NEW COMBINATIONS IN THE FLORIDA FLORA III

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ABSTRACT

New combinations are made for the following species and varieties within the flora of Florida: *Aster shortii* var. *camptosorus*, *Borrichia arborescens* var. *glabrata*, *Carex amphibola* var. *godfreyi*, *Carex flaccosperma* var. *pigra*, *Carex granularis* var. *gholsonii*, *Carex oligocarpa* var. *calcifugens*, *Carex oligocarpa* var. *paeninsulae*, *Carex oligocarpa* var. *thornei*, *Chrysopsis floridana* var. *highlandsensis*, *Chrysopsis linearifolia* var. *dressii*, *Conradina grandiflora* var. *etonia*, *Croton linearis* var. *fergusonii*, *Hymenocallis latifolia* var. *puntagordensis*, *Ludwigia grandiflora* var. *hexapetala*, *Oldenlandia uniflora* var. *fasciculata*, *Panicum spretum* var. *leucothrix*, *Panicum spretum* var. *longiligulatum*, *Peperomia obtusifolia* var. *floridana*, *Phlox carolina* var. *angusta*, *Phlox nivalis* var. *hentzii*, *Psilocarya eximia*, *Rayjacksonia phyllocephala* var. *megacephala*, *Schwalbea americana* var. *australis*, *Scutellaria altamaha* var. *australis*, *Spiranthes lacera* var. *eatonii*, *Vernonia gigantea* var. *ovalifolia*. Lectotypes have been designated for: *Aster camptosorus* (= *Aster shortii* var. *camptosorus*), *Croton fergusonii* (= *Croton linearis* var. *fergusonii*), *Eriocarpum megacephalum* (= *Rayjacksonia phyllocephala* var. *megacephala*), *Hedyotis fasciculata* (= *Oldenlandia uniflora* var. *fasciculata*). *Phytologia 94(3): 459-485 (December 1, 2012).*

KEY WORDS: Amaryllidaceae, *Aster*, *Borrichia*, *Carex*, *Chrysopsis*, Compositae, *Conradina*, *Croton*, Cyperaceae, Euphorbiaceae, *Hymenocallis*, Labiatae, *Ludwigia*, *Oldenlandia*, Onagraceae, Orchidaceae, *Panicum*, *Peperomia*, *Phlox*, Piperaceae, Polemoniaceae, *Psilocarya*, *Rayjacksonia*, Rubiaceae, *Schwalbea*, Scrophulariaceae, *Scutellaria*, *Spiranthes*, *Vernonia*.

Efforts to understand and document the rich Florida flora continue to encounter names of species or varieties that seem misplaced

as to rank, or have been overlooked when genera are divided. A series of publications (Brown 2008; Kral 1999; Ward 2001; Wunderlin & Hansen 2001; Ward 2004; Ward & Hall 2004; Ward 2006a; Ward 2006b; Ward & Housel 2007; Ward 2008; Ward 2009a; Ward 2009b; Ward 2011; Weakley et al. 2011) has attempted to adjust the epithets of these names to the taxonomic level that their degree of morphological difference would seem to deserve. Here, a further 26 new combinations are formed, in pursuit of that goal.

These changes in rank from species (or subspecies) to variety, or the reverse, or transfers from one generic home to another, are surely of minor importance in the larger world. But they speak directly to that age-old quandary, "what is a species," where the words carry an ever-evolving intellectual gloss. Advanced systematics texts present sophisticated discussions of as many as 7 defined species concepts (e.g., Judd et al. 1999), some far more subtle than the once revered "biological species concept." Still, the workaday definition requires that each newly examined taxon must have characteristics of form and distinctness that are similar in magnitude to other, more familiar taxa, or that its rank and placement be adjusted until it reflects minimal anomalies.

Within these uneven ranks are discrepancies of what have here been called "orphan taxa," entities that were recognized historically in Florida but for one reason or another have not been transferred into the appropriate genus or species. More often entities bear a rank higher or lower than comparison with the characteristics of related taxa would justify. This group contains a subset of recently recognized taxa, by authors who are intimately familiar with the group (usually a genus or section), and who define as species small morphological variances that an earlier author would have interpreted as acceptable infraspecific variation.

A common feature of this last subset is that the author has focused narrowly, often exclusively, on the genus of his interest. With this concentration, it is perhaps difficult for him to appreciate where his definition of "species" differs from that of the scholars who preceded

him. His work product then becomes a taxon -- a "species" -- with conventional nomenclature, morphological terminology, and seeming legitimacy, but of small, subtle, marginally useful groupings. Some workers, perhaps unwilling frontally to acknowledge the distortion these interpretations place on their science, resort to calling them cryptic species or microspecies.

This proliferation of diminutive taxa has increasingly beset all ranks, from families to genera and to species. The lure of monophylly as an essential element of classification has encouraged and justified this fragmentation (though at times the reverse is employed, where familiar, readily recognized families or genera disappear by merger into larger taxa). But with this fragmentation has come reduced ability by others to exploit the once-exclusive purpose of plant classification, that of identification and information retrieval. If the distinguishing characters become increasingly slight, accurate identification is retarded. And if identification -- correct or otherwise -- yields an unfamiliar name, access to relevant information elsewhere is hindered.

The authors of certain of these microspecies compound the analysis of their taxa by publishing their names and descriptions in the author's own online journals. Some adequately, though narrowly, meet the standards of "effective publication" (McNeill et al. 2006), by distribution of a few hard-paper copies to appropriate libraries; others seem to be accessible only in an electronic medium. Personal journals such as these are often overlooked (or scorned!) by the larger botanical public, and tend to be ephemeral, sooner or later overstaying their author's patience and stamina. A much-needed proposal for constrainment and standardization of electronic publication is presently under examination (Watson 2010).

It is realistic to believe that the era of truly new discoveries in Florida of species-level native plants is drawing to a close. The day may have passed when a student new to America and speaking scarcely intelligible English could within weeks encounter the modest but sharply distinct endemic known as *Stylisma abdita* Myint (1966); or a specimen found in an herbarium could be recognized as a genus new to

the state with a new, endemic species, *Ziziphus celata* Judd & Hall (1984), later confirmed by discovery of living plants (DeLaney et al. 1989); or a recent graduate, fresh from his discovery of a forest tree clearly native to the state but previously unknown to Florida and to the eastern United States, *Ulmus crassifolia* Nuttall (McDaniel 1967), could publish a well-founded new genus, based on a new panhandle endemic, *Harperocallis flava* McDaniel (1968). Those exuberant days are in the past and it is unwise to simulate them by assigning less distinct taxa to the same taxonomic rank.

A plea could be made -- certain to be ignored -- that future students of floras of reasonably well-studied regions such as Florida, restrain themselves in the publication of new microspecies. When the urge becomes irresistible to show their latest findings to the botanical public, may they temper their pride by selecting an infraspecific rank, rather than burden the science with what is potentially an immeasurably large, crippling, abundance of new species names.

The proposed diminution here of some recently described Florida taxa is not to be interpreted as condemnation of all. *Forestiera godfreyi* L. C. Anderson (1985) is both distinct and disjunct from its western congeners. *Carex kraliana* Naczi & Bryson (Naczi et al. 2002) seems sufficiently different to justify specific status. *Chrysopsis delaneyi* Wunderlin & Semple (DeLaney et al. 2003) has a substantial morphological basis. *Crotalaria avonensis* DeLaney & Wunderlin (1989) has been known as a distinct form at least since 1962 (Ward 2010). These, with *Eriocaulon nigrobracteatum* Bridges & Orzell (1993), *Rhynchospora megaplumosa* Bridges & Orzell (2000), *Juncus paludosus* Bridges & Orzell (2008), and others, though by-and-large of lesser morphological prominence than earlier-described taxa of their genus, are adequately distinguished.

As before, the rank of variety is here preferred where an infraspecific category is desired. Appreciation is given to other authors (e.g., Holmgren 1994) who have placed on record their own support of the varietal rank over that of subspecies.

The following are Florida taxa that in each case appear to represent discrete groupings but have been recognized and published at a rank their differences do not justify. In most, the morphological basis for distinction between the taxa is not given, but is reserved for another forum.

AMARYLLIDACEAE

Hymenocallis latifolia (Mill.) Roem. var. **puntagordensis** (H. P. Traub) D. B. Ward, comb. et stat. nov. Basionym: *Hymenocallis puntagordensis* H. P. Traub, Plant Life 18: 71. 1962. TYPE: United States, Florida, Charlotte Co., Punta Gorda (orig. source), 29 Aug 1961 (cult.), *Traub 878a*, *878b*, *878c* (holotype: MO).

Recent presentations of *Hymenocallis* (Smith & Flory 2002; Smith & Garland 2003) enumerated 12 species within Florida (and 3 elsewhere). Of these, 4 are in addition to those known to Small (1933), himself an acute field observer and assertive taxonomic splitter. At first glance, *Hymenocallis* appears to show the signs of an over-fragmented genus. Its numerous species, many bearing unfamiliar names, are so subtly distinguished that even experienced field botanists (e.g., Godfrey & Wooten 1979) have despaired of forming a meaningful treatment. Herbarium materials are often unidentifiable, even to the author of the species (H. P. Traub, pers. comm., Jan 1965). One searches for groupings among the named entities that will approximate what is thought of as "species" within other genera.

But further consideration of these unfamiliar taxa shows in large part a conformation to the characteristics found of species in other genera. The entities are separated by several morphological features, the ranges of many coincide with the known ranges of other unrelated Florida species, and for some there is the implication of genetic isolation as indicated by differing chromosome counts (Flory 1978). The easy pathway -- to accept as proven the names and data of these unfamiliar species -- is probably justified for most.

Even so, one name stands out, as probably unworthy of specific rank. *Hymenocallis puntagordensis*, though in print for over forty years (Traub 1962), is a wholly unfamiliar name to southeastern botanists. It came to attention only in the 1990s through the successful efforts of Gerald Smith and Mark Garland (1996) to relocate the plant, and its brief mention in a guide to the state's flora (Wunderlin 1998). Other than its type (prepared from cultivated plants) and a few collections by Smith and Garland, it seems entirely unrepresented in Florida and large national herbaria. It appears to occur only on disturbed sites, along roadsides and railroad right-of-ways, near the city of Punta Gorda, in southwestern peninsular Florida.

These plants bear evergreen leaves, a trait of tropical species found among Florida species only in *Hymenocallis latifolia*. Indeed, more robust specimens bear a striking resemblance to that species; but Smith and Garland believe that closer examination reveals several differences: the margin of the staminal cup has prominent projecting points, the pollen is yellow, the ovaries are pyriform, and the leaves are narrowly strap-shaped (in contrast to only small marginal iregularities of the staminal cup, orange pollen, ovoid ovary, and broader leaves in *H. latifolia*). The habitat is strikingly different; *H. latifolia* is a coastal species, found on dunes and edges of saline swamps and swales.

Smith and Garland are equivocal as to the nativity status of *Hymenocallis puntagordensis*. They have suggested (1996), in light of its restriction to disturbed sites, that it may not be native to Florida. Even so, because of certain similarities with other Florida species (*H. henryi*, of the Florida panhandle; *H. palmeri*, a widespread native of the Everglades), they concluded it is native. They later (2003) back away from this status by wondering if "it may be a taxon naturalized from the Neotropics that has undergone natural selection..." Wunderlin (1998) recorded it as a native and -- logically, considering that its only known location is in Florida -- as an endemic.

This habitat and distribution suggest this taxon is significantly different from other Florida species-level taxa of the genus. Unlike certain other areas of the state where endemics abound (Ward 1979;

Christman & Judd 1990), low-lying western Charlotte County is nearly lacking in plant endemism. Though of course, everything has to grow somewhere, one is uncomfortable in ascribing a unique distribution to a native plant. It is far more to be expected that a species of long duration in the area will conform to the vagaries of climate, soil types, competition, sea-level change, and other factors that constrain the distribution of other native species.

In contrast, an introduced species is free of historic influences and is subject only to the circumstances that bring it into the area. With *Hymenocallis puntagordensis* found only in disturbed habitats, as is typical of recently introduced species, and with its distinctive evergreen foliage showing relation only to the widespread, variable, little studied *H. latifolia*, it seems best to interpret *H. puntagordensis* as a non-native, smaller variant of that pan-Caribbean coastal species.

COMPOSITAE

Aster shortii Lindl. in Hook. var. **camptosorus** (Small) D. B. Ward, comb. et stat. nov. Basionym: *Aster camptosorus* Small, Bull. Torrey Bot. Club 24: 339. 1897. TYPE: United States, Alabama, Lee Co., "Wright's Mill, five miles south of Auburn," 17 Oct 1896, *Baker 76* (lectotype, designated here: NY).

Aster shortii is a northern species, rare in Virginia, the Carolinas, and northern Georgia. Var. *camptosorus* in Florida is quite disjunct, very rare, all collections seemingly having come from a small area in western Gadsden County. The variety as expressed in Florida differs in that leaves are narrower and more glossy above. Burgess (1903) and Alexander (1933) recognized the taxon at specific rank. Jones, in 1986, annotated specimens (FLAS, NY) with the above combination, but did not publish it. More recent authors (cf. Brouillet et al. 2006; Nesom 1994) did not address variation within the species.

Borrichia arborescens (L.) DC. var. **glabrata** (Small) D. B. Ward, comb. et stat. nov. Basionym: *Borrichia glabrata* Small, Man. S.E. U.S. 1340. 1903. Type: United States, Florida, Monroe Co., "southern Florida and the Keys," 1892?, *Curtiss 1412* (holotype: NY).

In Florida, typical *Borrichia arborescens* extends north along both coasts and onto the panhandle; its leaves are silvery-pubescent. On the Keys, Small's *B. glabrata* is of limited distribution, usually sympatric with the typical form, but readily distinguished by its green, glabrous leaves. Semple (1978a) noted the two forms, but did not give them taxonomic recognition.

Chrysopsis floridana Small var. **highlandsensis** (DeLaney & Wunderlin) D. B. Ward, comb. et stat. nov. Basionym: *Chrysopsis highlandsensis* K. R. DeLaney & R. P. Wunderlin, Bot. Expl. 2: 2. 2002. TYPE: United States, Florida, Polk Co., Avon Park, 12 Nov 2001, *DeLaney 5113* (holotype: USF; isotype: USF).

Chrysopsis linearifolia Semple var. **dressii** (Semple) D. B. Ward, stat. nov. Basionym: *Chrysopsis linearifolia* Semple ssp. *dressii* Semple, Brittonia 30: 492-495. 1978. TYPE: United States, Florida, Brevard Co., Merritt Island, 2 Oct 1976, *Semple, Wunderlin, Poppleton & Norman 2530* (holotype: MO; isotypes: US, USF, WAT).

Two recent epithets in the genus *Chrysopsis* require adjustment. DeLaney & Wunderlin (2002) report what they believe to be a new species, *Chrysopsis highlandsensis*. They recognize it to be related to the peninsular endemic known as *C. floridana* Small, and re-identify most collections bearing that name from the south-central peninsula (primarily Highlands Co.) as their new species. Though they relegate prior collections from counties immediately to the west (Hillsborough, Manatee) to *C. floridana* s.s., they also report stations for this older species in close proximity to their novelty. The authors

do not indicate they saw the type of *C. floridana* or were aware of its source; Small's type came from Bradenton, Manatee Co., within the range they assign to typical *C. floridana.*

DeLaney & Wunderlin (2002) speak at length (20 pages) of the differences they observed between the two taxa: "...the two species differ markedly in overall appearance and capitulescence shape...rosette habit...mid-stem leaf shape...rosette leaf shape...pubescence type, and...other subtile [!] characteristics..." Their 12 photographs (some full-page) show differences, and there is no difficulty in accepting the two named populations as carrying different genotypes. Yet specimens (in FLAS) they did not see are often ambiguous and easily misassigned if their place of collection is hidden. The rank of species is not justified by these observed differences.

Chrysopsis linearifolia ssp. *dressii* Semple (1978b) is a distinct peninsular endemic taxon, geographically disjunct from typical *C. linearifolia* of the Florida panhandle. Yet a wider selection of Florida specimens (FLAS), not reviewed by its author, shows frequent ambiguity if the origin is hidden. Varietal rank retains the taxon, yet in a less obtrusive context.

Rayjacksonia phyllocephala (DC.) Hartman & Lane var.
megacephala (Nash) D. B. Ward, comb. et stat. nov.
Basionym: *Eriocarpum megacephalum* Nash, Bull. Torrey Bot. Club 23: 107. 1896. TYPE: United States, Florida, Manatee Co., Sneed's Island, "near the mouth of the Manatee River," 21-23 Aug 1895, *Nash 2432* (lectotype, designated here: US; isolectotypes: F, MICH, MO, NY, P, PH).
= *Machaeranthera phyllocephala* var. *megacephala* (Nash) Shinners; *Haplopappus phyllocephalus* var. *megacephalus* (Nash) Waterfall; *Sideranthus megacephalus* (Nash) Small

When Lane & Hartman (1996) divided Cassini's *Haplopappus* by recognizing the new genus *Rayjacksonia*, they correctly transferred *Haplopappus phyllocephala* DC. But they slighted its larger-headed Florida native, *H. megacephalus* (Nash) Hitchc. by leaving it

synonymous with *R. phyllocephala*. Appropriate recognition was given by Shinners (1950) with his *Machaeranthera phyllocephala* var. *megacephala*; again by Waterfall (1960) with *Haplopappus phyllocephalus* var. *megacephalus*. With *Rayjacksonia* accepted at generic rank, Nash's epithet again needs transfer.

Vernonia gigantea (Walt.) Trel. ex Branner & Coville var. **ovalifolia** (Torr. & Gray) D. B. Ward, comb. et stat. nov. Basionym: *Vernonia ovalifolia* Torr. & Gray, Fl. N. Amer. 2: 59. 1841. TYPE: United States, Florida, Franklin Co.?, "Middle Florida," 1837?, *Chapman s.n.* (holotype: NY). = *Vernonia gigantea* ssp. *ovalifolia* (Torr. & Gray) Urbatsch

Urbatsch (1972) and Jones & Faust (1978) recognized both *Vernonia gigantea* ssp. *gigantea* and ssp. *ovalifolia*. The first is restricted in Florida to the central panhandle, the second is widespread in both panhandle and peninsula. A. W. Chapman, resident of Apalachicola and within range of both variants, first (1860) recognized both *V. ovalifolia* and *V. gigantea* (his *V. noveboracensis*), but later (1897) distinguished only *V. gigantea*. Wunderlin (1998) placed both variants under an undivided *V. gigantea*. The differences as documented by Urbatsch (1972: 236) are real, but modest.

CYPERACEAE

Carex amphibola Steud. var. **godfreyi** (Naczi) D. B. Ward, comb. et stat. nov. Basionym: *Carex godfreyi* Naczi, Contr. Univ. Michigan Herb. 19: 200. 1993. TYPE: United States, Florida, Lake Co., Astor Park, 22 Apr 1991, *Naczi 2781* (holotype: MICH; isotypes: FLAS, FSU, NCU, NY, US, VDB).

Carex flaccosperma Dewey var. **pigra** (Naczi) D. B. Ward, comb. et stat. nov. Basionym: *Carex pigra* Naczi, Novon 7: 67. 1997. TYPE: United States, Mississippi, Lowndes Co., Mahew, 15

May 1989, *Naczi 2174A* (holotype: MICH; isotypes: KNK, NCU, NY, US).

Carex granularis Muhl. ex Schkuhr in Willdenow var. **gholsonii** (Naczi & Cochrane) D. B. Ward, comb. et stat. nov. Basionym: *Carex gholsonii* Naczi & Cochrane, Novon 12: 524. 2002. TYPE: United States, Florida, Citrus Co., Crystal River, 24 Apr 1991, *Naczi 2787* (holotype: DOV; isotypes: FLAS, MICH, MO, NY, WIS).

Carex oligocarpa Schkuhr in Willd. var. **calcifugens** (Naczi) D. B. Ward, comb. et stat. nov. Basionym: *Carex calcifugens* Naczi, Novon 12: 512. 2002. TYPE: United States, Georgia, Screven Co., Blue Springs, "Blue Springs Landing on Savannah River," 2 May 1991, *Naczi 2840* (holotype: DOV; isotypes: FLAS, FSU, GA, GH, MICH, MO, NCU, NY, PH, TENN, UNA, US, USCH, VDB, VPI, VSC, WIN).

Carex oligocarpa Schkuhr in Willd. var. **paeninsulae** (Naczi, Bridges & Orzell) D. B. Ward, comb. et stat. nov. Basionym: *Carex paeninsulae* Naczi, Bridges & Orzell, Novon 12: 514. 2002. TYPE: United States, Florida, Clay Co., Green Cove Springs, "Magnolia Springs," 20 Apr 1991, *Naczi 2770* (holotype: DOV; isotypes: FLAS, FSU, GA, GH, MICH, MO, NY, VDB, WIN).

Carex oligocarpa Schkuhr in Willd. var. **thornei** (Naczi) D. B. Ward, comb. et stat. nov. Basionym: *Carex thornei* Naczi, Novon 12: 516. 2002. TYPE: United States, Alabama, Russell Co., Holy Trinity, "along S. side of Bluff Creek," 3 May 1996, *Naczi 5214* (holotype: DOV; isotypes: MICH, MO, NY, US, WIN).

Beginning in the early 1990s, Robert Naczi and colleagues published an impressive number of new southeastern species of *Carex*. For so many new species of that genus to be uncovered in the span of so few years, one would think that the sedges, admittedly without the

importance of many other genera, are so lacking in charm as to have been only superficially surveyed by previous workers.

This is surely not the case. Whatever their motivation, entire generations of cyperologists have labored in the field and herbarium and prepared scrumptious volumes of cleanly described, beautifully illustrated sedges. But how did these earlier workers overlook so many species? How could Naczi and his colleagues have sufficient skill and/or good fortune to be able to find seven new species of *Carex* for presentation in a single paper (2002, with Bryson and Cochrane)?

The answer, one fears, is that there has been a shift in the standards of what constitutes a species. It is possible that many of the newly described species of *Carex* will be found to represent geographically or environmentally separated and genetically isolated populations. But even so, and with acknowledgment that Naczi has provided detailed keys to separate his entities from their congeners, the differences are subtle. Until other persons have had opportunity to independently appraise these new entities, it seems best to to look with some caution at their significance. The ranking of "variety" preserves the present information, yet avoids over-emphasizing a taxon whose importance is not yet known.

Psilocarya eximia (Nees in Seem.) D. B. Ward, comb. nov. Basionym: *Spermodon eximius* Nees in Seem., Bot. Voy. Herald, 222. 1854. TYPE: Panama, "in palis prope urb.," 1846-1847, *Seemann 140* (holotype: BM; isotype: K).
= *Rhynchospora eximia* (Nees in Seem.) Boeck. [Seemann may have collected the specimen in Panama just before he joined the Herald expedition in Jan 1847. Nees, author of the name, was never in Panama.]

Psilocarya Torr. may be argued to be generically separable from *Rhynchospora* Vahl. [*Psilocarya* are annuals, with several to many flowers (and achenes) per spikelet and no perianth bristles; *Rhynchospora* s.s. are mostly perennials, with 1-2 flowers per spikelet

and perianth bristles often present at base of achene.] If retained at generic rank, three species of *Psilocarya* occcur in Florida. *Psilocarya nitens* (Vahl) Wood and *Psilocarya scirpoides* Torr. are widespread and frequent. A third species is rare, with few Florida collections; it was formerly (and incorrectly) known as *Psilocarya schiedeana* (Kunth) Liebm. (i.e., Small 1933; Godfrey & Wooten 1979). If treated as a *Rhynchospora* it becomes *R. eximia* (Nees) Boeck. But without transfer of Nees' epithet, it has no correct name in *Psilocarya.*

This species had earlier been treated (as a *Psilocarya*) by Liebmann, but rather than forming a new name he made a new combination, *P. schiedeana* (Kunth) Liebm. (1851), based on *Rhynchospora schiedeana* Kunth (1837), a very different plant (thus misapplied to the Florida species).

EUPHORBIACEAE

Croton linearis Jacq. var. **fergusonii** (Ferguson in Small) D. B. Ward, comb. et stat. nov. Basionym: *Croton Fergusonii* Ferguson in Small, Flora Southeastern United States 695. 1903. TYPE: United States, Florida, Palm Beach Co., Palm Beach, "sand ridges near the ocean," 2 May 1895, *Curtiss 5360* (lectotype, designated here: NY; isolectotype: MO?).

In his monograph of the genus *Croton*, Ferguson (1901) described two variants of *C. linearis*, the first typical of the species (as confirmed by comparison with its type), the second (non-typical) representative of a wider-leaved form. Ferguson did not name these other than as "Form A" and "Form B," though he noted them to be "probably...specifically distinct." Two year later he prepared the treatment of *Croton* for Small's "Flora" (1903); there his "Form A" was named *C. Fergusonii*, with "Small" as the author.

These two entities, as described in Ferguson (1901) and Ferguson in Small (1903), well fit the variants found along the southeastern Florida coast. Intermediates seem few. Yet Ferguson's

plant is clearly derivative of *C. linearis*, and is best treated as a variety of that species, as is done here.

The authorship of *Croton Fergusonii* is muddled. Small (1903: 693) credited the treatment of *Croton* to Ferguson; his data, though reworded, is largely from Ferguson's earlier (1901) monograph, and two other species were recorded as named by him. But Small's authorship was unambiguously assigned to *C. Fergusonii*, and Small (1933) later continued this accreditation. Unquestionably Ferguson would not have submitted his treatment under the name and authorship "*Croton Fergusonii* Ferguson;" he would have proposed some other epithet. Likely, Small, in appreciation of Ferguson's scholarly efforts and as a professional courtesy, simply substituted Ferguson's name for whatever epithet had been suggested for "Form B." If this be true, Small was merely the editor, and the true authorship was that of Ferguson. "Ferguson in Small" is sufficient acknowledgment for both.

GRAMINEAE

Panicum spretum Schult. var. **leucothrix** (Nash) D. B. Ward, comb. et stat. nov. Basionym: *Panicum leucothrix* Nash, Bull. Torrey Bot. Club 24: 41. 1897. TYPE: United States, Florida, Lake Co, "low pine land at Eustis," July 1894, *Nash 1338* (holotype: NY; isotypes: NCU, NY, TAES, US).
= *Panicum acuminatum* Sw. var. *leucothrix* (Nash) Lelong; *Dichanthelium leucothrix* (Nash) Freckmann; *Dichanthelium acuminatum* ssp. *leucothrix* (Nash) Freckmann & Lelong

Panicum spretum Schult. var. **longiligulatum** (Nash) D. B. Ward, comb. et stat. nov. Basionym: *Panicum longiligulatum* Nash, Bull. Torrey Bot. Club 26: 574. 1899. TYPE: United States, Florida, Franklin Co, Apalachicola, 1892, *Vasey s.n.* (holotype: NY). = *Panicum acuminatum* Sw. var. *longiligulatum* (Nash) Lelong; *Dichantheliu acuminatum* ssp. *longiligulatum* (Nash) Freckmann & Lelong

The genus *Panicum* in recent decades has inspired a number of independent reappraisals, each with its own philosophies and taxonomic conclusions. Lelong (1965, 1984), Freckmann (1967, 1981), Gould & Clark (1978), Hansen & Wunderlin (1988), and Freckmann & Lelong (2003) have all attempted to improve on the classic study by Hitchcock & Chase (1910). Only because of the variances of name and rank found among these worthies does it seem permissible to offer still another interpretation of certain taxa.

In the later years of the 19th century, George V. Nash applied his keen eye to the small differences to be found among the many southeastern *Panicum*. Two of his discoveries, *P. longiligulatum*, and *P. leucothrix*, though usually no longer given specific status, have survived recognition at lower ranks. These names, with others, form a small group of taxa held together by scarcely more than ligules of conspicuous hairs and mid-sized spikelets; the earliest name is *P. acuminatum* Sw. Ten of these variants are summarized by Freckmann & Lelong (2003), all treated as subspecies.

But examination of the southeastern members of this group suggests they may be separated into two adequately distinct species -- *P. acuminatum* and *P. spretum*. Both *P. leucothrix* and *P. longiligulatum* fall within the second species. Typical *P. spretum* is northern and seems absent from Florida. The Florida variants of *P. spretum* appear not to intergrade, but their differences are slight. Both have previously been treated as varieties of *P. acuminatum* (Lelong 1984), thus the change made here is only an accomodation to recognition of *P. spretum*.

These species, among many others, have in recent decades been treated as members of *Dichanthelium*, a genus apart from *Panicum* s.s. (Gould & Clark 1978; Hansen & Wunderlin 1988; Freckmann & Lelong 2003). There is merit in recognition of *Dichanthelium* as a distinct biological group. But its differences from *Panicum* are slight, of lesser magnitude than those separating other segregates such as *Setaria*, *Paspalidium* and *Brachiaria*. It is sufficient that *Dichanthelium* be recognized at subgeneric rank.

LABIATAE

Conradina grandiflora Small var. **etonia** (Kral & McCartney) D. B. Ward, comb. et stat. nov. Basionym: *Conradina etonia* Kral & McCartney, Sida 14: 393. 1991. TYPE: United States, Florida, Putnam Co., vic. Florahome, 20 Sept 1990, *McCartney s.n.* (holotype: SMU; isotype: VCB).

The treatment of *Conradina etonia* by McCartney and Kral (1991) is vastly detailed, suffering only by the absence of a similar treatment of typical *Conradina grandiflora* with which it may be compared. In compensation, the authors provide a lengthy commentary to establish the most apparent character differences between the two taxa.

But the cited contrasts are, in effect, damaging to the argument that the differences are of specific rank. Details of indumentum, of leaf venation, of size and pilosity, and of stamen pubescence, while wholly persuasive of the taxon's genetic separateness, do not rise to the level of difference to be found among related species. The sole population, in northwestern Putnam County, is a 90 km. outlier from the northernmost *Conradina grandiflora* in eastern Volusia County, a species whose scattered stands extend to southern Florida. This pattern of disjunction occurs with other taxa; the authors cite *Sabal etonia*, an endemic palm found throughout the Florida scrub and whose type locality is the nearby Etonia Creek for whom their new *Conradina* species is named. This isolation, coupled with the small size of the *C. etonia* population, gives ample opportunity for random selection to produce small deviations. That it is known from a single population, within a platted but yet undeveloped subdivision, raises fear that it is likely to vanish from the flora before more can be learned.

Scutellaria altamaha Small var. **australis** (Epling) D. B. Ward, comb. et stat. nov. Basionym: *Scutellaria altamaha* Small ssp. *australis* Epling, Univ. California Publ. Bot. 20: 89. 1942.

TYPE: United States, Alabama, Houston Co., "pine woods 10 miles south of Dothan," 10 Aug 1927, *Wiegand & Manning 2782* (holotype: GH; isotype: BH).

Specimens cited and mapped by Epling (1942) show a discontinuous distribution between his *Scutellaria altamaha* ssp. *altamaha* [North Carolina into central Georgia] and his *S. altamaha* ssp. *australis* [southern Alabama, panhandle Florida (disregarding a mapped but uncited out-of-range record of ssp. *australis* from vic. Tampa Bay)]. Later workers have either omitted *S. altamaha* or incorrectly merged it with the larger-flowered *S. incana* Biehl., a disjunct northern species. But the distinction between Epling's two subspecies of *S. altamaha* is unclear; he noted "plants of the two areas are not appreciably different."

ONAGRACEAE

Ludwigia grandiflora (Michx.) Greuter & Burdet var. **hexapetala** (Hook. & Arn.) D. B. Ward, comb. et stat. nov. Basionym: *Jussiaea hexapetala* Hook. & Arn. in Hook., Bot. Misc. 3: 312. 1833. TYPE: Uruguay, "in marshes," 1832, *Tweedie s.n.* (holotype: K; isotype: E). = *Ludwigia hexapetala* (Hook. & Arn.) Zardini, Gu & Raven; *Ludwigia grandiflora* ssp. *hexapetala* (Hook. & Arn.) Nesom & Kartesz

Authors differ as to the taxonomic rank of an introduced *Ludwigia* now appearing in Florida wetlands. All agree that *L. grandiflora* is present in the state. Zardini et al. (1991) maintain that a related, somewhat rarer, larger-flowered entity, *L. hexapetala*, is also in the state and is best held as a separate species. Nesom & Kartesz (2000) recognize this second entity, but as *L. grandiflora* ssp. *hexapetala*. And Wunderlin & Hansen (2003) combine the two without distinction. The differences as described by Nesom & Kartesz and Zardini et al. are real. But in consideration of the "quantitative and broadly overlapping" morphological distinctions between the two

(Nesom & Kartesz), they are here treated as var. *grandiflora* and var. *hexapetala*.

Neither variety of *Ludwigia grandiflora* is native to the southeastern United States; both taxa are from South America, but their histories suggest different dates of introduction. Var. *grandiflora*, the smaller-flowered form, has been in the Southeast since Michaux (1803) and Chapman (1860). Michaux's collection was from the seaport of Savannah, Georgia (Zardini et al. 1991), an obvious point of entry. [Michaux's journal (Sargent 1889) recorded his presence in Savannah on April 30, 1787, the only time he visited that city.] The larger-flowered var. *hexapetala* seems to lack early collections. The wide-ranging William Bartram in the 1770s and Ferdinand Rugel in the 1840s did not encounter the species. Both varieties are erratic in distribution, a common pattern with introductions. Both appear to be at least partly sympatric in southern Brazil and elsewhere in South America. The two taxa distinguishable in Florida may represent only "founder effect" selections from a less well differentiated parent population.

ORCHIDACEAE

Spiranthes lacera Raf. var. **eatonii** (P. M. Brown) D. B. Ward, comb. et stat. nov. Basionym: *Spiranthes eatonii* O. Ames ex P. M. Brown, North Amer. Nat. Orchid Jour. 5: 9. 1999. TYPE: United States, Florida, Dade Co., Orange Glade, 21 Feb 1905, *Ames 6905* (holotype: GH).

This orchid was discovered in South Florida in 1905 by A. A. Eaton (Brown 1999), and his specimens were annotated as *Spiranthes eatonii* by O. Ames. But Ames never published the name, and it is appropriate that Brown should do so. The plants appear to represent populations showing small morphological discontinuities with their related congeners.

PIPERACEAE

Peperomia obtusifolia (L.) A. Dietr. in L. var. **floridana** (Small) D. B. Ward, comb. et stat. nov. Basionym: *Peperomia floridana* Small, Torreya 26: 109. 1926. TYPE: United States, Florida, Dade Co., "Ross Hammock near Silver Palm School," 12 Nov 1906, *Small & Carter 2478* (holotype: NY).
= *Rhynchophorum floridanum* (Small) Small

Boufford (1982) and others have merged Small's *Peperomia floridana* within the widespread tropical *P. obtusifolia.* But Florida botanists (J. Beckner, A. Herndon, R. Woodbury) have long been of the opinion that the two are separable. Popenoe (1979) reported *P. obtusifolia* "is usually restricted to decaying bark of logs and stumps and is seldom found far above the ground," while *P. floridana* is epiphytic, and "prefers the sound bark of living wood and often occurs...in the upper branches of trees." *Peperomia obtusifolia* is rare, but is found in the Fakahatchee Strand of Collier Co. and on the east coast north to Brevard Co.; *P. floridana* is very rare, persisting only marginally in hammocks of Dade Co.

Restoration of *Peperomia floridana* to the ranks of recognized Florida plants, if only at varietal rank, follows closely upon the similarly justified separation of *P. cumulicola* as worthy of varietal distinction from typical *P. humilis* (Ward 2001).

POLEMONIACEAE

Phlox carolina L. var. **angusta** (Wherry) D. B. Ward, comb. et stat. nov. Basionym: *Phlox carolina* L. ssp. *angusta* Wherry, Baileya 4: 98. 1956 (nomen novum, a *Phlox glaberrima* var. *suffruticosa* subvar. *angustissima* Brand, Pflanzenr. IV. 250: 65. 1907). TYPE: United States, Mississippi ('Missouri'), Biloxi, [date?], *Tracy 5077* (holotype: G).

Phlox nivalis Lodd. ex Sweet var. **hentzii** (Nutt.) D. B. Ward, comb. et stat. nov. Basionym: *Phlox hentzii* Nutt., J. Acad. Nat. Sci. Phila. 7: 110. 1834. TYPE: United States, North Carolina, Durham Co., Chapel Hill, "Southern Pine-barrens," 1833, *Hentz s.n.* (holotype: GH). = *Phlox nivalis* ssp. *hentzii* (Nutt.) Wherry

For decades Edgar T. Wherry reigned as the authority among American students of the Polemoniaceae. Unlike earlier European authors, Wherry had opportunity to see in the field nearly all species he treated. He summarized his deep knowledge of *Phlox* in 1955 with his informative but flawed "The Genus Phlox." [Though he meticulously described each entity and cited the place of origin of each name, he aberrantly chose to use forbidden trinomials, a flaunting of accepted practice that brought quick condemnation (DeWolf 1956) and acquiescence (Wherry 1956).]

Wherry's personal knowledge of variations within each species must command respect. Though some authors (e.g., Wunderlin & Hansen 2003) have disregarded or submerged Wherry's many subspecies, some seem to retain enough morphological reality to merit recognition as varieties. Two are recognized here.

RUBIACEAE

Oldenlandia uniflora L. var. **fasciculata** (Bertol.) D. B. Ward, comb. et stat. nov. Basionym: *Hedyotis fasciculata* Bertol., Mem. Reale Accad. Sci. Ist. Bologna 2: 306. 1850. TYPE: (lectotype, designated here: Bertoloni, Tab. 17, fig. 2. 1850). [Bertoloni cited no type, nor source for his new species. However, his full-page plate is "original material," suitable for lectotypification. A specimen may also exist (BOLO?).] = *Hedyotis uniflora* var. *fasciculata* (Bertol.) W. H. Lewis, nom. nud. (1962).

The genus *Oldenlandia* as a segregate from *Houstonia* and *Hedyotis* is now generally accepted (Terrell 1996), with 4 species recognized for Florida (Terrell & Robinson 2006). *Oldenlandia uniflora*, a pantropic weed, is quite variable in its African homeland. Variation in Florida seems to be bimodal, differing in pubescence, leaf shape, and capsule size (Small 1933), and suggestive of founder-effect chance selection from foreign sources. Though intermediates are common, sufficient to cause rejection of infraspecific taxa by most authors, recognition of two varieties assists further study of Florida variation.

SCROPHULARIACEAE

Schwalbea americana L. var. **australis** (Pennell) D. B. Ward, comb. et stat. nov. Basionym: *Schwalbea australis* Pennell, Proc. Acad. Nat. Sci. Phil. 71: 289. 1920 ("1919"). TYPE: United States, Florida, Volusia Co., "damp pine barrens near Seville," 10 May 1900, *Curtiss 6742* (holotype: NY).

Although Pennell (1920, 1935) recognized both *Schwalbea americana* and *S. australis* as species, his differences as keyed are small. Authors (Godfrey 1981; Wunderlin 1998; Federal Register, 29 Sept 1992; etc.) who acknowledge only a single undivided species, have a point. But plants identifiable as *S. australis* are distinctly southern and appear to be non-overlapping in range.

Schwalbea americana (inclusive of any infraspecific variation) is a Federally-listed endangered plant. Var. *australis* is not only rare in Florida, but is greatly diminished from earlier years. Although herbarium records are from scattered locations nearly throughout the state (south to Highlands Co.), the plant apparently only persists in the central panhandle (R. Halsenbeck, pers. comm., Oct 1992).

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