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ILLUSTRATIONS FOR THE *FLORA OF THE BAHAMA ARCHIPELAGO* REVISITED

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ABSTRACT

A number of illustrations used in the Corrells' 1982 *Flora of the Bahama Archipelago* were reproduced from Tomlinson's *The Biology of Trees Native to Tropical Florida*, 1980. This may explain why many illustrations and descriptions do not match each other or the plants growing in the Bahamas. Embedded in the preface to the Corrells' *Flora* is an acknowledgment to Tomlinson for allowing them to use drawings from his book on Florida trees. The Corrells' figure legends do not indicate which illustrations were reproduced from Tomlinson's book nor make clear that the plants may have been drawn from Florida specimens. I present a partial list of the 100 trees represented by 117 plates that the Corrells reproduced from Tomlinson's book.

INTRODUCTION

While revising my illustrated guide for common plants of San Salvador Island (Kass, 1991; 2005a), I noticed for the first time (Kass, 2005b) that a number of illustrations used in the Corrells' (1982) *Flora of the Bahama Archipelago* were reproduced from *The Biology of Trees Native to Tropical Florida*, by P.B. Tomlinson, first published in 1980.

The beautiful and scientifically accurate illustrations therein were drawn between the years 1965-1975, by Priscilla Fawcett, former illustrator at Fairchild Tropical Garden (FTG), Miami, Florida. Many herbarium specimens of the material from which the drawings were made were deposited in the FTG herbarium. I have not examined those specimens but concluded from Tomlinson's (1980) preface, acknowledgments, and technical notes (pp iii-v)

that they were drawn from Florida plant collections.

It then became clear why some of the plants I observed on San Salvador and on other islands in the Bahamas varied from the plants illustrated in the Corrells' *Flora* and perhaps explained why some of their plant descriptions did not match the illustrations. Embedded in the preface to the Corrells' flora (pp.11-12) is recognition of Fawcett's superb art work and an acknowledgment to Tomlinson for his "generous willingness to allow [them] to use drawings that Priscilla Fawcett made for his treatise on Florida trees, published in 1980." In 1973, Donovan Correll replaced W.T. Gillis as Taxonomist at FTG (Kass, 1991; Kass & Eshbaugh, 1993, 1994) and continued the work on a Bahamian flora in collaboration with his wife, Helen. While many of the Corrells' illustrations were probably drawn from Bahamian specimens, their figure legends did not indicate which ones were reproduced from Tomlinson's book from Florida plants. Readers may have assumed, therefore, that all illustrations were drawn from Bahamian plants, although some apparently were not.

METHODS

I compared all 166 figures in Tomlinson's (1980) book with those included in the Corrells' *Flora* (Correll & Correll 1982). I compiled and organized alphabetically by family, species, and common names all illustrations that were reproduced exactly from Tomlinson (1980) but not cited in their figure legends. Note that the Corrells capitalized the first letters of common names, whereas Tomlinson used lower case, and that a few of Tomlinson's common names were different

Table 1. Partial list of the 100 trees shown in Correll and Correll (1982), Flora of the Bahama Archipelago, with illustrations reproduced from Tomlinson (1980), The Biology of Trees Native to Tropical Florida. Note that the illustrations were drawn from Florida specimens. Names listed below are those used in the Corrells' Flora. Starred (*) names are represented by more than one figure.

<u>FAMILY</u>	<u>BOTANICAL NAME</u>	<u>COMMON NAME</u>
ANACARDIACEAE	* <i>Metopium toxiferum</i> (L.) Krug & Urb.	Poison Wood
	* <i>Schinus terebinthifolius</i> Raddi	Brazilian Pepper Tree
AVICENNIACEAE	<i>Avicennia germinans</i> (L.) L.	Black Mangrove
CASUARINACEAE	<i>Casuarina equisetifolia</i> [litorea] L.	Beefwood
COMBRETACEAE	<i>Conocarpus erectus</i> L.	Buttonwood
	<i>Laguncularia racemosa</i> (L.) Gaertn. f.	White Mangrove
LEGUMINOSAE	<i>Delonix regia</i> (Bojer ex Hook.) Raf.	Royal Poinciana
POLYGONACEAE	* <i>Coccoloba uvifera</i> (L.) L.	Sea Grape
RHIZOPHORACEAE	* <i>Rhizophora mangle</i> L.	Red Mangrove
RUBIACEAE	<i>Casasia clusiifolia</i> (Jacq.) Urb.	Seven Year Apple
	<i>Erithalis fruticosa</i> L.	Black Torch
SOLANACEAE	^a <i>Solanum bahamensis</i> L.	Canker-berry
SURIANACEAE	<i>Suriana maritima</i> L.	Bay Cedar
ZYGOPHYLLACEAE	<i>Guaicum sanctum</i> L.	Lignum Vitae

^aNote: The illustration for *Solanum bahamensis* in the Correll's *Flora* is misidentified as *S. erianthum*. The correct figure legend for the illustration is on page 1291, Fig. 557 (compare with Tomlinson, 1980, pg. 407).

from those used by the Corrells. No attempt has been made here to update the nomenclature legends. Note that the Corrells capitalized the first letters of common names, whereas Tomlinson used lower case, and that a few of Tomlinson's common names were different from those used by the Corrells. No attempt has been made here to update the nomenclature from that used in these books. A sub-sample of species is shown in Table 1. A complete list is published in the *Bahamas Naturalist and Journal of Science* (Kass & Miller, 2006).

RESULTS

Tomlinson's (1980) book on native Florida trees included 153 original illustrations (Figures 13-166) drawn by Fawcett. I found that the Corrells later reproduced 117 of Tomlinson's figures to illustrate 100 trees in

their Bahama *Flora* but omitted from their figure legends any citations to his book.

Table 1 lists by families, species, and common names, 14 examples of identical illustrations published in both books. Tomlinson's books (1980, 2001) provided much broader descriptions of the ecology and reproductive biology of these Florida plants than those found in the Corrells' *Flora*.

We further found that many trees endemic to the Bahamas were not drawn for the Corrells' (1982) Bahama *Flora*. Instead, they used illustrations of non-endemic trees from Tomlinson's book that were drawn by Fawcett, from Florida specimens (Kass and Miller 2006).

In contrast, Hitchcock (1893) and Northrop (1902) described and published illustrations of trees first collected in the Bahamas. We suggest that drawings of Bahamian endemics be included in any future flora of the Ba-

hama Archipelago and that all plant illustrations be based on specimens collected in the Bahamas.

Many plants listed in Table 1 also were drawn by Anthony Kowalski from live specimens on San Salvador Island, Bahamas, and published in Kass (1991, 2005). Kass' (2005a) *Illustrated Guide to Common Plants of San Salvador Island, Bahamas* also provided photographs and descriptions of economic and/or ethnobotanical use for many of these plants common to both the Bahamas and Tropical Florida.

People who are interested in trees that grow in both the Bahamas and Florida may find that Tomlinson's revision of his Florida trees (2001, revised from 1980) is more readily accessible and affordable than the Corrells' *Flora*. Readers who use either book to study these trees in the Bahamas should note, however, that the illustrations were made from Florida plants, which may differ from Bahamian plants in some of the characteristics seen in the illustrations.

DISCUSSION

Evolutionary studies on islands have found that species often vary greatly from their counterparts on the mainland because of different selection pressures and species isolation (Darwin, 1859; Schueller, 2004). Therefore, we should not assume uniformity of species between the mainland and any one island or even between islands in the Bahamas.

For example, studies on the reproductive biology of White Mangrove (*Laguncularia racemosa* L.) demonstrate that the breeding system and pollinators vary among islands in the Bahamas and between the Bahamas and mainland Florida (Rathcke *et al.*, 1996; Landry *et al.*, 2005a, b). Kass (2005a, p. 56) observed that the floral morphology of Black Mangrove (*Avicennia germinans* L.) on San Salvador Island differed from flowers observed in Florida (pers. obs.) and as illustrated in the Corrells' Bahama *Flora*. It is therefore important that

descriptions and illustrations of plants from the Bahamas be made available.

For conservation purposes, Eshbaugh and Wilson (1996) noted that an inventory of Bahamian species and a determination of rare plants are needed. They also noted that ecological communities are more fragile on islands than on continents. Therefore, it is especially important that we accurately identify species and that we recognize and document species differences that might exist for island populations. I suggest that descriptions with accompanying accurate illustrations of the plants in question would be an aid in this endeavor.

Unfortunately, the Corrells' *Flora* is limited for purposes of identifying individuals of rare plants. It also does not provide illustrations of many of the endemic trees found throughout the Bahamas, such as *Pavonia bahamensis* A. S. Hitchcock or *Crossopetalum coriaceum* Northrop. Approximately one-sixth of the Corrells' (1982) Bahama *Flora* illustrations were based on Florida material. Additionally, their illustrations of orchids, aquatic plants, and weeds were taken from previous publications and apparently were not based on Bahamian material (Correll & Correll, 1982, Preface pg. 12.)

Moreover, the Corrells' estimate of endemics in the Bahamas flora was greater than that made by Gillis (1974); thus, the number of apparent endemics in the Bahamas is high (Kass & Eshbaugh, 1993). It seems a new *Flora* of the Bahama Archipelago is in order.

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