Acacia tirion*** Najma Dh. in Dharani N. 2006. Field guide to acacias of the East Africa.

**Excluded names:**

**1** *Acacia purpurea* Bolle, Reise Mossamb. Bot. 1: 6. 1861 - Types: Mozambique, Chupanga, Sena, Tete, etc., *Peters* (B<sup>+</sup>). *Acacia mauroceana* DC., Cat. Hort. Monsp. 74: 1813 - Type: grown from seed collected by Broussonet in Morocco. (G, holotype). = ***Painteria leptophylla*** (DC.) Britton & Rose (D. Seigler & J. Ebinger, pers. comm.).

**2** *Acacia redacta* J.H.Ross, Bothalia 11: 231. 1974 – Type: South Africa, Cape Province, Namaqualand, 22 km N. of Stinkfontein on way to Jenkioskop, *Werger* 1518 (PRE, holotype; K, isotype). = *Calliandra redacta* (J.H.Ross) Thulin & Asfaw Nordic J. Bot. 1(1): 29 (1981).

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## Appendix

## List of taxa with voucher information and Genbank accession numbers for each DNA region

Species, voucher specimen, herbarium, *trnK/matK* GenBank accession, *psbA-trnH* GenBank accession, *trnL-trnF* GenBank accession. \*Sequences not included in Bouchenak-Khelladi *et al.* 2010.

**Acacia s.l. Miller:** \**A. adenocalyx* Brenan & Exell, *OM2439*, JRAU, JQ230127, —, JQ230284/JQ230285; *A. adoxa* Pedley, *Archer 50994*, MEL, AF523076, AF195716, AF195703/AF195684; *A. ampliceps* Maslin, *J. Miller 583*, CANB, AF523074, AF525003, AF522983; \**A. amythetophylla* Steud. ex. A.Rich., *MSB171878*, K, JQ230136, JQ230187, JQ230294; *A. arenaria* Schinz, *OM1048*, JRAU, GQ872212, GQ872302, GQ872257; *A. ataxacantha* DC., *RL1326*, JRAU, GQ872213, —, —; \**A. auriculiformis* Benth., *MSB57484*, K, JQ230110, JQ230158, JQ230305/ JQ230306; \**A. boormanii* Maiden, *Chase 17932*, K, JQ230111, —, —; *A. borlea* Burtt Davy, *RL1308*, JRAU, GQ872214, GQ872303, GQ872258; *A. bre-vispica* Harms, *RL1333*, JRAU, GQ872215, GQ872304, GQ872259; *A. burkeii* Benth., *RL1283*, JRAU, GQ872216, GQ872305, GQ872260; \**A. caraniana* Chiov., *M. Thulin et al. 10431*, K, —, —, JQ230256/JQ230257; *A. chariessa* Milne-Redh., *M. Steyn 2*, JRAU, GQ872218, GQ872307, GQ872262; \**A. cochliacantha* Willd., *J. Miller 246*, CANB, —, —, AF522968; *A. colei* Maslin & L.A.J.Thomson, *J. Miller 871*, CANB, AF274215, AF525007, AF522987; \**A. condyloclada* Chiov., *C.F. Hemming76 and R.M. Watson 30*, K, —, —, JQ230258/JQ230259; \**A. craspedocarpa* F.Muell., *Chase 17931*, K, —, JQ230162, JQ230250/JQ230251; *A. davyi* N.E.Br, *RL1319*, JRAU, GQ872219, GQ872308, GQ872263; *A. drummondii* Lindl., *2034627*, MEL, AF523106, AF195714, AF195704/AF195685; \**A. dudgeonii* Craib ex Holland, *MSB125505*, K, JQ265930, JQ230180, JQ230307/JQ230308; \**A. dyeri* P.P.Sw. ex Coates Palgr., *RL1309*, JRAU, JQ230137, JQ230188, JQ230221/JQ230222; \**A. ehrenbergiana* Hayne, *MSB99862*, K, JQ230138, JQ230189, JQ230295/JQ230296; *A. elata* A.Cunn ex Benth., *D. Murphy 234*, MEL, AF274149, AF195709, AF195702/AF195683; *A. eriocarpa* Brenan, *M. Steyn 1*, JRAU, GQ872220, GQ872309, GQ872264; *A. erubescens* Welw. ex Oliver, *RL1318*, JRAU, GQ872222, GQ872311, GQ872266; *A. exuvialis* I.Verdn., *RL1284*, JRAU, GQ872223, GQ872312, GQ872267; \**A. fleckii* Schinz., *MSB83043*, MSB, JQ230130, JQ230181, JQ230309/JQ230310; \**A. furcatispina* Burkart, *J. Miller 1214*, CANB, EU812018, EU811960, EU439992; *A. galpinii* Burtt Davy, *RL1304*, JRAU, GQ872224, GQ872313, GQ872268; *A. giraffae* Willd., *RL1300*, JRAU, GQ872226, GQ872315, GQ872270; \**A. goetzei* subsp. *goetzei* Harms, *RL1322*, JRAU, JQ230131, JQ230182, JQ230229/JQ230230; \**A. goetzii* subsp. *macrophylla* Brenan, *RL1320*, JRAU, —, JQ230183, JQ230227/JQ230228; *A. grandicornuta* Gerstner, *RL1286*, JRAU, GQ872227, GQ872316, GQ872271; \**A. gummifera* Willd., *MSB84062*, K, —, —, JQ230311; \**A. haematoxylon* Willd., *OM1069*, JRAU, JQ230141, JQ230192, JQ230275/JQ230276; \**A. hamulosa* Benth., *J.C.W. Fagg & B.T. Styles 39*, K, —, —, JQ230262/JQ230263; *A. hebeclada* DC. subsp. *chobiensis* (O.B.Miller) Schreiber, *OM1034*, JRAU, GQ872228, GQ872317, GQ872272; \**A. hebeclada* subsp. *hebeclada* DC., *MSB104986*, K, JQ230143, JQ230193, JQ230312/JQ230313; *A. hebeclada* subsp. *tristis* A.Schreib., *RL1301*, JRAU, GQ872229, GQ872318, GQ872273; \**A. hereroensis* Engl., *RL1332*, JRAU, JQ230132, JQ230184, JQ265939/JQ265940; \**A. hockii* De Willd., *MSB369514*, K, JQ230144, JQ230194, JQ230301/JQ230302; *A. kirkii* Oliv.,

*RL1307*, JRAU, GQ872231, GQ872319, GQ872275; *A. kosiensis* P.P.Sw. ex Coates Palgr., *RL1305*, JRAU, GQ872232, GQ872320, GQ872276; *A. kraussiana* Meisn. ex Benth., *RL1287*, JRAU, GQ872233, GQ872321, GQ872277; *A. luederetzi* Engl. var. *retinens* (Sim) J.H.Ross & Brenan, *RL1285*, JRAU, GQ872234, GQ872322, GQ872278; *A. lycopodiifolia* Hook., *M.F. Duretto 1063*, MEL, DQ371879, AF195715, AF195705/AF195686; *A. macrostachya* Rchb. ex G.Don, CANB632225, CANB, DQ371881, —, DQ371856; \**A. mammifera* Schltld., *Chase 8247*, K, JQ230112, JQ230163, —; *A. mearnsii* De Wild., *D. Murphy 200*, MEL, AF523110, AF195707, AF195694/AF195675; *A. melanoxydon* R.Br., *J. Miller 748*, CANB, AF274166, AF195712, AF195699/AF195680; *A. mellifera* (Vahl) Benth. subsp. *mellifera*, *OM1030*, JRAU, GQ872235, GQ872323, GQ872279; *A. montis-usti* Merxm. & Schreiber, *OM1065*, JRAU, —, GQ872324, GQ872280; \**A. natalitia* E.Mey., *RL1330*, JRAU, —, JQ278603, JQ230233/JQ230234; *A. nebrownii* Burt Davy, *OM1050*, JRAU, GQ872236, GQ872325, GQ872281; \**A. ogadensis* Chiov., *S. Bidgood et al. 4991*, K, —, —, JQ230264; JQ230265; *A. ormocarpoides* P.J.H.Hurter, *RL1293*, JRAU, GQ872239, GQ872327, GQ872284; \**A. pataczekii* D.I.Morris, *Chase 16092*, K, JQ230113, JQ230164, JQ230248/JQ230249; *A. permixta* Burt Davy, *Hurter J.2*, JRAU, GQ872240, GQ872328, GQ872285; *A. platycarpa* F.Muell., *D. Murphy 327*, MEL, AF274223, AF525005, AF522985; *A. polyacantha* Willd., *RL1323*, JRAU, GQ872241, GQ872329, GQ872286; *A. pulchella* R.Br., *D. Murphy 268*, MEL, AF523100, AF195724, AF195692/AF195673; *A. reficiens* Wawra, *RL1297*, JRAU, GQ872242, GQ872330, GQ872287; *A. rhemania* Schinz, *RL1288*, JRAU, GQ872243, —, —; *A. robbertsei* P.P.Sw. ex Coates Palgr., *RL1289*, JRAU, GQ872244, GQ872331, GQ872288; *A. robusta* Burch. subsp. *Clavigera* (E.Mey.) Brenan, *RL1316*, JRAU, GQ872245, GQ872332, GQ872289; \**A. robusta* Burch. subsp. *usambarensis*, *OM2458*, JRAU, JQ230146, —, JQ230286; JQ230287; \**A. robysiana* Merxm. & Schreiber, *OM1066*, JRAU, JQ230133, JQ230186, JQ230273/JQ230274; *A. schweinfurthii* Brenan & Exell, *RL1299*, JRAU, GQ872246, GQ872333, GQ872290; *A. sekhukhuniensis* P.J.H.Hurter, *RL1296*, JRAU, GQ872247, GQ872334, GQ872291; *A. senegal* (L.) Willd. var. *leiorachis* Brenan, *RL1324*, JRAU, GQ872248, GQ872335, GQ872292; *A. Senegal* (L.) Willd. var. *rostrata* Brenan, *RL1331*, JRAU, GQ872249, GQ872336, GQ872293; *A. sieberiana* DC. subsp. *sieberiana*, *OM1029*, JRAU, —, GQ872337, GQ872294; *A. sieberiana* DC. var. *woodii* (Burt Davy) Keay & Brenan, *RM02*, JRAU, GQ872250, GQ872338, GQ872295; *A. somalensis* Vatke, *M. Thulin 10823*, K, —, —, JQ230266/JQ230267; *A. spinescens* Benth., *D. Murphy 246*, MEL, AF523082, AF195725, AF195706; *A. stullmannii* Taub., *RL1294*, JRAU, GQ872251, GQ872339, GQ872296; *A. swazica* Burt Davy, *RL1327*, JRAU, GQ872252, GQ872340, GQ872297; \**A. theronii* P.P.Sw., *RL1313*, JRAU, —, JQ230196, JQ230223/JQ230224; \**A. torrei* Brenan, *OM2429*, JRAU, JQ230147, —, JQ230282/JQ230283; *A. translucens* Cunn. ex Hook., *D. Murphy 302*, MEL, AF523087, AF525004, AF522984; *A. tumida* F.Muell ex Benth., *J. Miller 872*, CANB, AF523111, AF525006, AF522986; \**A. vetista* Ker Gawl., *Chase 15949*, K, JQ230114, JQ230168, JQ230246/JQ230247; \**A. zizyphispina* Chiov., *A.S. Hassan 53*, K, —, —, JQ230269/JQ230270; *A. welwitschii* Oliv. subsp. *Delagoensis* (Harms) J.H.Ross & Brenan, *RL1325*, JRAU, GQ872254, GQ872342, GQ872299; \**Vachellia nilotica* (L.) P. J. Hurter & Mabb. subsp. *tomentosa* (Benth.) Kyal. & Boatwr., *MSB132963*, K, JQ230151, JQ230200, JQ230316; \**V. nilotica* (L.) P. J. Hurter & Mabb. subsp. *indica* (Benth.) Kyal. & Boatwr., *MSB61070*, K, JQ230150, JQ230199,

JQ230314/JQ230315; *V. tortilis* (Forssk.) Galasso & Banfi, *RL1290*, JRAU, GQ872253, GQ872341, GQ872298; \**V. tortilis* (Forssk.) Galasso & Banfi subsp. *tortilis*, *MSB151463*, K, JQ230154, JQ230203, JQ230320/JQ230321; \**V. tortilis* (Forssk.) Galasso & Banfi subsp. *heteracantha* (Burch.) Kyal. & Boatwr., *MSB82839*, K, JQ230153, JQ230201, JQ230317/JQ230318; \**V. tortilis* (Forssk.) Galasso & Banfi subsp. *spirocarpa* (Hochst. ex. A.Rich.) Kyal. & Boatwr., *MSB26381*, K, JQ230152, JQ230202, JQ230303/JQ230304; \**V. tortilis* (Forssk.) Galasso & Banfi subsp. *raddiana* (Savi). Kyal. & Boatwr., *MSB69065*, K, —, —, JQ230319; **Acaciella Britton & Rose:** *A. angustissima* (Mill.) Britton & Rose var. *angustissima*, *DS15993*, DS, DQ371887, AF195715, DQ371872; *A. boliviana* Rusby (= *A. angustissima*), *D. Murphy 248*, MEL, AF274144, AF525001, AF522981; \**A. chamelensis* (L.Rico) L.Rico, *L. Rico 8236*, K, —, JQ230160, —; *A. glauca* (L.) L.Rico, 96-12580 (DLEG), DQ371880, —, DQ371857; \**A. rosei* (Standl.) Britton & Rose, *Lott 9535*, K, JQ265929, JQ230165, JQ230241/JQ230242; \**A. tequilana* (S.Watson) Britton & Rose, *Rico 1206*, K, —, JQ230167, JQ230237/JQ230238. **Adenantha L.:** *A. pavonina* L., *Major Howell Seeds*, BH, AF521808, —, —. **Alantsilodendron Villiers:** *A. pilosum* J.-F.Villiers, *M. Luckow 4301* (BH), AY125844, —, AY125844. **Albizia Durraz.:** \**A. amara* Boiv., *OM2136*, JRAU, JQ230117, JQ230170, JQ230279; \**A. athlemintica* Brongn., *OM363*, JRAU, JQ230118, JQ230171, JQ230209; \**A. brevifolia* Schinz, *OM826*, JRAU, JQ230119, JQ230172, JQ230214/JQ230215; \**A. forbesii* Benth., *OM331*, JRAU, JQ230120, JQ230173, —; \**A. glaberrima* (Schum. & Thonn.) Benth., *OM2605*, JRAU, JQ230121, JQ230174, JQ230288/JQ230289; \**A. harveyi* Fourn., *OM1402*, JRAU, JQ230122, JQ230175, —; \**A. petersiana* Oliver, *OM745*, JRAU, JQ230123, JQ230176, JQ230212/JQ230213; *A. kalkora* Prain, *J. Miller 877*, CANB, AF523083, AF524965, AF522945; *A. sinaloensis* Britton & Rose, *J. Miller 878*, CANB, AF274121, AF524966, AF522946; \**A. suluensis* Gerstner, *SA 156*, JRAU, JQ230124, —, JQ230235; \**A. tanganyicensis* Baker f., *OM1972*, JRAU, —, —, JQ230278; \**A. versicolor* Welw. ex Oliver, *RL1214*, JRAU, JQ265933, JQ230177, JQ230218; \**A. zimmermannii* Harms, *OM2363*, JRAU, JQ230125, JQ230178, JQ230280; JQ230281; \**A. zygia* J.F.Macbr., *OM1820*, JRAU, JQ230126, JQ230179, —. **Anadenanthera Speg.:** *A. colubrina* (Vell.) Brenan, *R.T. Pennington 845*, E, AF278481, —, AF278481. **Arapatiella Rizzini & A.Mattos:** *A. psilophylla* (Harms) R.S.Cowan, *Carvalho 6095*, K, EU361859, —, EU361738. **Archidendron F.Muell.:** *A. hirsutum* I.C.Nielsen, *Douglas 625*, MEL, EU361860, —, AF365042. **Bussea Harms:** *B. perrieri* R.Vig., *Randrianasolo 527*, P, EU361896, —, EU361757. **Calliandropsis H.M.Hern. & P.Guinet:** *C. nervosus* (Britton & Rose) H.M.Hern. & P.Guinet, *Hernandez 2365*, BH, AF278520, —, AF278520. **Cathormion Hassk.:** *C. umbellatum* (Vahl) Kosterm., *J. Miller 882*, CANB, AF274122, AF524968, AF522949. **Chloroleucon Britton & Rose ex Record:** *C. mangense* (Jacq.) Britton & Rose, *J. Miller 527*, CANB, AF523072, AF524969, AF522950. **Ebenopsis Britton & Rose:** *E. ebano* (Berland.) Barneby & J.W.Grimes, *J. Miller 529*, CANB, AF274123, AF524970, AF522951. **Cylicodiscus Harms:** *C. gabunensis* Harms, *M.S.M. Sosef 645A*, BH, AF521819, —, AY125845. **Delonix Raf.:** *D. elata* Gamble, *Herendeen 20-XII-97-1*, US, EU361928, —, AF365106. **Desmanthus Willd.:** *D. bicornutus* S.Watson, *615637*, CANB, AF523108, —, AF522939; *D. cooleyi* (Eaton) Branner & Coville, *Wojciechowski 1018*, ASU, AY386916, —, —. **Dichrostachys Wight & Arn.:** \**D. cinerea* (L.) Wight & Arn., *OM256*, JRAU, JQ230155, JQ230204, JQ230207; JQ230208; \**D. cinerea* subsp. *Africana* Brenan &

Brummitt, *RBN359*, JRAU, JQ230156, JQ230205, JQ265941; *D. richardiana* Baill., Luckow 4261, BH, AF521823, —, —. **Dimorphandra Schott:** \**D. conjugata* Sandwith, Breteler 13800, WAG, EU361934, —, AF365099. **Dinizia Ducke:** *D. excelsa* Ducke, Sergio de Faria s.n., —, AF521827, —, AF278479. **Elephantorrhiza Benth.:** *E. elephantine* Skeels, Sergio de Faria s.n., —, AF521828, —, AF278484. **Enterolobium Mart.:** *E. contortisiliqua* (Vell.) Morong, J. Miller 888, CANB, AF274124, AF524971, AF522952; *E. cyclocarpum* (Jacq.) Griseb., D. Murphy 355, MEL, AF521831, AF524972, AF278518. **Erythrophleum Afzel. ex R.Br.:** *E. suaveolens* (Guill. & Perr.) Brenan, Herendeen 17-XII- 97-3, US, EU361949, —, AF365103. **Faidherbia A.Chev.:** *F. albida* (Delile) A.Chev., RM 01, JRAU, GQ872256, GQ872344, GQ872301. **Fillaeopsis Harms:** *F. discophora* Harms, D. Harris 4111, E, AF521832, —, AF278508. **Gagnebina Neck.:** *G. bakoliae* Luckow & Du Puy, Lockow 4243, BH, AY125848, —, AY125848. **Havardia Small:** *H. albicans* (Kunth) Britton & Rose, J. Miller 881, CANB, AF523085, AF524975, AF522956; *H. pallens* (Benth.) Britton & Rose, J. Miller 615547, CANB, AF274125, AF524974, AF522955. **Inga Mill.:** *I. edulis* Mart., 2066677, MEL, AF523078, AF524976, AF522957. **Jacqueshuberia Ducke:** *J. brevipes* Barneby, Redden 1240, US, EU361984, —, EU361815. **Kanaloa Lorence & K.R.Wood:** *K. kahoolawensis* Lorence & K.R.Wood, D. Lorence s.n., NTBG, AF521839, —, AF278489. **Lemuropisum H.Perrier:** *L. edule* H.Perrier, Du Puy M1033, K, EU361991, —, EU361818. **Leucaena Benth.:** *L. leucocephala* (Lam.) de Wit, J. Miller 615639, CANB, AF523094, —, AF522942; *L. retusa* Benth., Boke & Massey 419, UC, AY386858, —, —. **Lysiloma Benth.:** *L. acapulcense* (Kunth) Benth., J. Miller 885, CANB, AF274126, AF524977, AF522958; *L. tergeminum* Benth., J. Miller 532, CANB, AF523089, AF524978, AF522959. **Mariosousa Seigler & Ebinger:** *M. acatlensis* (Benth.) Seigler & Ebinger, DS16002, DS, DQ371890, —, DQ371874; *M. coulteri* (Benth.) Seigler & Ebinger, DS15953, DS, DQ371893, AF525008, DQ371868; *M. dolichostachya* (S.F.Blake) Seigler & Ebinger, DS16035, DS, DQ371892, AF525009, DQ371866; *M. salazari* (Britton & Rose) Seigler & Ebinger, DS15978, DS, DQ371888, —, DQ371865; \**M. sericea* (Martens & Galeotti) Seigler & Ebinger, Chase 19849, K, JQ230115, JQ230166, JQ230252/JQ230253; *M. usumacintensis* (Lundell) Seigler & Ebinger, DS16025, DS, DQ371889, —, DQ371863; *M. willardiana* (Rose) Seigler & Ebinger, 89-0143, DLEG, AY386898, —, DQ371862. **Microlobius C.Presl:** *M. foetidus* (Jacq.) M.Sousa & G.Andrade, J. Miller 435, CANB, AF523095, —, AF522960. **Mimosa L.:** *M. tenuiflora* (Willd.) Poir., 615541, CANB, AF274120, AF524963, AF522943. **Mimozyanthus Burkart:** *M. carinatus* (Griseb.) Burkart., F. Fortunato 7575, BAB/BH, AY944556, —, DQ344604. **Neptunia Lour.:** *N. gracilis* Benth., J. Grimes 3168, BH, AF521845, —, AF278494; *N. monosperma* F.Muell. ex Benth., B. Jackes s.n., BH, AF274209, —, AF522944; \**N. oleracea* Lour., RBN162 (JRAU), JQ230157, JQ230206, JQ230216/JQ230217. **Newtonia Baill.:** *N. buchananii* (Baker) G.C.C.Gilbert & Boutique, BNBG 69-6494, BR, AF521847, —, AF278501; *N. hildebrandtii* (Vatke) Torre, BNBG 73-2891, BR, AF521848, —, AF278502. **Pachyelasma Harms:** *P. tessmannii* Harms, Harris 3972, K, EU362013, —, AF365105. **Pararchidendron I.C.Nielsen:** *P. pruinatum* Koorders, 615549, CANB, AF274127, AF524980, AF522961. **Parapiptadenia Brenan:** *P. pterosperma* (Benth.) Brenan, E. Tameirao 2458, NY, DQ784651, —, DQ784651; *P. rigida* (Benth.) Brenan, A. arambarri s.n., BH, AF278505, —, AF278505. **Paraserianthes I.C.Nielsen:** *P. lophantha* (Willd.) I.C.Nielsen, 615550, CANB, AF274128, AF524981,



AF522962. **Parkia R.Br.:** *P. biglandulosa* Wright & Arn., *Banana Tree Nursery*, BH, AF521850, —, AF278498; *P. speciosa* Hassk., *Bruneau 931*, BH, AF521851, —, AF278499; *P. timoriana* (DC.) Merr., *DM 265*, MELU, AF523091, AF195719, AF195682. **Parkinsonia Plum. ex L.:** *P. florida* S.Watson, *Salywon 919*, ASU, AY386856, —, EU361827. **Peltophorum (Vogel) Benth.:** *P. dubium* Taub., *No. 90.2705*, *Wojciechowski 892*, ASU, AY386846, —, EU361828. **Pentaclethra Benth.:** *P. eetveldeana* De Wild. & T.Durand, *BNBG 65-6191*, BR, AF521852, —, AY125850; *P. macrophylla* Benth., *BNBG 87-1143*, BR, AF521853, —, AF278485. **Piptadenia Benth.:** *P. minutiflora* Ducke, *CM Leme 6*, NY, DQ790624, —, DQ784667; *P. peruviana* (J.F.Macbr.) Barneby, *M. Nee 38898*, NY, DQ790627, —, DQ784670; *P. stipulacea* Ducke, *L.P. de Queiroz et al. 3115*, NY, DQ790634, —, DQ784675. **Piptadeniastrum Brenan:** *P. africanum* (Hook. f.) Brenan, *D. Harris 4319*, E, AF521857, —, —. **Piptadeniopsis Burkart:** *P. lomentifera* Burkart, *M. Luckow 4476*, BAB/BH, AY944559, —, AY944541. **Prosopidastrum Burkart:** *P. mexicanum* (Dressler) Burkart, *Rebman 4021*, DES, AY386919, —, —. **Prosopis L.:** *P. glandulosa* Torr. subsp. *torreyana* (L.D.Benson) A.E.Murray, *Wojciechowski 875*, ASU, AY386851, —, —; *P. pallida* Kunth, *M. Lavin 3088*, BH, AF521860, —, —. **Pseudopiptadenia Rauschert:** *P. contorta* (DC.) G.P.Lewis & M.P.Lima, *L.P. de Queiroz et al. 3366*, NY, DQ784676, —, DQ784676; *P. suaveolens* (Miq.) J.W.Grimes, *S.A. Mori et al. 24790*, NY, DQ784677, —, DQ784677. **Pseudosamanea Harms:** *P. guachapele* (Kunth) Harms, *D. Murphy 350*, MEL, AF523079, AF524983, —. **Samanea Merr.:** *S. saman* Merr., *D. Murphy 357*, MEL, AF523073, AF524984, AF522965. **Schleinitzia Warb.:** *S. insularum* (Guill.) Guinet, *Waimanalo Res. Station, PI282460*, BH, AF521862, —, AF278491. **Senegalia Raf.:** \**S. anisophylla* (S.Watson) Seigler & Ebinger, *Chase 14817*, K, JQ230134, JQ230159, JQ230244/JQ230245; *S. berlandieri* (Benth.) Britton & Rose, *J. Miller 501*, CANB, AF274145, AF524998, AF522978; *S. caffra* (Thunb.) P.J. Hurter & Mabb., *RL1335*, JRAU, GQ872217, GQ872306, GQ872261; *S. catechu* (L.f.) P.J. Hurter & Mabb., *615594*, CANB, AF274141, —, DQ371870; *S. gaumeri* (Blake) Britton & Rose, *DS16042*, DS, DQ371895, —, DQ371858; *S. gilliesii* (Steud.) Seigler & Ebinger, *DLEG94-0167*, DLEG, DQ371882, —, DQ371860; *S. glomerata* (Benth.) Britton & Rose, *249*, CANB, AF274147, AF525000, AF522980; *S. modesta* (Wall.) P.J.Hurter, *615595*, CANB, AF274142, AF524995, AF522975; \**S. muricata* (L.) Britton & Rose, *DS14548\_JM1606*, CANB, EU812032, EU811974, EU440008; *S. nigrescens* (Oliv.) P.J.Hurter, *OM255*, JRAU, GQ872237, —, GQ872282; \**S. occidentalis* (Rose) Britton & Rose, *J. Miller 1219*, CANB, EU812055, EU811991, EU440032; *S. picachensis* (Brandege) Britton & Rose, *DS15981*, DS, DQ371895, —, —; *S. polyphylla* (DC.) Britton & Rose, *910150*, DELEP, AF274147, AF525000, AF522980; *S. roemeriana* (Scheele) Britton & Rose, *J. Miller 517*, CANB, AF523099, AF524997, AF522977; *S. sororia* (Standl.) Britton & Rose, *DS16067*, DS, DQ371876, —, DQ371859; \**S. tenuifolia* (L.) Britton & Rose, *W. Thomas 9537*, K, —, —, JQ230243; \**S. visco* (Griseb) Seigler & Ebinger, *Conicet (s.n.)*, K, JQ230116, JQ230169, JQ230239/JQ230240; \**S. vogeliana* (Steud.) Britton & Rose, *J. Miller 1603*, CANB, EU812025, EU811969, EU440001; *S. wrightii* (Benth.) Britton & Rose, *DLEG900444*, DLEG, AF274148, —, DQ371854. **Stryphnodendron Mart.:** *S. porcatum* D.A.Neill & Occhioni f., *D. Neill 14001*, MO, AY944547, —, AY944547; *S. rotundifolium* Mart., *B.M.T. Walter et al. 2913*, NY, DQ784685, —, DQ784685. **Vachellia Wight & Arn.:** \**V. anegadensis* (Britton) Seigler & Ebinger, *MH49*, K, JQ265931, —,

JQ230254/JQ230255; *V. campechiana* (Mill.) Seigler & Ebinger, *MH81*, MH, AF274133, —, AY574113; *V. caven* (Molina) Seigler & Ebinger, *J. Miller 247*, CANB, AF274131, AF524987, AF522967; \**V. choriophylla* (Benth.) Seigler & Ebinger, *J. Miller 1419*, CANB, EU812041, —, EU440017; *V. collinsii* (Saff.) Seigler & Ebinger, *DS16041*, DS, DQ371884, —, DQ371869; *V. constricta* (Benth.) Seigler & Ebinger, *J. Miller 505*, CANB, DQ371883, AF524989, DQ371861; \**V. cornigera* (L.) Seigler & Ebinger, *J. Miller 1344*, CANB, EU812045, EU811981, EU440021; *V. erioloba* (E.Mey.) P.J.Hurter, *RL1298*, JRAU, GQ872221, GQ872310, GQ872265; *V. farnesiana* (L.) Wight & Arn., *T.J. Entwisle 2708*, MEL, AF523115, AF195723, AF195688/AF195669; *V. gerrardi* (Benth.) P.Hurter, *RL1321*, JRAU, GQ872225, GQ872314, GQ872269; *V. karroo* (Hayne) Banfi & Galasso, *RL1282*, JRAU, GQ872230, —, GQ872274; \**V. macracantha* (Humb. & Bonpl. ex Willd.) Seigler & Ebinger, *J. Miller 1346*, CANB, EU812053, EU811989, EU440030; *V. nilotica* (L.) P.J.Hurter & Mabb., *RL1302*, JRAU, GQ872238, GQ872326, GQ872283; \**OM626*, JRAU, JQ230148, —, JQ230210/JQ230211; \**OM1063*, JRAU, JQ265932, JQ230197, JQ230271/JQ230272; \**OM2607*, JRAU, JQ230149, JQ230198, JQ230290/JQ230291; \**V. oviedoensis* (R.Garcia & M.Mejía) Seigler & Ebinger, *J. Miller 1601*, CANB, EU812029, —, EU440005; *V. pennatula* (Schltdl. & Cham.) Seigler & Ebinger, *DS16053*, DS, DQ371878, —, DQ371855; *V. schottii* (Torr.) Seigler & Ebinger, *J. Miller 520*, CANB, AF274136, AF524991, AF522971; *V. vernicosa* (Britton & Rose) Seigler & Ebinger, *J. Miller 265*, CANB, AF523113, AF524990, AF522970; *V. xanthophloea* (Benth.) P.J.Hurter, *RL1291*, JRAU, GQ872255, GQ872343, GQ872300. **Xerocladia Harv.:** *X. viridiramis* Taub., *Krosnik 8244*, BH, EU000438, —, EU004653. **Zapoteca H.M.Hern.:** *Z. tetragona* (Willd.) H.M.Hern., *J. Miller 615626*, CANB, AF523097, AF524986, AF522966. **Zygia P.Browne:** *Z. lathetica* Barneby & J.W.Grimes, *D. Neill 14002*, MO, AY94456, —, AY944550.