

## Endemic Seed Plants in the Bahamian Archipelago

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**Abstract** The Bahamian archipelago consists of approximately 2,400 islands occurring in the Atlantic Ocean off the coasts of Florida, Cuba, and Hispaniola. In 1982 Donovan Correll and Helen Correll published the most current synopsis of the floristic diversity of this island chain. Their publication cited a total of 1,371 vascular plant species of which 114 seed plants were listed as endemic to the archipelago (~8 % of the native flora). In the last 30 years, additional herbarium collections and taxonomic studies have shown that a number of species previously indicated to be endemic to these islands also occur in other regions or have been taxonomically merged into other species. The current number of species considered endemic to the Bahamian archipelago is 89 (~6 % of the total flora). There are 50 endemic species that have a known distribution on one (31 species) or two island groupings (19 species). Biogeographical analyses of endemic plant distributions shows three distinct clusters of species: southern, central, and the northern islands, with a fourth cluster that includes islands with a small area and one medium size island that seems that has been underexplored (i.e., Little Inagua). We anticipate that understanding the conservation status of endemic species and their distributions will help to develop legislation to preserve this Bahamian natural heritage.

**Keywords** Caribbean Islands · Tropical islands · West Indies · Biogeography · Plant conservation · Biodiversity hotspots

### Introduction

The Bahamian archipelago (The Bahamas plus The Turks and Caicos Islands) consists of approximately 700 islands and islets occurring along 450 miles of latitude (~20° to 27° N) in the Atlantic Ocean off the coasts of Florida, Cuba, and Hispaniola. This insular system represents the furthest north extreme of the Caribbean Island Biodiversity Hotspot. Because of its geographical location the Bahamian flora has connections both with the United States subtropical mainland and the Greater Antilles.

Alice Northrop (1902) wrote the first flora within the Bahamas. This work was followed by Britton and Millspaugh (1920) and culminated with the *magnum opus* of Correll and Correll (1982). These authors discussed endemism within the archipelago and increased our understanding of species distributions across these islands. Prior to our study it was only Taylor (1921) who published a paper focusing on patterns of plant endemism on the Bahamian islands, he recognized 132 endemic species of flowering plants. Previously Cooker (1905) indicated that the islands only have 56 endemic species of vascular plant. Britton and Millspaugh (1920) estimated that the Bahamian flora is composed of 133 endemic seed plants. Without giving a particular figure Gillis (1974) indicated that the islands should have a number of endemics significant lower than that reported by Taylor (1921).

Numerous other workers and institutions have contributed to the flora over the years such as William Gillis (Kass & Eshbaugh, 1993) and Miami University faculty and graduate students (Nickrent et al., 1988; Eshbaugh, 2014; Vincent & Hickey, 2014).

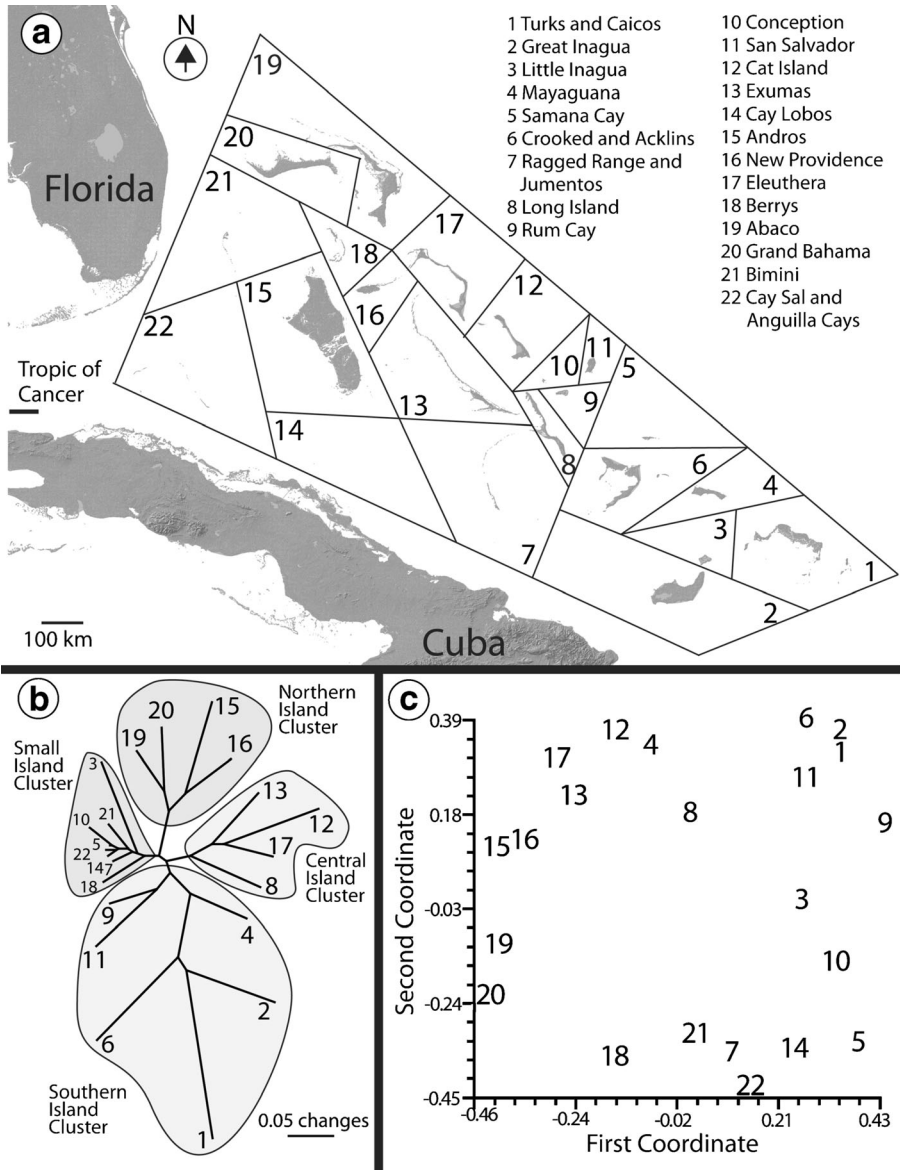
As part of the description of each species Correll and Correll (1982) indicated if a species is considered by them to be endemic. All total they identified 114 seed plant species as endemic to the archipelago. It is noteworthy, that this figure refers to those species for which these authors were certain of their status as Bahamian endemics. Correll and Correll (1982) listed six additional species for which they were not sure if they should be regarded as Bahamian endemics.

Correll and Correll (1982) presented details of species distributions across the archipelago based on their own field collections and herbarium specimen records at 25 institutions. These two authors showed the distributions of each species based on an 11 island grouping system of division that was created for their work.

The most recent checklist for the Caribbean Islands was published by Acevedo-Rodríguez and Strong (2012) and this work identified 92 seed plant endemic species. The study presented by us seeks to review the current plant endemism status of the Bahamian archipelago. We also provide recommendations for additional work to be conducted and potential avenues for governmental policies to give better protection to species with extremely limited distributions.

## Methodology

In a previous study Freid et al. (2003) (Fig. 1) established a new system of island divisions to more finely map where species were occurring (22 island groupings) than what was possible based on the 11 island groupings published by Correll and Correll (1982). Using information provided by Correll and Correll (1982) and Acevedo-Rodríguez and Strong (2012) we prepared an initial list of Bahamian endemics. Subsequently we reviewed herbarium specimens at BNH, FTG, NY, and MU. For our research we also conducted taxonomic literature reviews on each species to determine its current taxonomic status. In addition, we consulted specialists (see Acknowledgement section below) to interpret those species that were taxonomically difficult to understand. These reviews yielded two species lists. The first encompasses those species that we considered endemic to the archipelago (Appendix 1); the second one records those species that were considered by Correll and Correll (1982) and/or Acevedo-Rodríguez and Strong (2012) as Bahamian endemics but should now not be



**Fig 1** **a** Phylogeographical division of the Bahamian archipelago into 22 island groupings (Freid et al., 2003); **b** classification of the 22 island groupings after neighbor joining analysis of the endemic flora of these islands; **c** ordination of the 22 island groupings along the first two coordinates of a principal coordinate analysis of the endemic flora of these islands

regarded as part of the endemic flora. They either occur in other regions or are currently merged with non-endemic taxa.

The herbarium data and literature reviews allowed us to record the distribution of the endemic species for each of the 22 island grouping (Appendix 1). This resulted in a data matrix that recorded the presence (coded as 1) and absence (coded as 0) of each species in each island grouping. This data matrix was subsequently used for

classification and ordination studies. These two multivariate approaches helped us to reveal biogeographical relationships across the Bahamian archipelago. Ordination of island groupings was achieved through Principal Coordinates Analysis (PCO) with Jaccard's Coefficient using NTSYSpc vers. 2.1 (Rohlf, 2000). Classification of these groupings was based on the neighbor joining clustering method and it was performed with PAUP vers. 3.1.1 (Swofford, 2003) using the mean character difference distance. Based on this distance we obtained a network tree with branch lengths proportional to distances between clusters.

## Discussion

### Taxonomy Patterns

Our review showed that the Bahamian archipelago has 89 endemic seed plant species in 54 genera and 29 families (Appendix 1, Fig. 2). All of these species are Angiosperms with the exception of the Long Island endemic *Zamia lucayana* (Zamiaceae, Cycadales). Fifty-one species listed by Correll and Correll (1982) or Acevedo-Rodríguez and Strong (2012) are not regarded any longer as endemic to the archipelago (Appendix 2). Twenty-four species were delisted due to changes in taxonomy and 28 species were not considered as Bahamian endemics because they occur in other regions (Appendix 2). The three genera with the highest number of endemics are *Agave* (eight species), *Euphorbia* (seven species), and *Encyclia* and *Spermacoce* (six species in each of these two genera). The number of genera that have a single endemic species is 41. The most endemic-rich families are Rubiaceae (14 species), Euphorbiaceae (11 species), and Asteraceae (nine species).

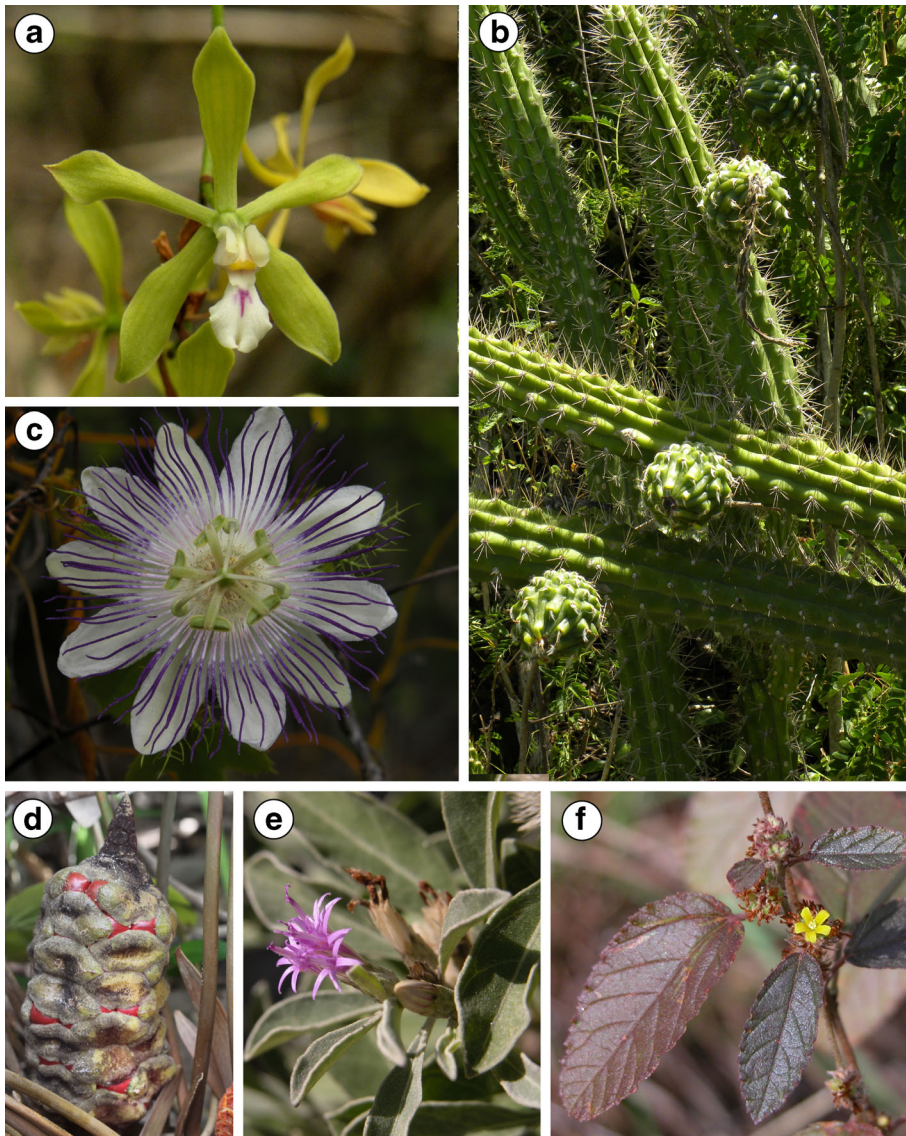
From a historical perspective the majority of the endemic Bahamian species (51) were described and published in two main periods: 1900–1909 (30 species) and 1970–1979 (21 species) (Fig. 3). The first period matches the plant exploration activities of N. L. Britton and C. F. Millspaugh sponsored by the Field Museum of Chicago and the New York Botanic Garden. The 1970–1979 interval coincides with the work supported by Fairchild Tropical Botanic Garden that led to the publication of the Bahamian flora by Correll and Correll (1982).

### Biogeography Patterns

The multivariate analyses of geographical distributions yielded four major island clusters (Fig. 1). One of these clusters was composed by small islands [the largest island of this group was Little Inagua (~78 km<sup>2</sup>, data from [http://www.bnt.bs/\\_m1780/Little-Inagua-Island](http://www.bnt.bs/_m1780/Little-Inagua-Island))]. Members of this cluster have a reduced number of endemic species and confirm a widespread pattern of other insular systems in which an increase in species and endemism diversity only starts to occur above a particular threshold area (i.e., the small-island effect) (Whittaker & Fernández-Palacios, 2007). However, we cannot rule out that Little Inagua is associated with this cluster because it is relatively remote and is still underexplored. We anticipate that future floristic studies in this island might find additional endemics shared with the neighbor islands of Turks and Caicos, Great Inagua, and Mayaguana.

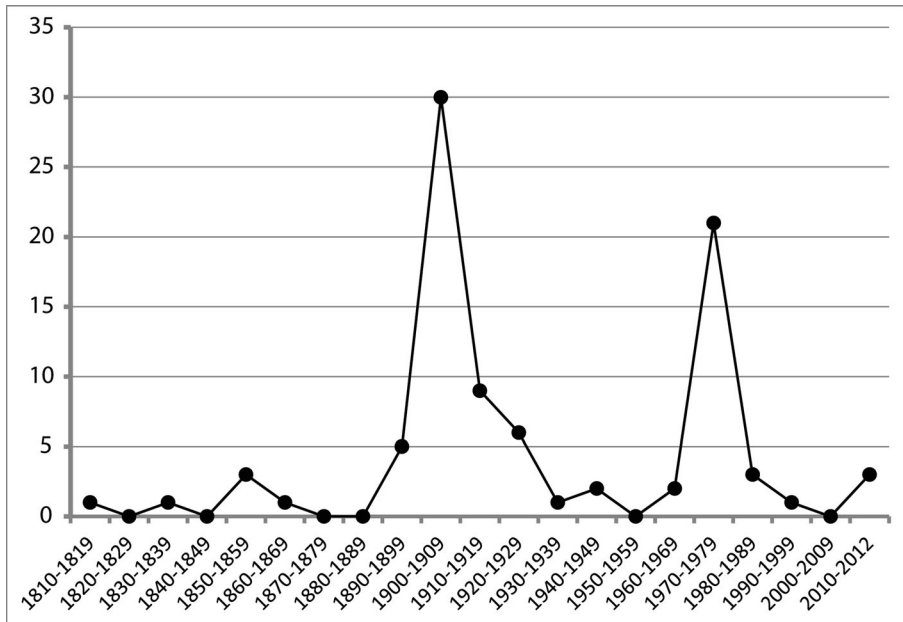
The three remaining clusters ally with the north-east geographical layout of the archipelago. Andros, New Providence, Abaco, and Grand Bahama formed the Northern





**Fig. 2** Selection of seed plant species endemic to the Bahamian archipelago. **a** *Encyclia fehlingii* (Saulede) Saulede & R. M. Adams (Orchidaceae); **b** *Harrisia brookii* Britton (Cactaceae); **c** *Passiflora bahamensis* (Passifloraceae); **d** *Zamia lucayana* Britton (Zamiaceae) – female individual; **e** *Lepidaploa arbuscula* (Less.) H. Rob. (Asteraceae); **f** *Waltheria bahamensis* Britton (Malvaceae). Photo credit: **a–c, e–f** Ethan Freid; **d** Michael Calonje

Island Cluster. These island grouping displayed the lowest scores along the first coordinated after the PCO analysis. Eleuthera, Exumas, Cat Island, and Long Island composed the Central Island Cluster. The PCO analyses showed them to have intermediate values along the first coordinate and high scores along the second one. The rest of the islands belonged to the Southern Island Cluster and they had large scores along the first and second coordinates. The only discrepancy between the neighbor joining



**Fig. 3** Publication of original descriptions of the 89 seed plant species endemic to the Bahamian archipelago. Data refer to year of publication of basionym

tree and the PCO scatter diagram was showed by Mayaguana (~285 km<sup>2</sup>, data from <http://www.bahamas.gov.bs>). The phylogeographical network placed this island with the Southern Island Cluster whereas the PCO analyses suggested that this island was closely related to those of the Central Island Cluster. The island of Mayaguana provides another example of a relatively isolated island that we believe still needs to be further explored; this might explain the disagreement between these two multivariate approaches. Interestingly, the island of San Salvador (~163 km<sup>2</sup>, data from <http://www.bahamas.gov.bs>) is smaller than Mayaguana but has similar number of endemics (15 endemics in San Salvador vs 14 endemics in Mayaguana) and it belongs to the Southern Island Cluster. San Salvador has been heavily explored mostly because of the presence of the Gerace Research Center since the 1970's, and indeed Kass (1991) published a floristic guide for this island.

More than half of the endemics (50 species) have a restricted insular distribution; 31 of them are confined to a single island grouping and 19 only occur on two island groupings (Table 1). The islands with the highest number of single-cluster endemics are Turks and Caicos (eight species) and Long Island (four species). The islands of Crooked and Acklins as well as Great Inagua have three single-island endemics each (Table 1). The Small Island Cluster has two endemics restricted only to this geographical group (i.e., *Euphorbia inaguaensis* and *Spermacoce inaguaensis* on Little Inagua) (Table 2). The number of endemics only confined to the Southern Island Cluster is 28. This value is lower for the Central Island Cluster (ten) and Northern Island Cluster (nine). The lowest number of endemics occurs on the Small Island Cluster (25). The Southern Island Cluster has the highest number of endemic species (59) followed by the Central Island Cluster (38) and the Northern Island Cluster (35). A full island biogeographic study of the Bahamian flora is out of the scope of this paper. However,

**Table 1** Bahamian endemic seed plant species that have restricted insular distribution. See Figure 1 for island grouping code

Single island grouping endemics		Two island grouping endemics	
Species	Island groupings	Species	Island groupings
<i>Agave cacozele</i>	16	<i>Agave acklinicola</i>	4, 6
<i>Agave indagatorum</i>	8	<i>Agave inaguensis</i>	1, 2
<i>Agave millspaughii</i>	13	<i>Aristida correlliae</i>	1, 6
<i>Agave nashii</i>	2	<i>Caesalpinia murifructa</i>	2, 6
<i>Ateleia popenoei</i>	13	<i>Encyclia inaguensis</i>	1, 3
<i>Chiococca stricta</i>	6	<i>Erithalis diffusa</i>	6, 1
<i>Cyperus correllii</i>	20	<i>Ermodea nashii</i>	2, 3
<i>Eleocharis bahamensis</i>	1	<i>Ermodea serratifolia</i>	2, 12
<i>Encyclia androsiana</i>	15	<i>Erythroxyllum reticulatum</i>	13, 15
<i>Encyclia caicensis</i>	1	<i>Harrisia brookii</i>	8, 17
<i>Encyclia withneri</i>	12	<i>Heliotropium nashii</i>	1, 2
<i>Ermodea gigantea</i>	6	<i>Maytenus lucayana</i>	15, 20
<i>Euphorbia inaguensis</i>	3	<i>Metastelma sigmoideum</i>	20, 21
<i>Euphorbia longinsulicola</i>	8	<i>Portulaca minuta</i>	13, 15
<i>Euphorbia proctorii</i>	2	<i>Spathelia bahamensis</i>	12, 17
<i>Evolvulus bahamensis</i>	1	<i>Spermacoce thymifolia</i>	1, 2
<i>Guettarda nashii</i>	2	<i>Stenandrium bracteosum</i>	4, 19
<i>Koanophyllon correlliorum</i>	19	<i>Tetranthus bahamensis</i>	6, 14
<i>Lepidium filicaule</i>	1	<i>Tolumnia sasseri</i>	12, 16
<i>Matelea correllii</i>	8		
<i>Metastelma stipitatum</i>	1		
<i>Mosiera androsiana</i>	15		
<i>Spermacoce brittonii</i>	1		
<i>Spermacoce capillaris</i>	1		
<i>Spermacoce felis-insulae</i>	12		
<i>Spermacoce inaguensis</i>	3		
<i>Sporobolus bahamensis</i>	6		
<i>Stenandrium carolinae</i>	1		
<i>Symphytotrichum lucayanum</i>	20		
<i>Zamia lucayana</i>	8		

the highest level of endemism occurs in a cluster of islands from the southern portion of the archipelago that has a reduced area. It appears that latitude rather than island area is a major player to understand patterns of floristic diversity in the Bahamian island chain. It is noteworthy that islands located at southern latitudes have a greater influence from the tropics, as they are also closer to Cuba and Hispaniola. Unlike, Florida most of the surface of these two islands has been above sea level during the Quaternary and Tertiary; therefore they have been acting as continuous sources of plants for the Bahamian archipelago.

**Table 2** Endemics restricted to a single Island Cluster. See Fig. 1b for details of the island groupings that compose the four Island Clusters yielded after the multivariate analyses. The Small Island Cluster has a total of 25 endemics. The Southern Island Cluster has 59 endemics. The total numbers of endemics occurring in the Central Island Cluster and the Northern Island Cluster are 38 and 35, respectively

Island Cluster	Species
Central Island Cluster	<i>Agave indagatorum</i>
Central Island Cluster	<i>Agave millspaughii</i>
Central Island Cluster	<i>Ateleia popenoei</i>
Central Island Cluster	<i>Encyclia withneri</i>
Central Island Cluster	<i>Euphorbia longinsulicola</i>
Central Island Cluster	<i>Harrisia brookii</i>
Central Island Cluster	<i>Matelea correllii</i>
Central Island Cluster	<i>Spathelia bahamensis</i>
Central Island Cluster	<i>Spermacoce felis-insulae</i>
Central Island Cluster	<i>Zamia lucayana</i>
Northern Island Cluster	<i>Agave cacozela</i>
Northern Island Cluster	<i>Agave braceana</i>
Northern Island Cluster	<i>Encyclia androsiana</i>
Northern Island Cluster	<i>Cyperus correllii</i>
Northern Island Cluster	<i>Encyclia fehlingii</i>
Northern Island Cluster	<i>Koanophyllon correlliorum</i>
Northern Island Cluster	<i>Mosiera androsiana</i>
Northern Island Cluster	<i>Maytenus lucayana</i>
Northern Island Cluster	<i>Symphyotrichum lucayanum</i>
Small Island Cluster	<i>Euphorbia inaguaensis</i>
Small Island Cluster	<i>Spermacoce inaguaensis</i>
Southern Island Cluster	<i>Agave acklinicola</i>
Southern Island Cluster	<i>Agave inaguaensis</i>
Southern Island Cluster	<i>Agave nashii</i>
Southern Island Cluster	<i>Argythamnia sericea</i>
Southern Island Cluster	<i>Aristida correlliae</i>
Southern Island Cluster	<i>Caesalpinia murifructa</i>
Southern Island Cluster	<i>Chiococca stricta</i>
Southern Island Cluster	<i>Coccothrinax inaguaensis</i>
Southern Island Cluster	<i>Eleocharis bahamensis</i>
Southern Island Cluster	<i>Encyclia caicensis</i>
Southern Island Cluster	<i>Erithalis diffusa</i>
Southern Island Cluster	<i>Ermodea gigantea</i>
Southern Island Cluster	<i>Euphorbia gymnonota</i>
Southern Island Cluster	<i>Euphorbia proctorii</i>
Southern Island Cluster	<i>Evolvulus bahamensis</i>
Southern Island Cluster	<i>Guettarda nashii</i>
Southern Island Cluster	<i>Heliotropium diffusum</i>
Southern Island Cluster	<i>Heliotropium nashii</i>



**Table 2** (continued)

Island Cluster	Species
Southern Island Cluster	<i>Lepidium filicaule</i>
Southern Island Cluster	<i>Lobelia lucayana</i>
Southern Island Cluster	<i>Metastelma stipitatum</i>
Southern Island Cluster	<i>Spermacoce brittonii</i>
Southern Island Cluster	<i>Spermacoce capillaris</i>
Southern Island Cluster	<i>Spermacoce savannarum</i>
Southern Island Cluster	<i>Spermacoce thymifolia</i>
Southern Island Cluster	<i>Sporobolus bahamensis</i>
Southern Island Cluster	<i>Stenandrium carolinae</i>
Southern Island Cluster	<i>Varronia lucayana</i>

### Future Conservation Initiatives

Governmental authorities of the Bahamas and Turks and Caicos should consider the protection status to the 50 species that are known to occur on two or less island groupings. These species are at the highest priority for protection as they have the most limited insular distribution (Maunder et al., 2008, 2011). As far as we are aware with the exception of *Zamia lucaya* (Calonje et al., 2013) none of these species have been the target of extensive field surveys to determine the limits of their geographical area and demographic patterns. Three particular endemics, *Encyclia androsiana*, *Lepidium filicaule*, and *Matelea correllii*, provide good examples of species whose distribution ranges are unknown. They demonstrate a need for a comprehensive conservation strategy for the endemic flora.

Endemics may have the potential to act as indicators of ecosystem status for rapid assessment purposes. They should serve as a means of assessing areas for development and to implement actions for when endemic species are being removed or their niches disturbed or altered. While random surveying for these endemic species on a particular island is clearly impractical, the checklist presented in this paper coupled with future results from auto-ecological patterns will help environmental agencies to produce shorter lists of what is likely to occur (and need to be surveyed for) within any island grouping.

To assist in the development of science based protected species list for the Bahamian archipelago, an IUCN Redlist targeting plant endemics should be produced. In support of producing a redlist for the Bahamian endemics additional research is needed. For each species a combination of criteria need to be determined to know its conservation status (IUCN, 2012). These criteria include having details pertinent population size and numbers, distribution area, and current and possible threats.

To assess which of the endemics occur within The Bahamas and Turks and Caicos protected area system is an essential step to delineate in situ conservation programs. For instance, Calonje et al. (2013) found that the Critically Endangered endemic *Zamia lucayana* occurs along a very narrow strip near the coast of Long Island on privately own land. As new parks are created and old parks expanded there should be a discussion of how well the expansion of the park system can be done to maximize protection of endemic species.

## Conclusions

The Bahamian archipelago has fewer endemic seed-plant species than previously thought. While the reduction of accepted endemic species fosters the idea that the Bahamian archipelago is low on endemic diversity it brings to light the importance of protecting those endemic species that do occur in the archipelago. Bearing in mind the ecological uniformity of the Bahamas Islands within the Caribbean Islands Hotspot, we find that this archipelago have a relatively high number of endemic species, there are two possible explanations for this. First the archipelago is highly fragmented with many opportunities for speciation following colonization and isolation. Secondly, the Bahamian chain is at relatively short distance from the northern portions of Haiti and most of Cuba. This geographical location can pave the way for long distance dispersal and subsequent speciation events.

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## Literature Cited

- Acevedo-Rodríguez, P.** 2005. Vines and climbing plants of Puerto Rico and the Virgin Islands. Contributions from the United States National Herbarium 51: 1–483.
- & **Lewis, G. P.** 2012. Leguminosae (Fabaceae). Pp. 392–471. In: P. Acevedo-Rodríguez & M. T. Strong (eds.). Catalogue of seed plants of the West Indies [Smithsonian Contributions to Botany 98: 1–1192].
- & **M. T. Strong (eds.)**. 2012. Catalogue of seed plants of the West Indies. Smithsonian Contributions to Botany 98: 1–1192.
- Ackerman, J.** 2012. Orchidaceae. Pp. 622–667. In: P. Acevedo-Rodríguez & M. T. Strong (eds.). Catalogue of seed plants of the West Indies [Smithsonian Contributions to Botany 98: 1–1192].
- 2014. Orchid flora of the Greater Antilles. Memoirs of the New York Botanical Garden 109: 1–625.
- Areces Berazain, F. & P. A. Fryxell.** 2007. Malvaceae. Flora de la República de Cuba. Serie A, Plantas Vasculares 13: 1–228.
- Areces-Mallea, A. A.** 2001. A new opuntoid cactus from the Cayman Islands. B. W. I. with a discussion and key to the genus *Consolea* Lemaire. Brittonia 53: 96–107.
- Barneby, R.** 1998. Silk tree, Guanacaste, Monkey's Earring. Part 3. *Calliandra*. Memoirs of the New York Botanical Garden 74(3): 1–223.
- Barreto Valdés, A.** 1999. Las leguminosas (Fabaceae) de Cuba I. Subfamilia Caesapilnioideae. Collectanea Botanica (Barcelona) 24: 6–1489.
- Braem, G. J.** 1986. Der neue, aber doch alte, Name für die "Variegaten Oncidien.". Die Orchidee 37(2): 55–59.
- Britton, N. L.** 1915. The vegetation of Mona Island. Annals of the Missouri Botanical Garden 2: 33–58.

- . 1916. The vegetation of Anegada. *Memoirs of the New York Botanical Garden* 6: 565–580.
- & C. F. Millspaugh. 1920. The Bahama flora. Published by the authors, New York.
- Burch, D. 1966. Two new species of *Chamaecyse* (Euphorbiaceae), new combinations, and a key to the Caribbean members of the genus. *Annals of the Missouri Botanical Garden* 53: 90–99.
- Calonje, M., A. W. Meerow, L. Knowles, D. Knowles, P. Griffith, K. Nakamura & J. Francisco-Ortega. 2013. Cycad biodiversity in the Bahama Archipelago and conservation genetics of the critically endangered *Zamia lucayana* (Zamiaceae). *Oryx* 47: 190–198.
- Cedeño-Maldonado, J. A. & R. G. O'Reilly. 1996. *Nashia inaguensis* (Verbenaceae): New records for the floras of St. Croix and Puerto Rico. *Caribbean Journal of Science* 32: 115.
- Clarke, H. D., D. S. Seigler & J. E. Ebinger. 2009. Taxonomic revision of the *Vachellia acuífera* species group (Fabaceae: Mimosoideae) in the Caribbean. *Systematic Botany* 34: 84–101.
- Cooker, W. C. 1905. Vegetation of the Bahama islands. Pp 185–270. In: G. B. Shattuck (ed). The Bahama islands. The Macmillan Company, New York, New York.
- Correll, D. S. & H. B. Correll. 1982. Flora of the Bahama archipelago (including the Turks and Caicos Islands). Gantner Verlag, Vaduz, Liechtenstein.
- D'Arcy, W. G. 1971. The island of Anegada and its flora. *Atoll Research Bulletin* 139: 1–21.
- Eshbaugh, W. H. 2014. The flora of the Bahamas, Donovan Correll, and the Miami University connection. *Botanical Review*.
- Feuillet, C. 2012. Boraginaceae. Pp. 157–174. In: P. Acevedo-Rodríguez & M. T. Strong (eds.). Catalogue of seed plants of the West Indies [Smithsonian Contributions to Botany 98: 1–1192].
- Figueredo Cardona, L. M., O. J. Reyes Domínguez, F. Acosta Cantillo & M. C. Fagilde Espinosa. 2009. Estudio florístico de los cerros calizos costeros de la Reserva de la Biosfera Baconao, Cuba. *Polibotánica* 68: 69–117.
- Fong, A., D. Maceira, W. S. Alverson, J. M. Shopland (eds.). 2005. Cuba: Sibonei-Jutici. *Rapid Biological Inventories* 10: 1–210.
- Förther, H. 1998. Die infragenerische gliederung der gattung *Heliotropium* L. und ihre stellung innerhalb der subfam. Heliotropioideae (Schrud.) Arn. (Boraginaceae). *Sendtnera* 5: 35–241.
- Freid, E. H., L. R. Richey, T. Ferguson & E. Carey. 2003. A proposed new system for the division of islands within the Bahamian archipelago. *Bahamas Journal of Science* 11(1): 36–38.
- Fryxell, P. A. 1972. A revision of *Phymosia* (Malvaceae). *Madroño* 21: 153–174.
- Gillis, W. T. 1971. The systematics and ecology of poison-ivy and the poison-oaks (*Toxicodendron*, Anacardiaceae). *Rhodora* 73: 370–443.
- . 1974. Phantoms in the flora of the Bahamas. *Phytologia* 29: 154–166.
- . 1976. *Agave* in the Bahamas Islands. *Phytologia* 33: 78–81.
- González-Gutiérrez, P. A. 2007. *Vachellia acuífera* (Fabaceae: Mimosoideae) new to Cuba. *Willdenowia* 37: 547–549.
- , J. L. Verdecía Góngora, O. Leiva, A. Matos & R. Pe. 2006. Apuntes sobre la flora y la vegetación del sector costero Corinthia-Barrederas, Frank País, Holguín. *Revista del Jardín Botánico Nacional* 27: 33–45.
- Howard, R. A. 1988a. Nomenclature notes on Antillean plants. *Phytologia* 65: 285–289.
- . 1988b. Flora of the Lesser Antilles. Leeward and Windward Islands. Vol. 4. Dicotyledoneae – Part 1. Arnold Arboretum, Harvard University, Jamaica Plain.
- . 1989. Flora of the Lesser Antilles. Leeward and Windward Islands. Vol. 6. Dicotyledoneae – Part 3. Arnold Arboretum, Harvard University, Jamaica Plain.
- Hunt, D. 2006. The new cactus lexicon. DH Books, Milbourne Port.
- ILDIS. 2013. International legume database and information service. Available online: <http://www.ildis.org/>.
- IUCN. 2012. IUCN red list categories and criteria: Version 3.1, ed. Secondth. IUCN, Gland.
- Irwin, H. S. & R. C. Barneby. 1982. The American Cassiinae. A synoptic revision of Leguminosae tribe Cassiinae subtribe Cassiinae in the New World. *Memoirs of the New York Botanical Garden* 35: 1–918.
- Johnston, I. M. 1928. Studies in the Boraginaceae VII. The South American species of *Heliotropium*. *Contributions from the Gray Herbarium* 81: 3–73.
- . 1937. Studies in the Boraginaceae XII. 2. Novelities and critical notes. *Journal of the Arnold Arboretum* 18: 10–25.
- Kass, L. B. 1991. An illustrated guide to common plants of San Salvador Island, Bahamas. Bahamian Field Station, San Salvador, The Bahama.
- & W. H. Eshbaugh. 1993. The contributions of William T. Gillis (1933–1979) to the flora of the Bahamas. *Rhodora* 95: 369–391.
- King, R. M. & H. Robinson. 1987. The genera of the Eupatorieae (Asteraceae). *Monographs in Systematic Botany from the Missouri Botanical Garden* 22: 1–581.

- Klotz, G.** 1982. Systematische gliederung der gattung *Rocheportia* Swartz. Revista del Jardín Botánico Nacional 3: 99–110.
- Knapp, S.** 2009. Synopsis and lectotypification of *Solanum* (Solanaceae) species endemic in the West Indies. Anales del Jardín Botánico de Madrid 66: 65–84.
- Krings, A. & M. Endress.** 2012. Apocynaceae. Pp. 36–54. In: P. Acevedo-Rodríguez & M. T. Strong (eds.). Catalogue of seed plants of the West Indies [Smithsonian Contributions to Botany 98: 1–1192].
- Kuijt, J.** 2003. Monograph of *Phoradendron* (Viscaceae). Systematic Botany Monographs 66: 1–643.
- . 2011. Monograph of *Dendropemon* (Loranthaceae). Systematic Botany Monographs 92: 1–110.
- Lieve, S. & U. Meve.** 1997. Some clarifications, new species, and new combinations in American Cynanchinae (Asclepiadaceae). Novon 7: 38–45.
- León & Alain.** 1957. Flora de Cuba, Vol. 4. Contribuciones Ocasionales del Museo de Historia Natural del Colegio de La Salle 16: 1–556.
- Liogier, H. A.** 1981. Antillean studies I. Flora of Hispaniola: Part 1. Phytologia Memoirs 3: 1–218.
- . 1985. La flora de la Española III. Universidad Central del Este, San Pedro de Macorís.
- & **L. F. Martorell.** 2000. Flora of Puerto Rico and adjacent islands. A systematic synopsis, ed. 2nd. Editorial de la Universidad de Puerto Rico, San Juan.
- Martínez-Bernal, A., R. Grether & R. M. González-Amaro.** 2008. Leguminosae I. Mimosoideae: *Mimosa*. Flora de Veracruz 147: 1–127.
- Martínez-Habibe, M. C.** 2012. Systematics, biogeography and leaf anatomy and architecture of *Bursera* subgen. *Bursera* (Burseraceae) in the Greater Antilles and the Bahamas. Ph.D. Dissertation. Claremont Graduate University, Claremont, California.
- Maunder, M., A. Leiva, E. Santiago-Valentín, D. W. Stevenson, P. Acevedo-Rodríguez, A. W. Meerow, M. Mejía, C. Clubbe & J. Francisco-Ortega.** 2008. Plant conservation in the Caribbean Island biodiversity hotspot. Botanical Review 74: 197–207.
- , **M. Abdo, R. Berzain, C. Clubbe, F. Jiménez, A. Leiva, E. Santiago-Valentín & J. Francisco-Ortega.** 2011. The plants of the Caribbean islands: a review of the biogeography, diversity and conservation of a storm-battered biodiversity hotspot. Pp 154–178. In: D. Bramwell & J. Caujapé-Castells (eds). The biology of island floras. Cambridge University Press, London.
- McKenzie, P. M., L. E. Urbatsch & G. R. Proctor.** 1990. *Aristida correlliae*, a new species of Poaceae from the Turks and Caicos Islands. Systematic Botany 15: 421–424.
- Méndez Santos, I. E.** 2001. Primer reporte de *Stachytarpheta fruticosa* (Mills sp.) B. L. Robins (Verbenaceae) para Cuba. Revista del Jardín Botánico Nacional 22: 149–150.
- Miller, J. S. & M. Gottschling.** 2007. Generic classification in the Cordiaceae (Boraginales): Resurrection of the genus *Varronia* P. Br. Taxon 56: 1–163.
- Moreno, N. P.** 1993. Taxonomic revision of *Clematis* L. subgenus *Clematis* (Ranunculaceae) for Latin America and the Caribbean. Ph.D. dissertation, Rice University, Houston, Texas.
- Mory, B.** 2010. Celastraceae. Flora de la República de Cuba. Serie A, Plantas Vasculares 16: 1–80.
- Negrón-Ortiz, V.** 2005. Taxonomic revision of the neotropical genus: *Erithalis* (Rubiaceae: Chiococceae). Sida 21: 1565–1598.
- & **R. J. Hickey.** 1996. The genus *Ernodea* (Rubiaceae) in the Caribbean Basin. II. Morphological analyses and systematics. Systematic Botany 21: 445–458.
- Nesom, G. L.** 1994. Review of the taxonomy of *Aster* (Asteraceae: Astereae), emphasizing the New World species. Phytologia 77: 141–297.
- Nickrent, D. L., W. H. Eshbaugh & T. K. Wilson.** 1988. Vascular flora of Andros Island. Kendall/Hunt Publishing, Dubuque.
- Northrop, A. R.** 1902. Flora of New Providence and Andros (Bahama Islands). Memoirs of the Torrey Botanical Club 12: 1–98.
- Oudejans, R. C. H. M.** 1989. New names and new combinations in the genus *Euphorbia* L. (Euphorbiaceae). Phytologia 67: 43–49.
- . 1992. New combinations for infraspecific taxa in the genus *Euphorbia* L. Collectanea Botanica (Barcelona) 21: 183–189.
- Parker, T.** 2008. Trees of Guatemala. The tree press, Austin.
- Peterson, P. M., R. J. Soreng & S. F. Smith.** 1990. *Aristida correlliae*, a new species of Poaceae from the Turks and Caicos Islands. Systematic Botany 15: 421–424.
- Proctor, G. R.** 2012. Flora of the Cayman Islands, ed. 2nd. Royal Botanic Gardens, Kew.
- Rankin Rodríguez, R.** 2003. Polygalaceae. Flora de la República de Cuba. Serie A, Plantas Vasculares 7: 1–52.
- Rohlf, F. J.** 2000. NTSYSpc. Numerical taxonomy and multivariate analysis system. User guide, ver. 2.1. Exeter Software, Setauket.

- Robinson, H.** 1990. Studies in the *Lepidaploa* complex (Vernoniae: Asteraceae) VII. The genus *Lepidaploa*. Proceedings of the Biological Society of Washington 103: 464–498.
- 1999. Generic and subtribal classification of American Vernoniae. Smithsonian Contributions to Botany 89: 1–116.
- & **V. A. Funk.** 2012. Asteraceae. Pp. 89–141. In: P. Acevedo-Rodríguez & M. T. Strong (eds.). Catalogue of seed plants of the West Indies [Smithsonian Contributions to Botany 98: 1–1192].
- Salywon, A.** 2007. Four new combinations in *Mosiera* (Myrtaceae) from the Caribbean. Journal of the Botanical Research Institute of Texas 1: 899–900.
- Sauleda, R. P.** 2012. A new name for an old species. Orchid Digest 26: 44–48.
- Soto Arenas, M. A. & P. Cribb.** 2010. A new infrageneric classification and synopsis of the genus *Vanilla* Plum. ex Mill. (Orchidaceae: Vanillinae). Lankesteriana 9: 355–398.
- Stace, C.** 2010. Combretaceae. *Terminalia* and *Buchenavia* with Abdul-Ridha Alwan. Flora Neotropica 107: 1–369.
- Ståhl, B.** 1996. The relationships of *Heberdenia bahamensis* and *H. penduliflora* (Myrsinaceae). Botanical Journal of the Linnean Society 122: 315–333.
- Steinmann, V. W.** 2003. The submersion of *Pedilanthus* into *Euphorbia* (Euphorbiaceae). Acta Botánica Mexicana 65: 45–50.
- Strickland-Constable, R., H. Schneider, S. W. Ansell, S. J. Russell & S. Knapp.** 2010. Species identity in the *Solanum bahamense* species group (Solanaceae, *Solanum* subgenus *Leptostemonum*). Taxon 59: 209–226.
- Strong, M. T. & P. Acevedo-Rodríguez.** 2012. Cyperaceae. Pp. 257–300. In: P. Acevedo-Rodríguez & M. T. Strong (eds.). Catalogue of seed plants of the West Indies [Smithsonian Contributions to Botany 98: 1–1192].
- Swofford, D. L.** 2003. PAUP\*: phylogenetic analysis using parsimony (\*and other methods), version 4. Sinauer, Sunderland.
- Taylor, N.** 1921. Endemism in the Bahama flora. Annals of Botany 35: 523–532.
- Tellería, M. C., G. Sancho, V. A. Funk, I. Ventosa & N. Roque.** 2013. Pollen morphology and its taxonomic significance in the tribe Gochnatieae (Compositae, Gochnatioideae). Plant Systematics and Evolution 299: 935–948.
- Tucker, G. C.** 1984. Taxonomic notes on two common neotropical species of *Cyperus* (Cyperaceae). Sida 10: 298–307.
- Ventosa, I. & P. Herrera.** 2011a. Do the Antillean species of *Gochnatia* Kunth (Asteraceae) truly belong in that genus? A phylogenetic analysis based on morphological characters. Compositae Newsletter 49: 8–22.
- & ———. 2011b. Restoration of the name *Anastrophia* to define the species in the section *Anastrophioides* of *Gochnatia* (Gochnatioideae, Asteraceae). Compositae Newsletter 49: 23–37.
- Vincent, M. A. & R. J. Hickey.** 2014. Systematics, taxonomy, and the new flora of the Bahamian Archipelago. Botanical Review.
- Whittaker, R. J. & J. M. Fernandez-Palacios.** 2007. Island Biogeography Ecology, Evolution and Conservation. Oxford Press. United Kingdom. 416 pages.
- Wunderlin, R. P. & B. F. Hansen.** 2011. Guide to the vascular plants of Florida, ed. 3rd. University of Florida Press, Gainesville.
- Zappi, D. C.** 1994. *Pilosocereus* (Cactaceae). The genus in Brazil, David Hunt.

## Appendix 1. List of Endemic Seed Plant Species Currently Recognized on the Bahamian Archipelago

This checklist of Bahamian endemics was originally based on the works of Correll and Correll (1982; accepted endemics coded as “C&C”) and Acevedo-Rodríguez and Strong (2012; accepted endemics coded as “A-R&S”). The endemism status of these species was checked with taxonomic experts (see Acknowledgements) and with recent treatments and monographs. For each species we have assigned the following descriptors:

**Bas.:** Date of publication of basionym.

**Dist.:** Insular distribution. See Fig. 1 for island grouping numeric codes.

**Notes:** Additional relevant information.



## Acanthaceae

*Stenandrium bracteosum* (Britton & Millsp.) Britton in Leonard, *Wrightia* 2: 77, 1960 [A-R&S, C&C]. **Bas.:** 1920. **Dist.:** 4, 19.

*Stenandrium carolinae* Leonard & Proctor in Leonard, *Wrightia* 2: 75, 1960 [A-R&S, C&C]. **Dist.:** 1.

## Apocynaceae

*Mateleia correllii* Spellman, *Ann. Missouri Bot. Gard.* 65: 1255, 1979 [A-R&S, C&C]. **Dist.:** 8.

*Metastelma inaguense* Vail ex Britton, *Rhodora* 66: 13, 1964 [A-R&S, C&C (listed as “apparently endemic”)]. **Bas.:** 1906. **Dist.:** 1, 2, 4, 6, 11, 19. **Notes:** Correll and Correl (1982) listed this species as *Cynanchum inaguense* (Vail) Howard & Dunbar (Apocynaceae). We follow the taxonomy of Lieve and Mede (1997) and Kings and Endress (2012) and consider that endemic species of *Cynanchum* L. belong to *Metastelma* R.Br.

*Metastelma sigmoideum* (Correll) Acev.-Rodr., *Smithsonian Contr. Bot* 98: 48, 2012 [A-R&S, C&C (listed as “apparently endemic”)]. **Bas.:** 1977. **Dist.:** 20, 21. **Notes:** Correll and Correl (1982) listed this species as *Cynanchum sigmoideum* Correll. **Notes:** See notes for *M. inaguense*.

*Metastelma stipitatum* (Correll) Liede, *Novon* 7: 43, 1997. **Bas.:** 1977 [C&C (listed as “apparently endemic”)]. **Dist.:** 1. **Notes:** Correll and Correl (1982) treated this species as *Cynanchum stipitatum* Correll. This species is not listed by Kings and Endress (2012); however, in our study it is accepted as a distinct endemic species within *Metastelma* as suggested by Lieve and Mede (1997). The species is morphologically close to *M. northropiae* Schltr. and additional research to elucidate taxonomic affinities with the latter are needed (Liede-Schumann, pers. comm.)

## Asparagaceae

*Agave acklinicola* Trel., *Mem. Natl. Acad. Sci.* 11: 41, 1913 [A-R&S, C&C]. **Dist.:** 4, 6. **Notes:** Gillis (1976) considered that *A. acklinicola*, *A. braceana*, *A. cacozela*, *A. indagatorum*, and *A. millspaughii* should be merged with the endemic *A. bahamana*. Previously Britton and Millspaugh (1920) also were certain is these species should be recognized a distinct species. Until additional taxonomic research is available to clarify the taxonomic distinctiveness of these morphs we have decided to follow the most recent account by Acevedo-Rodríguez and Strong (2012).

*Agave bahamana* Trel., *Mem. Natl. Acad. Sci.* 11: 40, 1913 [A-R&S, C&C]. **Dist.:** 11, 12, 13, 15, 17, 18, 20. **Notes:** See notes for *A. acklinicola*.

*Agave braceana* Trel., *Mem. Natl. Acad. Sci.* 11: 40, 1913 [A-R&S, C&C]. **Dist.:** 15, 19, 20. **Notes:** See notes for *A. acklinicola*.

*Agave cacozela* Trel., *Mem. Natl. Acad. Sci.* 11: 41, 1913 [A-R&S, C&C]. **Dist.:** 16. **Notes:** See notes for *A. acklinicola*.

*Agave inaguensis* Trel., *Mem. Natl. Acad. Sci.* 11: 41, 1913 [A-R&S, C&C]. **Dist.:** 1, 2. **Notes:** See notes for *A. acklinicola*.

- Agave indagatorum* Trel., Mem. Natl. Acad. Sci. 11: 42, 1913 [A-R&S, C&C]. **Dist.:** 8, 11. **Notes:** See notes for *A. acklinicola*.
- Agave millsbaughii* Trel., Mem. Natl. Acad. Sci. 11: 41, 1913 [A-R&S, C&C]. **Dist.:** 13. **Notes:** See notes for *A. acklinicola*.
- Agave nashii* Trel., Mem. Natl. Acad. Sci. 11: 45, 1913 [A-R&S, C&C]. **Dist.:** 2.

## Arecaceae

- Coccothrinax inaguensis* Read, Principes 10: 30, 1966 [A-R&S, C&C]. **Dist.:** 1, 2, 9, 11

## Asteraceae

*Anaethropia paucifloscula* Wright ex Hitchc., Rep. (Annual) Missouri Bot. Gard. 4: 102, 1893 [A-R&S]. **Dist.:** 1, 2, 3, 4, 6, 12, 13, 15, 17. **Notes:** Correll and Correll (1982) accepted the name *Gochnatia paucifloscula* (Wright ex Hitchc.) Jervis ex Cabrera (Asteraceae) and listed this species as also occurring in Cuba. We follow the taxonomy of Ventosa and Herrera (2011a, b); Robinson and Funk (2012), and Tellería et al. (2013). This species does not occur in Cuba.

*Chromolaena bahamensis* (Northr.) R. M. King & H. Rob., Phytologia 20: 199, 1970 [A-R&S, C&C]. **Bas.:** 1902. **Dist.:** 13, 15, 16, 17, 18, 19. **Notes:** Correll and Correll (1982) accepted *Eupatorium bahamense* Northr. (Asteraceae). We follow the works of King and Robinson (1987) and Robinson & Funk (2012).

*Chromolaena lucayana* (Britton) R. M. King & H. Rob., Phytologia 20: 203, 1970 [A-R&S, C&C]. **Bas.:** 1920. **Dist.:** 1, 4, 6, 7, 8, 18, 19, 20. **Notes:** Correll and Correll (1982) accepted *Eupatorium lucayanum* Britton. We follow the works of King and Robinson (1987) and Robinson & Funk (2012).

*Koanophyllon correlliorum* (Plettman) R. M. King & H. Rob., Phytologia 37: 458, 1977 [A-R&S, C&C]. **Bas.:** 1977. **Dist.:** 19. **Notes:** Correll and Correll (1982) accepted *Eupatorium correlliorum* Britton. We follow the works of King and Robinson (1987) and Robinson and Funk (2012).

*Lepidaploa arbuscula* (Less.) H. Rob., Proc. Biol. Soc. Wash. 103: 481, 1990 [A-R&S, C&C]. **Bas.:** 1831. **Dist.:** 1, 2, 3, 6, 15, 16. **Notes:** Correll and Correll (1982) listed this species as *Vernonia arbuscula* Less. (Asteraceae). Taxonomic treatments by Robinson (1990, 1999) and Robinson and Funk (2012) is followed by us.

*Symphyotrichum lucayanum* (Britton) G. L. Nesom, Phytologia 77: 286, 1995. **Bas.:** 1906 [A-R&S]. **Dist.:** 20. **Notes:** Correll and Correll (1982) regarded this species [listed as *Aster lucayanus* Britton (Asteraceae)] as the non-endemic *Aster concolor* L.; however, Nesom (1994) regarded *S. lucayanus* as a distinct species. Robinson and Funk (2012) listed *S. lucayanus* as endemic to the Bahamas.

*Tetranthus bahamensis* Britton, Bull. New York Bot. Gard. 5: 318, 1907 [A-R&S, C&C]. **Dist.:** 6, 14.

*Thymopsis brittonii* Greenman, Bull. New York Bot. Gard. 3: 453, 1905 [A-R&S, C&C (listed as “perhaps in Cuba”)]. **Dist.:** 12, 13, 16. **Notes:** We follow Robinson & Funk (2012) and consider that until new evidence is available *T. brittonii* is a species restricted to the Bahamian archipelago.

*Wedelia bahamensis* (Britton) Schulz ex O.E. Schulz, Symb. Antill. 7: 106, 1911 [A-R&S, C&C]. **Bas.:** 1905. **Dist.:** 1, 4, 6, 8, 11, 12, 13, 15, 16, 17.

## Boraginaceae

*Heliotropium diffusum* Britton, Bull. New York Bot. Gard. 4: 122, 1905 [A-R&S, C&C]. **Dist.:** 1, 4, 6, 9.

*Heliotropium nashii* Millsp., Publ. Field Columb. Mus., Bot. Ser. 2: 309, 1909 [A-R&S, C&C]. **Dist.:** 1, 2.

*Heliotropium nanum* Northr., Mem. Torrey Bot. Club 12: 61, 1902 [A-R&S, C&C (listed as “doubtfully endemic”)]. **Dist.:** 1, 2, 3, 4, 6, 7, 8, 9, 10, 12, 13, 15, 16, 17, 18. **Notes:** We follow Förther (1998) who accepted this species within *Heliotropium* L.

*Varronia bahamensis* (Urb.) Millsp., Publ. Field Columb. Mus., Bot. Ser. 2: 310, 1909 [A-R&S]. **Bas.:** 1899. **Dist.:** 1, 2, 4, 6, 8, 11, 12, 13, 15, 16, 17, 19, 20. **Notes:** Correll and Correll (1982) listed this species (as *Cordia bahamensis* Urb.) for Florida, Cuba, and Anegada. Wunderlin and Hansen (2011) also recorded this species (as *C. bahamensis*) for Florida, but these reports need additional research as they seem to refer to naturalized or cultivated plants. It is unlikely that the plants grown in Cuba and Anegada refer to this species (Miller, pers. comm.); although, *V. bahamensis* is morphologically similar to the Puerto Rico-Anegada endemic *V. rupicola* (Urb.) Britton (Miller, pers. comm.).

*Varronia lucayana* Millsp., Publ. Field Columb. Mus., Bot. Ser. 2: 311, 1909 [A-R&S, C&C]. **Dist.:** 1, 2, 4, 6. **Notes:** Correll and Correll (1982) listed this species as *Cordia lucayana* Millsp. (Boraginaceae). In here we follow taxonomic treatments by Miller and Gottschling (2007) and Feuillet (2012).

## Brassicaceae

*Lepidium filicaule* C. L. Hitchc., Madroño 8: 142, 1945 [A-R&S]. **Dist.:** 1.

## Burseraeae

*Bursera frenningae* Correll, J. Arnold Arbor. 60: 157, 1979 [A-R&S, C&C]. **Dist.:** 6, 8, 12, 13, 17.

## Cactaceae

*Harrisia brookii* Britton, Bull. Torrey Bot. Club 35: 564, 1909 [A-R&S, C&C]. **Dist.:** 8, 17.

## Campanulaceae

*Lobelia lucayana* Britton & Millsp., Bahama Fl.: 428, 1920 [A-R&S, C&C]. **Dist.:** 1, 9, 11.

## Celastraceae

*Maytenus lucayana* Britton, Bull. New York Bot. Gard. 4: 140, 1906 [A-R&S, C&C]. **Dist.:** 15, 20.

## Convolvulaceae

*Evolvulus bahamensis* House, Bull. Torrey Bot. Club 35: 89, 1908 [A-R&S]. **Dist.:** 1. **Notes:** Correll and Correll (1982) did not accept this species and they merged it with the Greater Antillean endemic *E. arbuscula* Poir. More recently Acevedo & Strong (2012) and Austin (pers. comm.) considered this to be an good species endemic to the Bahamas.

## Cyperaceae

*Cyperus correllii* (T. Koyama) G. C. Tucker, Sida 10: 305, 1984 [A-R&S, C&C]. **Bas.:** 1976. **Dist.:** 20. **Notes:** The species was listed as *Torulinium correlli* T. Koyama (Cyperaceae) by Correll and Correll (1982). The taxonomy proposed by Tucker (1984) and Strong & Acevedo Rodríguez (2012) is followed in our study.

*Eleocharis bahamensis* Boeckeler Beitr. Cyper. 2: 11, 1890 [A-R&S, C&C]. **Dist.:** 1.

## Erythroxyloaceae

*Erythroxyllum reticulatum* Northr., Mem. Torrey Bot. Club 12: 43, 1902 [A-R&S, C&C]. **Dist.:** 13, 15.

## Euphorbiaceae

*Argythamnia argentea* Millsp., Publ. Field Columb. Mus., Bot. Ser. 2: 154, 1906 [A-R&S, C&C]. **Dist.:** 1, 7, 17.

*Argythamnia lucayana* Millsp., Publ. Field Columb. Mus., Bot. Ser. 2: 154, 1906 [A-R&S, C&C]. **Dist.:** 1, 8, 12, 13, 15, 17, 18, 20, 21.

*Argythamnia sericea* Griseb., Fl. Brit. W. I.: 44, 1859 [A-R&S, C&C]. **Dist.:** 1, 2, 6.

*Croton brittonii* Acev.-Rodr., Smithsonian Contr. Bot. 98: 324, 2012 [A-R&S]. **Dist.:** 4, 6, 8, 9, 10, 11, 12, 17. **Notes:** This name was published by Acevedo Rodríguez & Strong (2012) as a synonymy of the illegitimate name *C. bahamensis* Millsp. These authors regarded this taxon as endemic to the Bahamas. Correll and Correll (1982) merged *C. bahamensis* with the non-endemic *C. humilis* L.

*Euphorbia cayensis* Millsp., Torreya 4: 172, 1904 [A-R&S, C&C]. **Dist.:** 11, 15, 18, 19, 20, 22.

*Euphorbia gymnonota* Urb., Symb. Antill. 5: 396, 1908 [A-R&S, C&C]. **Dist.:** 1, 2, 6, 9, 11.

*Euphorbia inaguaensis* Oudejans, Phytologia 67: 46, 1989 [A-R&S]. **Dist.:** 3. **Notes:** Correll and Correll (1982) referred to this endemic species as *E. abbreviata* Correll; however, this is an illegitimate name. Oudejans (1989) published the name *E. inaguaensis* to correct this taxonomic error.

*Euphorbia lecheoides* Millsp., Publ. Field Columb. Mus., Bot. Ser. 2: 163, 1906 [A-R&S, C&C]. **Dist.:** 1, 2, 3, 4, 6, 8, 11, 12, 13, 17.

*Euphorbia longinsulicola* S. R. Hill, Sida 6: 313, 1976 [A-R&S, C&C]. **Dist.:** 8.

*Euphorbia proctorii* (D. G. Burch) Correll, Sida 8: 319, 1980 [A-R&S, C&C]. **Bas.:** 1976. **Dist.:** 2.

*Euphorbia vaginulata* Griseb., Fl. Brit. W. I.: 52, 1859 [A-R&S, C&C]. **Dist.:** 1, 2, 3, 6, 11, 12.

#### Fabaceae

*Ateleia popenoei* Correll, J. Arnold Arbor. 62: 261, 1981 [A-R&S, C&C]. **Dist.:** 13.

*Caesalpinia murifructa* Gillis & Proctor, J. Arnold Arbor. 55: 427, 1974 [A-R&S, C&C]. **Dist.:** 2, 6.

*Galactia bahamensis* Urb., Symb. Antill. 2: 331, 1900 [A-R&S, C&C]. **Dist.:** 1, 2, 5, 6, 8, 9, 10, 11.

#### Linaceae

*Linum bahamense* Northr., Mem. Torrey Bot. Club 12: 42, 1902 [A-R&S, C&C (listed as “known only from Inagua and Acklins Islands”)]. **Dist.:** 15, 16, 17, 19, 20. **Notes:** Correll and Correll (1982) recognized two morphs within this species: *L. bahamense* f. *bahamense* and *L. bahamense* f. *corrallicola* (Small) Rogers.

#### Malvaceae

*Pavonia bahamensis* Hitchc., Rep. (Annual) Missouri Bot. Gard. 4: 63, 1893 [A-R&S, C&C]. **Dist.:** 1, 6, 9, 11, 15.

*Waltheria bahamensis* Britton, Torrey 3: 105, 1903 [A-R&S, C&C]. **Dist.:** 12, 15, 16, 18, 19, 20.

#### Myrtaceae

*Mosiera androsiana* (Urb.) Salywon, J. Bot. Res. Inst. Texas 1: 899, 2007 [A-R&S, C&C]. **Bas.:** 1915. **Dist.:** 15. **Notes:** This species is listed as *Psidium androsianum* (Urb.) Correll (Myrtaceae) by Correll and Correll (1982). Salywon (2007) and Acevedo-Rodríguez (2005) suggested that this Bahamian endemic should be placed within *Mosiera* Small.

#### Orchidaceae

*Encyclia androsiana* Sauleda, New World Orchid. Nomencl. Notes 2: s.n., 2012. **Dist.:** 15. **Notes:** see notes for *E. gracilis* in Appendix 2.

*Encyclia caicensis* Sauleda & R. M. Adams, Selbyana 2: 340, 1978 [A-R&S, C&C]. **Dist.:** 1.

*Encyclia fehlingii* (Sauleda) Sauleda & R. M. Adams, Brittonia 33: 187, 1981 [A-R&S, C&C]. **Bas.:** 1977. **Dist.:** 15, 16, 19, 20.

*Encyclia correllii* Sauleda, Orchid Digest 76: 44, 2012. **Bas.:** 1835. **Dist.:** 1, 2, 4, 6, 10, 12, 15, 16, 17, 19, 20.

*Encyclia inaguensis* Nash in Britton & Millsp., Bahama Fl.: 92, 1920 [A-R&S, C&C]. **Dist.:** 1, 3.

*Encyclia withneri* (Sauleda) Sauleda & R. M. Adams, Brittonia 33: 187, 1981 [A-R&S, C&C]. **Bas.:** 1977. **Dist.:** 12.



*Tolumnia sasseri* (Moir) Braem, Die Orchidee 37: 59, 1986 [A-R&S, C&C]. **Bas.:** 1975. **Dist.:** 12, 16. **Notes:** Correll and Correll (1982) recognized this species as *Oncidium sasseri* Moir (Orchidaceae). We have followed most recent taxonomic placements proposed by Braem (1986) and Ackerman (2012).

#### Passifloraceae

*Passiflora bahamensis* Britton, Bull. New York Bot. Gard. 5: 315, 1907 [A-R&S, C&C]. **Dist.:** 12, 15, 16.

#### Poaceae

*Aristida correlliae* P. M. McKenzie, Urbatsch & Proctor, Syst. Bot. 15: 421, 1990 [A-R&S]. **Dist.:** 1, 6. **Notes:** This is the most recently described species endemic to the Bahamas. This name honors Dr. Helen Correll (McKenzie et al., 1990). The name was also accepted by Peterson et al. (1990).

*Eragrostis bahamensis* Hitchc., Rep. (Annual) Missouri Bot. Gard. 4: 149, 1893 [A-R&S, C&C]. **Dist.:** 1, 2, 3, 6, 9.

*Sporobolus bahamensis* Hack., Oesterr. Bot. Z. 52: 56, 1902 [A-R&S, C&C]. **Dist.:** 6.

#### Polygalaceae

*Polygala northropiana* R. N. Banerjee, Taxon 28: 418, 1979 [A-R&S, C&C]. **Dist.:** 4, 6, 15, 16, 19, 20.

#### Portulacaceae

*Portulaca minuta* Correll, J. Arnold Arbor. 60: 154, 1979 [A-R&S, C&C]. **Dist.:** 13, 15.

#### Ranunculaceae

*Clematis plukenetii* DC., Syst. Nat. 1: 153, 1817 [A-R&S]. **Dist.:** 4, 12, 13, 15, 16, 17, 19, 20. Correll and Correll (1982) recognize two endemic species within *Clematis* L.: *C. bahamica* (Kuntze) Britton and *C. orbiculata* Correll. However, Moreno (1993) in her unpublished treatment for one of the sections of this genus considered that these taxa do not merit taxonomic recognition as two different species. She also indicated that they refer to an earlier name: *C. plukenetii*. This taxonomic placement was also accepted by Acevedo-Rodríguez & Strong (2012).

#### Rubiaceae

*Catesbaea foliosa* Millsp., Publ. Field Columb. Mus., Bot. Ser. 2: 312, 1909 [A-R&S, C&C]. **Dist.:** 1, 2, 6, 9, 12.

*Chiococca stricta* Correll, J. Arnold Arbor. 58: 45, 1977 [A-R&S, C&C]. **Dist.:** 6.

*Erithalis diffusa* Correll, J. Arnold Arbor. 58: 47, 1977 [A-R&S, C&C]. **Dist.:** 6, 11.

*Ernodea gigantea* Correll, J. Arnold Arbor. 58: 49, 1977 [A-R&S, C&C]. **Dist.:** 6.

*Ernodea millspaughii* Britton, Bull. Torrey Bot. Club 35: 207, 1908 [A-R&S, C&C]. **Dist.:** 1, 2, 3, 6, 7, 8, 13, 18, 19, 20, 21.

*Ernodea nashii* Britton, Bull. Torrey Bot. Club 35: 208, 1908 [A-R&S, C&C]. **Dist.:** 2, 3.

*Ernodea serratifolia* Correll, J. Arnold Arbor. 58: 50, 1977 [A-R&S, C&C]. **Dist.:** 2, 12.

*Guettarda nashii* Britton & Millsp., Bahama Fl.: 413, 1920 [A-R&S, C&C]. **Dist.:** 2.

*Spermacoce brittonii* (Standl.) R.A. Howard, Phytologia 65: 287, 1988 [A-R&S, C&C]. **Bas.:** 1931. **Dist.:** 1. **Notes:** Correll and Correll (1982) considered this species as *Borreria brittonii* Standl. (Rubiaceae). In our study we follow the taxonomy of Howard (1988a) and Acevedo-Rodríguez & Strong (2012) and we accept this species within *Spermacoce* L.

*Spermacoce capillaris* (Correll) R. A. Howard, Phytologia 65: 287, 1988 [A-R&S, C&C]. **Bas.:** 1979. **Dist.:** 1. **Notes:** Correll and Correll (1982) considered this species as *Borreria capillaris* Correll (Rubiaceae). See additional details in notes for *S. brittonii*.

*Spermacoce felis-insulae* (Correll) R. A. Howard, Phytologia 65: 288, 1988 [A-R&S, C&C]. **Bas.:** 1977. **Dist.:** 12. **Notes:** Correll and Correll (1982) listed this species as *B. felis-insulae* Correll. See additional details in notes for *S. brittonii*.

*Spermacoce inaguensis* (Britton) R. A. Howard, Phytologia 65: 287, 1988 [A-R&S, C&C]. **Bas.:** 1920. **Dist.:** 3. **Notes:** Correll and Correll (1982) accepted this species as *B. inaguensis* Britton. See additional details in notes for *S. brittonii*.

*Spermacoce savannarum* (Britton & Millsp.) R. A. Howard, Phytologia 65: 287, 1988 [A-R&S, C&C] (listed as “apparently endemic”). **Bas.:** 1920. **Dist.:** 1, 2, 6. **Notes:** Correll and Correll (1982) regarded this species as *B. savannarum* Britton. See additional details in notes for *S. brittonii*.

*Spermacoce thymifolia* (Griseb.) Kuntze, *Revis. Gen. Pl.* 3(3): 123, 1898 [A-R&S, C&C]. **Bas.:** 1861. **Dist.:** 1, 2. **Notes:** Correll and Correll (1982) accepted this taxon as *B. thymifolia* Britton. See additional details in notes for *S. brittonii*.

## Rutaceae

*Spathelia bahamensis* Vict., Contr. Inst. Bot. Univ. Montréal 63: 76, 1948 [A-R&S, C&C]. **Dist.:** 12, 17.

## Sapindaceae

*Thouinia discolor* Griseb., Fl. Brit. W. I.: 127. 1859 [A-R&S, C&C]. **Dist.:** 2, 4, 6, 8, 9, 11, 12, 13, 15, 16, 17, 19, 21.

## Verbenaceae

*Lantana balsamifera* Britton, Bull. New York Bot. Gard. 4: 123, 1906 [A-R&S, C&C]. **Dist.:** 1, 3, 18.

*Lantana demutata* Millsp., Publ. Field Columb. Mus., Bot. Ser. 2: 175, 1906 [A-R&S, C&C]. **Dist.:** 2, 8, 12, 13, 17.

## Zamiaceae

*Zamia lucayana* Britton, Bull. New York Bot. Gard. 5: 311, 1907. **Dist.:** 8. **Notes:** Correll and Correll (1982) merged this species with the non-endemic *Z. pumila* L.

## Appendix 2. Species Delisted as Endemic to the Bahamian Archipelago

This appendix includes those species that were accepted as Bahamian endemics by Correll and Correll (1982) (coded as “C&C”) or Acevedo-Rodriguez and Strong (2012) (coded as A-R&S) that we do not consider as part of the endemic flora of the archipelago. Each name is followed by a short discussion under the “**Notes**” descriptor. For those species that have not been the subject of recent taxonomic treatments or that have not been included in the “Flora de la República de Cuba” project we have checked for their distribution outside the Bahamian archipelago at the FLA, MO, and NY herbaria.

## Amaryllidaceae

*Zephyranthes cardinalis* C. H. Wright, Bot. Mag. 140: t. 8553, 1914 [A-R&S]. **Notes:** The original description of this species was based on material cultivated in New Providence. It is likely that it refers to plants of *Z. bifolia* grown in gardens of the archipelago (Meerow, pers. comm., Vincent, pers. comm.)

## Anacardiaceae

*Rhus bahamensis* G. Don, Gen. Hist. 2: 72, 1832 [A-R&S]. **Notes:** Gillis (1971) indicated that *R. bahamensis* is a *nomem nudum*, and that it is likely that this name refers to *Toxicodendron radicans* (L.) Kuntze (Anacardiaceae). The latter is also found in USA and Mexico.

## Apocynaceae

*Metastelma bahamense* Griseb., Cat. Pl. Cub.: 174, 1866 [A-R&S]. **Notes:** Correll and Correll (1982) listed this species for Cuba and according to Gillis (1974) the species is also found on this island. We have located specimens from Cuba at NY (i.e., NY1622615 and NY1622616, both annotated by D. Correll). *Metastelma bahamense* is morphologically similar to *M. northropiae* Schltr. and additional research is needed to determine if both species should be kept separately (Liede-Schumann, pers. comm.).

*Neobrachea bahamensis* (Britton) Britton, in Britton & Millsp., Bahama Fl.: 335, 1920 [C&C (listed as “apparently endemic to the Bahamas”)]. **Notes:** This species also occurs on Cuba (León & Alain, 1957; Fong et al., 2005; Figueredo Cardona et al., 2009; Krings & Endress, 2012). We located one herbarium specimen collected in Cuba for this species at NY (NY01335760).

## Asteraceae

*Vernonia bahamensis* Griseb., Fl. Brit. W. I.: 352, 1861 [C&C]. **Notes:** Robinson (1990) merged this species with the Bahamian endemic *Lepidaploa arbuscula* (Less.) H. Rob.

## Burseraeae

*Bursera inaguensis* Britton, Bull. New York Bot. Gard. 3: 443, 1905 [C&C (listed as “probably also Cuba”)]. **Notes:** This species also occurs in Cuba (Martínez-Habibe, 2012).

## Boraginaceae

*Heliotropium eggersii* Urb., Symb. Antill. 5: 481, 1908 [C&C]. **Notes:** In his treatment for *Heliotropium* L., Förther (1998) accepted this name although indicating that he was unable to examine any material. Feuillet (2012) considered this species as a synonym of the widespread neotropical species *Euploca procumbens* (Mill.) Diane & Hilger (Boraginaceae). Earlier taxonomic revisions within the family merged this Bahamian species with *Heliotropium procumbens* Mill. (Johnston, 1928, 1937).

*Rocheportia bahamensis* Britton, Bull. New York Bot. Gard. 5: 317, 1909 [C&C]. **Notes:** Klotz (1982) considered this taxon as an endemic subspecies of *R. cuneta* SW.; however, in this treatment he was not aware of *Rocheportia spinosa* (Jacq.) Urb. as the legitimate name [basinomy *Ehretia spinosa* Jacq. (Boraginaceae)] to refer to plants of *R. spinosa*. An infraspecific placement for the Bahamian individuals, within *R. spinosa*, has not been published yet. Such taxonomic arrangement is made in our study as follows: ***Rocheportia spinosa*** (Jacq.) Urb., Repert. Spec. Nov. Regni Veg. 13: 472, 1915 ssp. ***bahamensis*** (Britton) Freid & Jestrow **comb. nov.** (basinomy: *Rocheportia bahamensis* Britton, Bull. New York Bot. Gard. 5: 317, 1909, type Bahamas Insulae (Watlings Islds.) leg. Britton & Millspaugh 6167).

## Cactaceae

*Cephalocereus bahamensis* Britton, Contr. U. S. Natl. Herb. 12: 415, 1909 [C&C]. **Notes:** This species is a synonym of *Pilosocereus polygonus* (Lam.) Byles & Rowles (Cactaceae), a species restricted to the Bahama archipelago, Cuba, Florida, and Hispaniola (Zappi, 1994; Acevedo-Rodríguez & Strong, 2012).

*Opuntia bahamana* Britton & Rose, Cact. 1: 203, 1919 [C&C]. **Notes:** This species is considered as a synonym of *O. stricta* (Haw) Haw (Hunt, 2006; Acevedo-Rodríguez & Strong, 2012). The latter is found throughout the Caribbean Islands, Mexico, and Southeastern USA (Hunt, 2006).

*Opuntia lucayana* Britton, Bull. New York Bot. Gard. 4: 141, 1906 [C&C]. **Notes:** This species is believed to be an intergeneric hybrid between *O. stricta* and *Consolea macrantha* (Griseb.) A. Berger (Hunt, 2006).

*Opuntia nashii* Britton, Bull. New York Bot. Gard. 3: 446, 1905 [C&C]. **Notes:** This species has been transferred to *Consolea* Lemaire (Cactaceae) and it also occurs in Cuba (*C. nashii* (Britton) A. Berger subsp. *gibarense* Areces). *C. nashii* subsp. *nashii* is a Bahamian endemic (Areces-Mallea, 2001).

## Celastraceae

*Crossopetalum aquifolium* (Griseb.) Hitch., Rep. (Annual) Missouri Bot. Gard. 4: 70, 1893 [C&C (listed as “possibly Cuba”)]. **Notes:** This species is also found in Cuba (Mory, 2010).

*Crossopetalum coriaceum* Northr., Mem. Torrey Bot. Club 12: 48, 1902 [C&C]. **Notes:** This species also occurs in Cuba (Mory, 2010).

## Combretaceae

*Bucida spinosa* (Northr.) Jenn., Carnegie Mus. 11: 201, 1917 [C&C]. **Notes:** This species is also found in Cuba, Belize, Hispaniola, Mexico (Yucatan), and Puerto Rico (Stace, 2010).

## Convolvulaceae

*Evolvulus squamosus* Britton, New York Bot. Gard. 3: 399, 1905 [C&C]. **Notes:** This species is also found on the Cayman Islands (Proctor, 2012) and the Virgin Islands (Britton, 1916; D’Arcy, 1971).

## Euphorbiaceae

*Euphorbia abbreviata* Correll, Sida 8: 317, 1980 [C&C]. **Notes:** This is an illegitimate name. Oudejans (1989) published the name *E. inaguaensis* to correct this taxonomic error.

*Euphorbia brittonii* Millsp., Publ. Field Columb. Mus., Bot. Ser. 2: 159, 1906 [C&C]. **Notes:** This taxon is considered a synonym of *Euphorbia minutula* Boiss. (Acevedo-Rodríguez and Strong, 2012; Berry, pers. comm.; Van Ee, pers. comm.), a species endemic to the Bahamian archipelago and Cuba [the type of this species is a specimen from Cuba collected by C. Wright (MO1809734) (Burch, 1966)].

*Euphorbia exumensis* (Millsp.) Correll, Sida 8: 319, 1980 [C&C]. **Notes:** This species is currently treated as *E. lecheoides* Millsp. var. *exumensis* (Millsp.) Oudejans (Oudejans, 1992). *Euphorbia lecheoides* is endemic to the Bahamas

*Euphorbia wilsonii* (Millsp.) Correll, Sida 8: 319, 1980 [C&C]. **Notes:** This endemic taxon is currently accepted as *E. lecheoides* Millsp. var. *wilsonii* (Millsp.) Oudejans (Oudejans, 1992). *Euphorbia lecheoides* is a Bahamian endemic.

*Pedilanthus bahamensis* Millsp., Publ. Field Columb. Mus., Bot. Ser. 2: 359, 1913 [C&C]. **Notes:** Steinmann (2003) considered this taxon as an endemic subspecies of the widespread and non-endemic *Euphorbia tithymaloides* L.

## Fabaceae

*Acacia acuífera* Benth., London J. Bot. 1: 496, 1842 [C&C]. **Notes:** The accepted name for this species is *Vachelia acuífera* (Benth.) Seigler & Ebinger (Fabaceae). It is also found in Cuba (González-Gutiérrez, 2007; Clarke et al., 2009).

*Caesalpinia ovalifolia* Urb., Symb. Antill. 2: 273, 1900 [C&C (listed as “apparently endemic”)]. **Notes:** This species is considered a synonym of *Guilandina ciliata* Bergius



ex Wikstr. (Fabaceae) [Howard, 1988b (as *Caesalpinia ciliata* (Bergius ex Wikstr.) Urb.); Acevedo-Rodríguez & Lewis, 2012; ILDIS, 2013]. The species also occurs in Hispaniola (Liogier, 1985), Lesser Antilles (Howard, 1988b), and Puerto Rico and Virgin Islands (Acevedo-Rodríguez, 2005).

*Caesalpinia reticulata* Britton, Bull. New York Bot. Gard. 4: 118, 1905 [C&C]. **Notes:** Correll and Correll (1982) was not certain about the taxonomic status of this species indicating that it might be a morphological variant of *C. bahamensis*. Previously Gillis (1971) merged both species, in our study we concord with this taxonomic arrangement and consider that *C. reticulata* is a synonym of *C. bahamensis*. This placement is also followed by Acevedo-Rodríguez & Lewis (2012) and ILDIS (2013). *Caesalpinia bahamensis* occurs in the Bahama islands, Cuba, and Hispaniola (Barreto Valdés, 1999; Acevedo-Rodríguez & Lewis, 2012).

*Calliandra haematomma* (DC.) Benth., London J. Bot. 3: 103, 1844 [C&C (listed as “apparently endemic”)]. **Notes:** This species also occurs in Cuba, Bolivia, Hispaniola, Jamaica, Paraguay, and Puerto Rico (Barneby, 1998). *Calliandra haematomma* var. *correllii* Barneby is the only taxon of this species complex endemic to the Bahamian archipelago.

*Cassia caribaea* Northr., Mem. Torrey Bot. Club 12: 39, 1902 [C&C]. **Notes:** This species is considered as part of the *Chamaecrista caribaea* (Northr.) Britton complex, a taxonomic group that has three varieties, with two of them (*C. caribaea* var. *caribaea* and *C. caribaea* var. *lucayana* (Britton) Irwin & Barneby) endemic to the Bahama archipelago (Irwin & Barneby, 1982). The third one (*C. caribaea* var. *inaguensis* (Britton) Irwin & Barneby) is found in the Bahama islands and also in Hispaniola (Irwin & Barneby, 1982).

*Cassia lucayana* Britton, Bull. New York Bot. Gard. 4: 138, 1906 [C&C]. **Notes:** This species is considered a variety of *Chamaecrista caribaea*. See further details in notes for *Cassia caribaea*.

*Mimosa bahamensis* Benth., J. Bot. (Hooker) 4: 408, 1842 [C&C, A-R&S]. **Notes:** This species is also found in Central America and Mexico (Martínez-Bernal et al., 2008; Parker, 2008).

## Loranthaceae

*Dendropemon bahamensis* Britton in Britton & Millsp., Bahama Fl.: 109, 1920 [C&C]. **Notes:** Kuijt (2011) merged this species with *D. loranthoideus* (Baill.) Tiegh., a taxon endemic to the Bahamian archipelago and Hispaniola.

*Dendropemon brevipes* Britton in Britton & Millsp., Bahama Fl. 108, 1920 [C&C]. **Notes:** This species has been included within *D. purpureus* (L.) Krug & Urb. The latter is endemic to the Bahama islands, Cuba, Hispaniola, and Puerto Rico (Kuijt, 2011).

## Malvaceae

*Hibiscus brittonianus* Kearney, Leafl. West. Bot. 7: 121, 1954 [C&C]. **Notes:** Arecos Berazaín & Fryxell (2007) merged this species with *Hibiscus clypeatus* L. subsp. *membranaceus* (Cav) O. J. Blanch. The latter is endemic to the Bahama islands, Cuba, and Haiti.

*Phymosia abutiloides* (L.) Desv. in Ham., Prodr. Pl. Ind. Occid. 50, 1825 [C&C]. **Notes:** This species also occurs in Hispaniola (Fryxell, 1972; Liogier, 1981). We have

located several specimens from Hispaniola in FLA (i.e., FLAS209854, FLAS177242), MO (i.e., MO1992581, MO1570484, MO2137524, MO765762), and NY (i.e., NY01440741)

### Orchidaceae

*Encyclia gracilis* (Lindl.) Schltr., Orchideen: 209, 1914 [A-R&S, C&C]. **Notes:** This name has been used for a endemic orchid species that is relatively common in the archipelago; however, a recent study of its original description and type specimen shows that this taxon as originally published corresponds with the natural hybrid *Encyclia x lucayana* Sauleda & Adams (accepted name *Encyclia x gracilis* (Lindl.) Schltr.). Bahamian plants that have been traditionally assigned to “*Encyclia gracilis*” have been assigned a to the recently described species *Encyclia correllii* Sauleda (see Appendix 1).

*Oncidium lucayanum* Nash in Britton & Millsp., Bahama Fl.: 98, 1920 [C&C]. **Notes:** This species (accepted name *Tolumnia lucayana* (Nash) Braem) also occurs in Cuba and Hispaniola (Ackerman, 2014).

*Tetramicra urbaniana* Cogn. in Urb., Symb. Antill. 6: 551, 1910 [C&C]. **Notes:** This species is considered as a synonym of *Tetramicra parviflora* Lindl. The latter is also found in Cuba, Hispaniola, and Jamaica (Ackerman, 2014).

*Vanilla correllii* Sauleda & R. M. Adams, Brittonia 33: 192, 1981 [C&C]. **Notes:** Soto Arenas and Cribb (2010) placed this species within *V. poitaei* Rchb. f. The latter is endemic to the Bahamian archipelago, Cuba, Hispaniola, and Puerto Rico.

### Plumbaginaceae

*Limonium bahamense* Britton, Bull. New York Bot. Gard. 4: 142, 1906 [C&C]. **Notes:** This species also occurs in Hispaniola [as *L. bahamense* var. var. *haitense* (S.F. Blake) Alain] (Acevedo-Rodríguez & Strong, 2012). We have located specimens from Hispaniola in MO (i.e., MO2532, MO25446, MO6496, MO46468, Ekman, 7-11-1929, Zanoni et al. 11-12-1981.), and NY (i.e., NY1624311, NY1624315)

### Polygalaceae

*Polygola wilsonii* Small in Britton & Millsp., Bahama Fl.: 216 [C&C (listed as “known only from Salt Cay Bank, Anguilla Isles”)]. **Notes:** This species also occurs in Cuba (Rankin Rodríguez, 2003).

### Primulaceae

*Ardisia bahamensis* (Gaertn.) A. DC., Trans. Linn. Soc. London 17: 128, 1834 [A-R&S]. **Notes:** This species [accepted name *Heberdenia bahamensis* (Gaertn.) Sprague (Primulaceae)] is a Macaronesian island endemic (Ståhl, 1996).

## Ranunculaceae

*Clematis bahamica* Kuntze (Britton), Bull. New York Bot. Gard. 4: 117, 1906 [C&C]. Notes: Moreno (1993) considered this species as a synonym of the Bahamian endemic *C. plukenetii* DC.

*Clematis orbiculata* Correll, J. Arnold Arbor. 58: 40, 1977 [C&C]. Notes: Moreno (1993) considered this species as a synonym of the Bahamian endemic *C. plukenetii* DC.

## Rhamnaceae

*Ziziphus taylori* (Britton) M. C. Johnst., Amer. J. Bot. 51: 1118, 1964 [C&C]. Notes: This species also occurs in Puerto Rico (Island of Mona) (Britton, 1915; Liogier & Martorell, 2000).

## Rubiaceae

*Erithalis salmeoides* Correll, J. Arnold Arbor. 58: 49, 1977 [C&C]. Notes: This species is also found in Cuba, Dominican Republic and Jamaica (Negrón-Ortiz, 2005).

*Ernodea cokeri* Britton in Coker, Bahama Is. (Shattuck) 264, 1905 [C&C]. Notes: This species also occurs in Florida (Negrón-Ortiz & Hickey, 1996).

*Ernodea taylori* Britton, Bull. Torrey Bot. Club 35: 208, 1908 [C&C]. Notes: This taxon is also present in the Cayman Islands, Cuba, and Haiti (Negrón-Ortiz & Hickey, 1996).

*Scolosanthus bahamensis* Britton, Bull. New York Bot. Gard. 3: 452, 1905 [C&C]. Notes: The species also occurs in Cuba (Fong et al., 2005; Gonzalez Gutiérrez et al., 2006). We have located specimens from Cuba at NY (i.e., NY01331083, NY1331084, NY1331085).

*Spermacoe bahamensis* (Britton) R. A. Howard, Phytologia 65: 287, 1988 [C&C] (listed as *Borreria bahamensis* Britton). Notes: This species has an unusual disjunct distribution between the Bahamas and the Lesser Antilles (Howard, 1989). Herbarium specimens for the Lesser Antilles were located in MO (i.e., MO807516, Meagher 4037, and Meagher 02/16/10/94) and NY (i.e., NY01331217, NY01331218, NY01331219, and NY01331219).

## Santalaceae

*Phoradendron northropiae* Urb. in Northrop, Mem. Torrey Bot. Club 12: 33, 1902 [C&C]. Notes: This species also occurs in South America (Kuijt, 2003).

## Solanaceae

*Solanum didymacanthum* Millsp., Publ. Field Columb. Mus., Bot. Ser. 2: 183, 1906 [C&C]. Notes: This taxon is considered as a synonym of *S. microphyllum* (Lam) Dunai, a species endemic to the Bahamas and Hispaniola Knapp (2009).

*Solanum bahamense* L., Sp. Pl. 1: 188, 1753. Notes: Correll and Correll (1982) did not provide details pertinent to the distribution status of this species. Strickland-Constable et al. (2010) indicated that this species has a wide distribution in the Bahamian archipelago, Florida and the Greater and Lesser Antilles.

## Verbenaceae

*Nashia inaguensis* Millsp., Publ. Field Columb. Mus., Bot. Ser. 2: 177, 1906 [C&C].

**Notes:** This species also occurs on Puerto Rico and the Virgin Islands (Cedeño-Maldonado & O'Reilly, 1996).

*Stachytarpheta fruticosa* (Millsp.) B. L. Rob., Proc. Amer. Acad. Arts Sci. 51: 531, 1916 [C&C]. **Notes:** This species is also found in Cuba (Méndez Santos, 2001).