

ADDITIONS AND CORRECTIONS TO
THE WILD ORCHIDS OF NORTH AMERICA, NORTH OF MEXICO. II

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ABSTRACT

The Wild Orchids of North America, North of Mexico (Brown & Folsom 2003) has served as an illustrated and annotated checklist of the orchids of that region. In the years since research was completed for that work, many new taxa have been described, as well as other pertinent facts published that required five corrections to the original manuscript. In Part I, those additions and corrections, including literature references and photographs, were presented to enable the reader to update this volume to the end of 2005. This current paper contains additions, emendations, and eight new combinations through March 2020.

RESUMEN

Las Orquídeas Silvestres de América del Norte, Norte de México (Brown y Folsom 2003) ha servido como lista de verificación ilustrada y anotada de las orquídeas de esa región. En los años transcurridos desde que se completó la investigación para ese trabajo, se han descrito muchos taxones nuevos, así como otros hechos pertinentes publicados, así como la necesidad de cinco correcciones de hecho al manuscrito original. En la Parte I esas adiciones y correcciones, incluidas referencias bibliográficas y fotografías, se presentaron para permitir al lector actualizar este volumen al cierre de 2005. Este documento actual contiene adiciones, enmiendas, y ocho nuevas combinaciones hasta marzo de 2020.

Since the previous Additions and Corrections to *The Wild Orchids of North America, North of Mexico* (Brown 2005), fourteen new species and three varieties have been described, several older forms revived, numerous new combinations published, range extensions noted, recent rediscoveries of 'lost' species made, and significant publications presented. Whether one accepts all of the subspecific taxa is not the point of this publication. These taxa have been described and are present in living material and therefore deserve some recognition. Recent reassessments of older generic concepts and ongoing molecular work have resulted in several transfers and new combinations. Whereas this is not intended in any way to be a revised edition of *The Wild Orchids of North America north of Mexico*, those combinations and transfers, (although in some cases a more accurate assessment of the individual taxon) are usually listed as synonyms, with literature references, under the appropriate species. Additions and emendations are arranged in original page order of *The Wild Orchids of North America, North of Mexico*.

Page 2

Delete: *Amerorchis rotundifolia* (Banks ex Pursh) Hultén

small round-leaf orchis

Amerorchis has been subsumed into *Galearis* p. 42.

Page 10

Add: *Calopogon xfloridensis* P.M. Br., N. Amer. Native
Orchid J. 14(2):177. 2008.

Florida hybrid grass-pink

(*C. multiflorus* × *C. pallidus*)

Add: *Calopogon xfowleri* P.M. Br., N. Amer. Native
Orchid J. 14(2):178. 2008.

Fowler's hybrid grass-pink

(*C. barbatus* × *C. pallidus*)

Add: *Calopogon xgoethensis* P.M. Br., N. Amer. Native
Orchid J. 14(2):179. 2008.

Goethe hybrid grass pink

(*C. multiflorus* × *C. tuberosus*)

Add: *Calopogon xsimulans* P.M. Br., N. Amer. Native
Orchid J. 14(2):178. 2008.

false Oklahoma hybrid grass-pink

(*C. barbatus* × *C. tuberosus*)

Add: *Calopogon xobscurus* P.M. Br., N. Amer. Native
Orchid J. 14(2):177. 2008.

hidden hybrid grass-pink

(*C. barbatus* × *C. multiflorus*)

Add: *Calopogon xvulgaris* P.M. Br., N. Amer. Native
Orchid J. 14(2):178. 2008.

common hybrid grass-pink*(C. pallidus × C. tuberosus)***Page 12**

Add: *Calypso bulbosa* nothovar. *kostiukiae* Catling, Native Orchid Conf. J. 9(1):1(–6). 2012.

Kostiuk's hybrid fairy-slipper

(C. bulbosa var. *americana* × *Calypso bulbosa* var. *occidentalis*)

Page 11

Add: *Camaridium vestitum* (Sw.) Lindl.

Maxillaria, in part, has been subsumed into *Camaridium*.

Ref: Blanco, M.A. et al. 2007. *Lankasteriana* 7(3):515–537.

Page 12

All North American *Cleistes* have been reassigned to *Cleistesopsis* Pansarin & F. Barros.

Ref: Brown, P.M. 2009. *N. Amer. Native Orchid J.* 15(1): 51–65.

Add: *Cleistesopsis divaricata* (L.) Pansarin & F. Barros, *N. Amer. Native Orchid J.* 15(1):52. 2009.

large spreading pogonia

Add: f. *leucantha* (P.M. Br.) P.M. Br., *N. Amer. Native Orchid J.* 15(1):52. 2009.

white-flowered form

Add: *Cleistesopsis bifaria* (Fernald) Pansarin & F. Barros, *N. Amer. Native Orchid J.* 15(1):51. 2009.

upland small spreading pogonia

Add: *Cleistesopsis oricamporum* P.M. Br.) P.M. Br., *N. Amer. Native Orchid J.* 15(1):52. 2009.

coastal small spreading pogonia (Fig. 1)

Add: *Cleistesopsis ×ochlockoneensis* (P.M. Br.) P.M. Br., *N. Amer. Native Orchid J.* 15(1):52. 2009.

Ochlockonee hybrid rosebud orchid

(C. divaricata × C. oricamporum)

Page 14

Delete: *Coeloglossum*

Coeloglossum has been subsumed into *Dactylorhiza* as *Dactylorhiza* subgen. *Coeloglossum* page 31.

Page 14

Add: *Corallorhiza bentleyi* J. Freudenst., Harvard Pap. Bot. 10:5–51. 1997.

Add: *Corallorhiza bentleyi* J. Freudenst. f. *flavida* P.M. Br., *N. Amer. Native Orchid J.* 14(4):270. 2008.

Bentley's coralroot-yellow flowered form (Fig. 2)**Page 15**

Add: *Corallorhiza maculata* var. *gigas-dormiens* P.M. Br. & A. Cousins, *N. Amer. Native Orchid J.* 16(4):181–185. 2010.

Sleeping Giant spotted coralroot (Fig. 3)**Page 26**

Add: *Cypripedium parviflorum* Salisbury var. *exiliens* Sheviak, Native Orchid Conf. J. 7(2):5. 2010.

northern dwarf yellow lady's-slipper (Fig. 4)**Page 31**

Add: *Dactylorhiza* subgen. *Coeloglossum*

Dactylorhiza viridis (L.) R.M. Bateman, Pridgeon, & M.W.Chase var. *virescens* (Muhl. ex Willd.) Baumbach, *Orchidee* (Hamburg) 64:137. 2013.

long-bracted green orchis; frog orchis

Ref: Bateman, R.M. et al. 2009. *Ann. Bot.* 104(3):431–445.

Page 32

Delete: *Deiregyne confusa* Garay and replace with *Sotoa confusa* (Garay) Salazar page 103

Ref: Salazar, G. 2010. *Lankesteriana* 9(3):491–504.

Add: *Dendrophylax porrectus* (Rchb.f.) Carlswald & Whitten, *Int. J. Pl. Sci.* 164:51. 2003.

jingle bell orchid

Add: *Dichromanthus cinnabarinus* (La Llave & Lex.) Garay f. *aureus* P.M. Br., *McAllen Int. Orchid Soc. J.* 7(12):4–11. 2006.

cinnabar ladies'-tresses-golden yellow form**Page 41**

Add: *Eulophia andamanensis* Rchb.f.

Andaman eulophia

Non-native; Lee County, Florida; half-dozen plants escaped from cultivation; collected by Roger Hamer and subsequently cultivated in Homestead; Miami-Dade County.

Ref: Wunderlin & Hansen. 2020. Atlas of Florida plants. <http://florida.plantatlas.usf.edu/SpecimenDetails.aspx?PlantID=4928/> 2018

Add: *Eulophia graminea* Lindl.

Chinese crown orchis

A recent non-native found in south Florida rapidly spreading north to Orange and Hillsborough counties.

Ref: Pemberton, et al. 2008. *Lankasteriana* 8(1):5–14.

Page 42

Galearis (L.) Raf. now includes what was traditionally treated as *Amerorchis* (Banks ex Pursh) Hultén therefore necessitating six new combinations.

Galearis rotundifolia (Banks ex Pursh) R.M. Bateman f. ***angustifolia*** (J. Rousseau) P.M. Br., **comb. nov.** Basionym: *Orchis rotundifolia* f. *angustifolia* J. Rousseau, *Bull. Jard. Bot. État Bruxelles* 27:371. 1957.

narrow-leaved form

Galearis rotundifolia (Banks ex Pursh) R.M. Bateman f. **beckettii** (Boivin) P.M. Br., **comb. nov.** BASIONYM: *Orchis rotundifolia* f. *beckettii* B. Boivin, *Naturaliste Canad.* 87:42. 1960.

white-flowered form

Galearis rotundifolia (Banks ex Pursh) R.M. Bateman f. **immaculata** (W. Mazurski & Laur. P. Johnson) P.M. Br., **comb. nov.** BASIONYM: *Amerorchis rotundifolia* (Banks ex Pursh) Hultén f. *immaculata* W. Mazurski & Laur. P. Johnson, *Lindleyana* 10(1):1. 1995.

white-lipped form

Galearis rotundifolia (Banks ex Pursh) R.M. Bateman f. **lineata** (Mousley) P.M. Br., **comb. nov.** BASIONYM: *rotundifolia* Banks ex Pursh var. *lineata* Mousley, *Canad. Field-Naturalist* 55:65. 1941.

lined-lipped form

Galearis rotundifolia (Banks ex Pursh) R.M. Bateman f. **rosea** (P.M. Br.) P.M. Br., **comb. nov.** BASIONYM: *Amerorchis rotundifolia* (Banks ex Pursh) Hultén f. *rosea* P.M. Br., *N. Amer. Native Orchid J.* 10:34. 2004

pink-flowered form

Galearis rotundifolia (Banks ex Pursh) R.M. Bateman f. **wardii** (P.M. Br.) P.M. Br., **comb. nov.** BASIONYM: *Amerorchis rotundifolia* (Banks ex Pursh) Hultén f. *wardii* P.M. Br., *N. Amer. Native Orchid J.* 10:34. 2004

bicolored form

Page 44

Delete: *Galearis spectabilis* (L.) Raf. f. *willeyi* (F. Seym.) P.M. Br., *Wild Fl. Notes* 3(1):16. 1988.

Add: *Galearis spectabilis* (L.) Raf. f. *ilacina* (Ames) P.M. Br., *N. Amer. Native Orchid J.* 14(2):138. 2008.

Ref: Ames, O. 1900. *Amer. Gardening* 21:375.

Page 44

Add: *Goodyera xintermedia* P.M. Br., *McAllen Int. Orchid Soc. J.* 21(8):3. 2020 (in ed.)

hybrid rattlesnake orchis
(*G. pubescens* × *G. tessellata*)

Page 45

Add: *Greenwoodiella deserticola* Salazar, Hern.-López, & J. Sharma, *Syst. Bot.* 14(4):831. 2016.

desert ladies'-tresses (Fig. 5)

Ref: Salazar, G.A. & J. Sharma. 2017. *Lindleyana* (5): 390–393.

Page 48

Delete: *Harrisella porrecta* (Rchb.f.) Fawcett & Rendle *Harrisella* has been subsumed into *Dendrophyllax* p. 32.

Add: *Heterotaxis sessilis* (Sw.) F. Barros, *Hoehnea* 29(2):112. 2002.

Synonym: *Maxillaria crassifolia* Rchb.f., *Bonplandia* 2:16. 1854.

False Butterfly Orchid

Ref: Blanco, M.A. et al. 2007. *Lankasteriana* 7(3):515–537.

Page 48

Add: *Hexalectris arizonica* S. Watson

Arizona crested coralroot

Ref: Brown, P.M. & S.N. Folsom. 2019. *Wild orchids of the southwestern United States.* 78.

Page 48/49

Add: *Hexalectris colemanii* (Catling) Kennedy & Watson, *Syst. Bot.* 35:64–76. 2010.

Coleman's crested coralroot

This new species was originally described as a variety from southeastern Arizona.

Ref: Coleman, R.A. 1999. *N. Amer. Native Orchid J.* 5(1): 312–15. Brown, P.M. & S.N. Folsom. 2019. *Wild orchids of the southwestern United States.* 80.

Page 48

Add: *Hexalectris grandiflora* f. *luteoalba* P.M. Br., *McAllen Int. Orchid Soc. J.* 7(12):6. 2006.

Greenman's crested coralroot yellow-flowered form

Ref: Brown, P.M. & S.N. Folsom. 2008. *Field guide to the wild orchids of Texas.* 74–75.

Page 49

Add: *Hexalectris nitida* f. *albescens* M. White & P.M. Br., *N. Amer. Native Orchid J.* 14(4):268. 2008.

whitish shining crested coralroot

Ref: Brown, P.M. & S.N. Folsom. 2019. *Wild orchids of the southwestern United States.* 82.

Page 50

Add: *Hexalectris parviflora* L.O. Williams southeastern Arizona; new to the United States

small-flowered crested coralroot (Fig. 6)

Ref: Coleman, R. & J. Fox. 2015. *Native Orchid Conf. J.* 12(3): 15–21. Coleman, R. & J. Fox. 2016. *Orchids* 85(1):36–39. Brown, P.M. & S. Folsom. 2019. *Wild orchids of the southwestern United States.* 85.

Pages 55–59

Listera Adans. has been subsumed into *Neottia* page 67

Page 64

Add: *Malaxis spicata* Sw. f. *trifoliata* P.M. Br., *N. Amer. Native Orchid J.* 9:34. 2003.

Florida adder's-mouth-three-leaved form

Add: *Malaxis spicata* Sw. f. *morganiae* P.M. Br., N. Amer. Native Orchid J. 15(1):43. 2009

Florida adder's-mouth-Morgan's green-flowered

Add: *Malaxis spicata* Sw. f. *variagata* P.M. Br., P. Subrahm, & J. Subrahm., N. Amer. Native Orchid J. 15(1):43. 2009.

Florida adder's-mouth-variegated form

Page 67

add: *Microthelys rubrocallosa* (B.L. Rob. & Greenm.) Garay, Bot. Mus. Leaflet. 30:338. 1982.

Galeottia rubrocallosa (B.L. Rob. & Greenm.) Szlachetko
Schiedeella rubrocallosa (B.L. Rob. & Greenm.) Balogh
Spiranthes rubrocallosa B.L. Rob. & Greenm.

little red-lip (Fig. 7)

restricted to New Mexico; Mexico

Ref: Coleman, R.A. & M. Baker. 2006. Orchids 75(1):56–57.
Brown, P.M. & S.N. Folsom. 2019. Wild orchids of the southwestern United States. 102.

add: *Neottia* subgen. *Listera* (R. Br.) Szlach., Fragm. Florist. Geobot. Suppl. 3:116. 1995.

add: *Neottia smallii* (Wiegand) Szlach. f. *cinnamomea* (P.M. Br.) P.M. Br.

Small's twayblade-cinnamon-colored form

Ref: Brown, P.M. 2008. N. Amer. Native Orchid J. 14(4):270.

Page 68

Add: *Orthochilus. Pteroglossaspis* has been subsumed into *Orthochilus* necessitating two new combinations.

Orthochilus ecristatus (Fernald) Bytebier f. **flavus** (P.M. Br.) P.M. Br., **comb. nov.** Basionym: *Pteroglossaspis ecristata* f. *flava* P.M. Br., N. Amer. Native Orchid J. 6(1):64. 2000.

crestless plume orchid-yellow-flowered form

Ref: Brown, P.M. & S.N. Folsom. 2004. Wild orchids of the southeastern United States. 184–85. Brown, P.M. & S.N. Folsom. 2005. Wild orchids of Florida: expanded edition. 228–29.

Orthochilus ecristatus (Fernald) Bytebier f. **purpureus** (P.M. Br.) P.M. Br., **comb. nov.** BASIONYM: *Pteroglossaspis ecristata* f. *purpurea* P.M. Br., N. Amer. Native Orchid J. 9:34. 2003.

crestless plume orchid-dusky-purple-flowered form

Ref: Brown, P.M. & S.N. Folsom. 2004. Wild orchids of the southeastern United States. 184–85. Brown, P.M. & S.N. Folsom. 2005. Wild orchids of Florida: Expanded edition. 228–29.

Add: *Platanthera brevifolia* (Greene) Kraenzl. f. *alba* P.M. Br., McAllen Int. Orchid Soc. J. 7(12):8. 2006.

short-leaved rein orchis-albino form

Page 84

Emend: *Platanthera hyperborea* (L.) Lindl.

northern green bog orchid

range extension across all of northern North America

Ref: Catling, P.M. 2012. Native Orchid Conf. J. 9(4):7–13.

Page 92

Add: *Platanthera shriveri* P.M. Br., N. Amer. Native Orchid J. 14(4):239. 2004.

Shriver's frilly orchis (Fig. 8)

Page 93

Add: *Platanthera tescamnis* Sheviak & W.F. Jenn., Rhodora 108(933):20. 2006.

Intermountain rein orchis (Fig. 9)

Ref: Brown, P.M. & S.N. Folsom. 2019. Wild orchids of the southwestern United States. 166.

Page 93

Add: *Platanthera yosemitensis* Colwell, Sheviak, & P.E. Moore, Madroño 54(1):86. 2007.

Yosemite bog orchis (Fig. 10)

restricted to Yellowstone National Park, Calif.

Ref: Brown, P.M. & S.N. Folsom. 2019. Wild orchids of the southwestern United States. 168.

Page 94

Add: *Platanthera xenigma* P.M. Br., N. Amer. Native Orchid J. 14(4):255. 2004.

enigmatic hybrid fringed orchis

(*P. grandiflora* × *P. psychodes*)

Add: *Platanthera xrhinhartii* C. Wilson ex P.M. Br., McAllen Int. Orchid Soc. J. 21(2):22–23. 2020.

Rhinehart's hybrid fringed orchis

(*P. ciliaris* × *P. integrilabia*)

Add: *Platanthera xferryi* P.M. Br., McAllen Int. Orchid Soc. J. 21(2):22. 2020.

Ferry's hybrid fringed orchis

(*P. lacera* × *P. shriveri*)

Page 101

Add: *Platanthera xcolwelliae* P.M. Br.

Colwell's hybrid rein orchis

(*P. sparsiflora* × *P. yosemitensis*)

Ref: Brown, P.M. & S.N. Folsom. 2019. Wild orchids of the southwestern United States. 173, 298.

Add: *Platanthera xcorderi* P.M. Br., McAllen Int. Orchid Soc. J. 21(8):3. 2020 (in ed.)

Corder's hybrid fringed orchis

(*P. chapmanii* × *P. conspicua*)

Add: *Platanthera xdulcis* P.M. Br.

(*P. purpurascens* × *P. dilatata* var. *albiflora*)

fragrant hybrid bog orchis

Ref: Brown, P.M. & S.N. Folsom. 2019. Wild orchids of the southwestern United States. 173, 298.

Add: *Platanthera xfolsonii* P.M. Br., N. Amer. Native Orchid J. 15(1):40(2B). 2009.

(*P. dilatata* var. *leucostachys* × *P. yosemitensis*)

Folsom's hybrid bog orchis

Ref: Brown, P.M. 2010. N. Amer. Native Orchid J. 16(2):114–116. Brown, P.M. & S.N. Folsom. 2019. Wild orchids of the southwestern United States. 173.

Add: *Platanthera xkelleyi* P.M. Br., N. Amer. Native Orchid J. 15(1):40(3B). 2009.

(*P. sparsiflora* × *P. tescamnis*)

Kelley's hybrid bog orchis

Ref: Brown, P.M. 2010. N. Amer. Native Orchid J. 16(2):114–116. Brown, P.M. & S.N. Folsom. 2019. Wild orchids of the southwestern United States. 173.

Add: *Platanthera xsmithii* P.M. Br., N. Amer. Native Orchid J. 15(1):40(4B). 2009.

(*P. aquilonis* × *P. tescamnis*)

Smith's hybrid bog orchis

Ref: Brown, P.M. 2010. N. Amer. Native Orchid J. 16(2):114–116. Brown, P.M. & S.N. Folsom. 2019. Wild orchids of the southwestern United States. 173.

Add: *Platanthera xevansiana* P.M. Br., N. Amer. Native Orchid J. 115(1):40(1B). 2009.

(*P. purpurascens* × *P. aquilonis*)

Mt. Evans hybrid bog orchis

Ref: Brown, P.M. 2010. N. Amer. Native Orchid J. 16(2):114–116. Brown, P.M. & S.N. Folsom. 2019. Wild orchids of the southwestern United States. 173.

Page 102

Delete: *Sacoila lanceolata* (Aubl.) Garay var. *paludicola* (Luer) Saulea, Wunderlin, & B.F. Hansen

Delete: *Sacoila lanceolata* var. *paludicola* Luer f. *aurea* P.M. Br.

Add: *Sacoila paludicola* (Luer) P.M. Br., N. Amer. Native Orchid J. 14(3):187. 2008.

Fakahatchee ladies'-tresses

Add: *Sacoila paludicola* (Luer) P.M. Br. f. *aurea* (P.M. Br.) P.M. Br., N. Amer. Native Orchid J. 14(3):198. 2008.

Fakahatchee ladies'-tresses-yellow-flowered form

Add: *Schiedeella arizonica* P.M. Br. f. *virescens* P.M. Br., McAllen Int. Orchid Soc. J. 7(12):10. 2006.

little red-lip-green form

Page 103

Add: *Sotoa confusa* (Garay) Salazar

Replaces *Deirigyne confusa* Garay

Rimrock ladies'-tresses

Ref: Coleman, R., J. Sirotnak, & A. Leavitt. 2006. Native Orchid Conf. J. 3(3):7–8, 13. Salazar, G. 2010. Lankesteriana 9(3):491–504.

Page 104

Add: *Spiranthes arcisepala* M.C. Pace, Syst. Bot. 42(4):650. 2017.

has been isolated from the *Spiranthes cernua* s.l. complex

Appalachian ladies'-tresses (Fig. 11)

Page 108

Add: *Spiranthes igniorchis* M. Pace, Brittonia 69(3):323–339. 2017.

has been isolated from *Spiranthes longilabris*

fire ladies'-tresses (Fig. 12)

Page 108

Add: *Spiranthes incurva* (Jennings) M.C. Pace, Syst. Bot. 42(4):655. 2017.

has been isolated from the *Spiranthes cernua* s.l. complex

Sphinx ladies'-tresses (Fig. 13)

Page 112

Add: *Spiranthes niklasii* M. Pace, Syst. Bot. 42(4):660. 2017.

has been isolated from the *Spiranthes cernua* s.l. complex

Possibly of hybrid origin *S. cernua* × *S. ovalis*; currently restricted to the Ozarks.

Niklas' ladies'-tresses (Fig. 14)

Emend: Photo labeled *Spiranthes odorata* is *S. triloba*

Insert correct photo of *S. odorata*

Page 114

Add: *Spiranthes perexilis* (Sheviak) M.C. Pace, Taxon 68(2):210. 2019.

wet meadows, Calif., Ore.

languid ladies'-tresses (Fig. 15)

Ref: Sheviak, C. 2010. Native Orchid Conf. J. 9(4):1–6. Brown, P.M. & S.N. Folsom. 2019. Wild orchids of the southwestern United States. 186–87.

Page 116

Add: *Spiranthes stellata* P.M. Br., L.A. Dueck & K.M. Cameron, N. Amer. Native Orchid J. 14(1):4. 2008.

wet meadows, Calif., Ore.

Starry ladies'-tresses (Fig. 16)

Ref: Brown, P.M. & S. Folsom. 2019. Wild orchids of the southwestern United States. 192–193.

Page 116

Add: *Spiranthes triloba* (Small) K. Schum. emend. M.C. Pace

has been isolated in southwestern Florida from *Spiranthes odorata* (Nutt.) Lindl.

panther ladies'-tresses (Fig. 17)

Ref: Pace, M.C. & K.M. Cameron. 2016. Syst. Bot. 41(4):924–939.

Page 118

Add: *Spiranthes xsierrae* M.C. Pace, Taxon 68(2):210. 2019.

Sierra hybrid ladies-tresses

(*Spiranthes perexilis* × *Spiranthes porrifolia*)
very rare in central Calif.

Ref: Brown, P.M. & S.N. Folsom. 2019. Wild orchids of the southwestern United States. 194.

Add: *Spiranthes xstellata* (P.M. Br., Dueck, & K.M. Cameron) M.C. Pace, Taxon 68(2):210. 2019.

Hybrid starry ladies-tresses

(*Spiranthes perexilis* × *Spiranthes romanzoffiana*)

Ref: Brown, P.M. & S.N. Folsom. 2019. Wild orchids of the southwestern United States. 194.

Add: *Spiranthes xkapnosperia* M.C. Pace, Syst. Bot. 42(4):659. 2017.

smokey hybrid ladies-tresses

(*Spiranthes cernua* × *Spiranthes ochroleuca*)

Page 124

Emend: *trianthophora* to *trianthophoros*

Add: *Triphora trianthophoros* (Sw.) Rydb. var. *texensis*
P.M. Br. & Rich.B. Pike, N. Amer. Native
Orchid J. 12:5. 2006.

Pike's three birds orchis (Fig. 18)

Ref: Britton, N.L. 1901. Manual of the flora of the northern states. 298.

Pages 128–153

Emend: to color, leaf, and growth forms.

1. *Galearis rotundifolia* f. *beckettiae*
2. *Galearis rotundifolia* f. *lineata*
8. *Cleistesopsis divaricata* f. *leucantha*
25. *Galearis spectabilis* f. *lilacina*
27. *Neottia australis* f. *scottii*
28. *Neottia australis* f. *trifoliata*
29. *Neottia convallarioides* f. *trifolia*
30. *Neottia cordata* var. *cordata* f. *variegata*
31. *Neottia xveltmanii*
32. *Platanthera blephariglottis* f. *holopetala*
38. *Platanthera shriveri*
42. *Sacoila lanceolata* f. *albidaviridis*
43. *Sacoila lanceolata* f. *folsomii*
44. *Sacoila paludicola* f. *aurea*
49. *Triphora trianthophoros* f. *caerulea*

Page 157

Couplet 6: replace *Harrisella* with *Dendrophylax*

Page 158

Couplet 17a: replace *Maxillaria* with *Camaridium*/
Heterotaxis

Page 159

Couplet 29 add: plants of Big Bend National Park; flowers
to 1 cm, lips prominent...*Greenwoodiella*

Page 160

Insert in couplet 36: plants of rocky slopes in western New
Mexico...*Microthelys*

Page 161

Couplet 53b: replace with *Galearis*

Page 162

Couplet 59b: replace *Listera* with *Neottia*

Page 163

Couplet 73a: replace *Listera* with *Neottia*

Coupler 78a: replace *Pteroglossaspis* with *Orthochilus*

Page 163**Key 4**

Change *Cleistes* to *Cleistesioipsis*

Emend couplet 1a to read: plants of inland piedmont and
mountains...*C. bifaria*

Plants of coastal areas...*C. oricamporum*

Key 5

Replace *Coeloglossum* with *Dactylorhiza*

Key 6

Couplet 10: insert: lip with median stripe; faint dots...*C.*
maculata var. *gigas-dormiens*

Key 8

Insert into couplet 13: dwarf plants of northern Alaska
eastward to northwestern North Dakota...*C. parviflorum*
var. *exiliens*

Key 10

Insert before couplet 1: plants transcontinental, flowers
green to suffused with purple; lip notched...*D. viridis*

Key 16

Emend couplet 4b to read. *H. arizonica*

Add to 3b...*H. parviflora*

Key 19

Emend generic name to *Neottia*

Key 23

5a delete var. *blephariglottis*

Emend couplet 5b to read *P. conspicua*

Add to couplet 13 lip deeply lacerate and frilly...*P. shriveri*

Emend 22a to delete var. *obtusata*

Emend 22b to read:...*P. oligantha*

31b inflorescence a slender spike with distinctly yellow
lips...*P. yosemitensis*

33b leaves clustered on lower third of plant; lips narrow
and descending...*P. tescamnis*

Couplet 37 emend to read: transcontinental; plants of
northern North America

Key 27

Emend 1a to read *S. paludicola*

Emend 2a to read *S. lanceolata*

Key 28

Note.—For some years the *Spiranthes cernua* complex has been viewed as a compilospecies with gene flow from the various geographic areas of eastern North America resulting in distinctive morphologies (Sheviak 1991). The current work of Pace and Cameron (2017) has determined that these geographic morphs are apparently valid species. Identifying some of these can be difficult and the reader is referred to their paper for detailed information, line drawings, and photographs. Even with this help, some plants can prove to be problematic.

Couplet 16

Divide *S. odorata* into: lip white or pale cream; plants widespread on Southeastern Coastal Plain...*S. odorata*

Lip with a prominent yellow (rarely green) central portion, plants of southwestern Florida...*S. triloba*

Add: lip white; local endemic of southern Arkansas and adjacent Oklahoma...*S. niklasii*

Following 19b

This revised key to the *S. cernua* complex may help in identifying specimens.

1a: spikes uniformly single-ranked (often one-sided); lateral sepals widely spreading on either side; lip yellow-green; southern states...2

1b: spikes generally multiple-ranked; lateral sepals held in close proximity to petals, or less widely spread; lip white, yellow, or green...3

2a: flowering August–September; lateral sepals often oblique; endemic to burned grasslands in central Florida...*S. igniorchis*

2b: flowering October–December; lateral moderately oblique or more widely spreading; more widespread...*S. longilabris*

3a: spikes single-ranked, often tightly coiled; lip yellow; lateral sepals disjunct from petals; petals and sepals somewhat down curved; Northeast or Nova Scotia...*S. casei* (I might also describe habitat)

3b: spikes generally multiple-ranked, if single ranked not tightly coiled; lip yellow, white, or green; petals and sepals usually not down curved...4

4a: flowers clearly tubular; lip typically a strong yellow or orange; sepals spreading and incurved; leaves often absent during anthesis...*S. magnicamporum*

4b: flowers tubular or of a different shape; lip ranging from white to yellow/green; sepals spreading or appressed to petals, not usually incurved; leaves present or absent during anthesis...5

5a: stem leaves present; lateral sepals somewhat separated from the remainder of each flower; spikes clearly arranged into three vertical columns...*S. ovalis*

5b: stem leaves generally absent (but not always); lateral sepals separated or not separated from the remainder of each flower; spikes not arranged into straight columns...6

6a: lip with strong yellow or green coloration...7

6b: lip with weaker yellow coloration or pure white...9

7a: plants of dry, typically northeastern locations; lip with strong butterscotch yellow coloration (especially underneath)...*S. ochroleuca*

7b: plants of wet, typically southern habitats; lip generally yellow to green in color, sometimes faint; leaves especially large, often present on stems themselves...8

8a: endemic to Florida, but potentially present in bordering states; lip with strong yellow-green coloration; papillae present...*S. triloba*

8b: found in southern states, including Florida; lip with weaker yellow-green coloration; papillae absent...*S. odorata*

9a: flowers cubical; lateral sepals down curved, fairly wide; primarily northeastern distribution...*S. arcisepala*

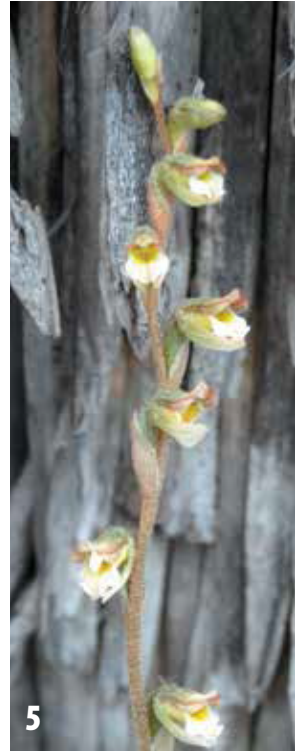
9b: flowers not cubical; lateral sepals sometimes thinner, appressed, incurved, or spreading slightly; northeast or elsewhere...10

10a: lip white; local endemic of southern Arkansas and adjacent Oklahoma; leaves withering...*S. niklasii*

10b: lip white-yellow; found within the range of the aforementioned or elsewhere...11

11a: lip generally faint yellow or white; flowers typically nodding, wide-ranging throughout eastern North America...*S. cernua*

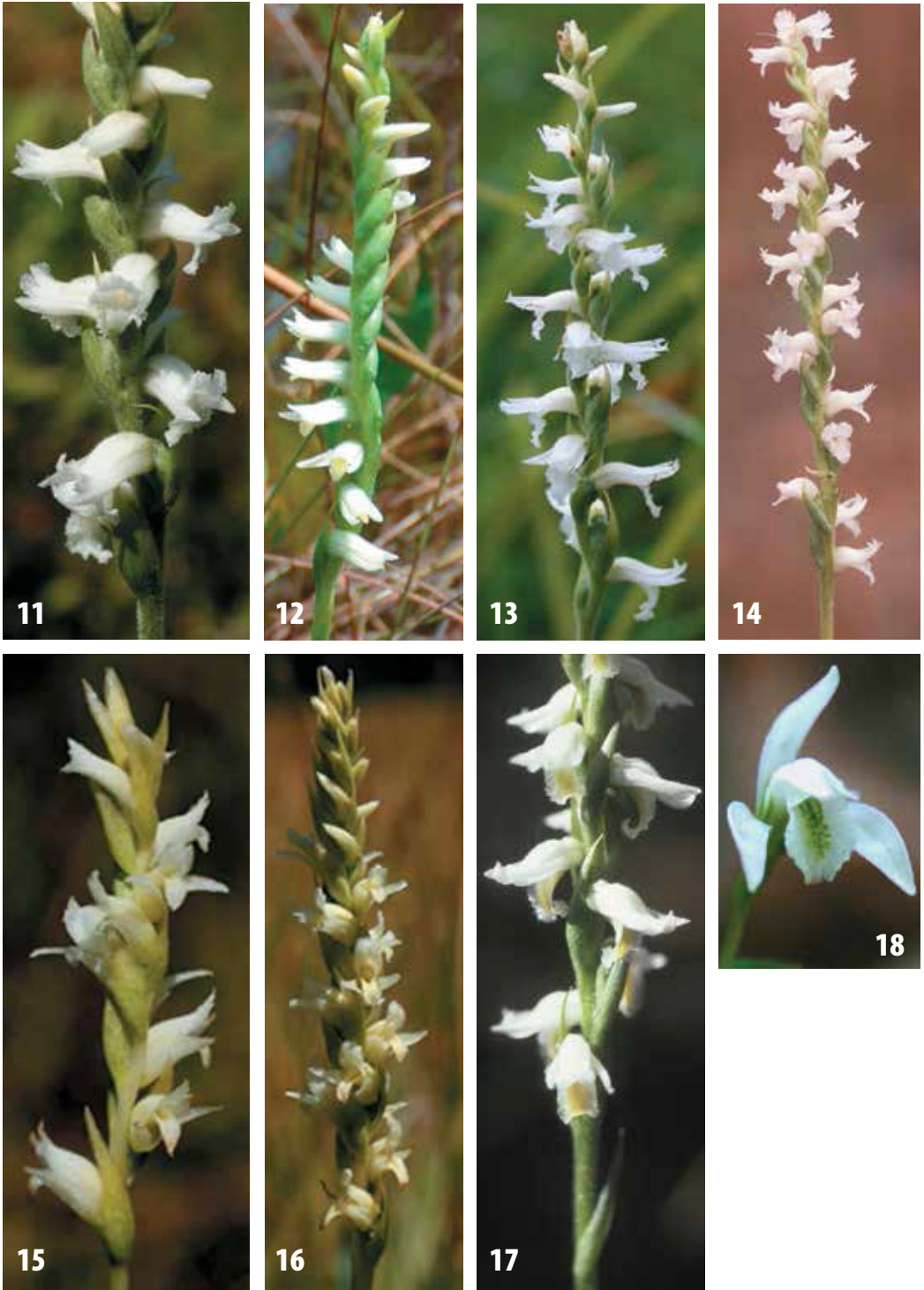
11b: lip generally a pale yellow or of stronger coloration; flowers typically ascending (plants of northeastern North America)...*S. incurva*



Figs. 1–5 (color pl.). 1. *Cleistesopsis* (*Cleistes*) *oricamporum*. 2. *Corallorhiza bentleyi*. 3. *Corallorhiza maculata* var. *gigas-dormiens*. 4. *Cypripedium parviflorum* var. *exiliens*. 5. *Greenwoodiella deserticola*.



Figs. 6–10 (color pl.). **6.** *Hexalectris parviflora*. **7.** *Microthelys rubrocallosa*. **8.** *Platanthera shriveri*. **9.** *Platanthera tescamnis*. **10.** *Platanthera yosemitensis*.



FIGS. 11–18 (color pl.). 11. *Spiranthes arcisepala*. 12. *Spiranthes igniorchis*. 13. *Spiranthes incurva*. 14. *Spiranthes niklasii*. 15. *Spiranthes perexilis*. 16. *Spiranthes stellata*. 17. *Spiranthes triloba*. 18. *Triphora trianthophoros* var. *texensis*.



FIGS. 1–7 (b/w pl.). 1. *Cleistesopsis (Cleistes) oricamporum*. 2. *Corallorhiza bentleyi*. 3. *Corallorhiza maculata* var. *gigas-dormiens*. 4. *Cypripedium parviflorum* var. *exiliens*. 5. *Greenwoodiella deserticola*. 6. *Hexaletris parviflora*. 7. *Microthelys rubrocallosa*.



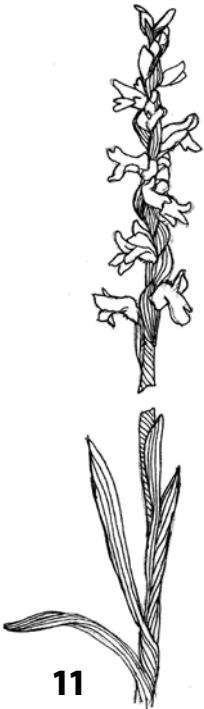
8



9



10



11



12



13



14

FIGS. 8–14 (b/w pl.). 8. *Platanthera shriveri*. 9. *Platanthera tescamnis*. 10. *Platanthera yosemitensis*. 11. *Spiranthes arcisepala*. 12. *Spiranthes igniorchis*. 13. *Spiranthes incurva*. 14. *Spiranthes niklasii*.



FIGS. 15–18 (b/w pl.). 15. *Spiranthes perexilis*. 16. *Spiranthes stellata*. 17. *Spiranthes triloba*. 18. *Triphora trianthophoros* var. *texensis*.

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Note.—A limited number of reprints of the part 1 are still available and are designed for insertion into *The Wild Orchids of North America*, *North of Mexico* are available from the author. Copies of the book are also available from University Press of Florida (www.upf.com).

New photo credits in this publication: Tania J. Hernández-López: *Greenwoodiella deserticola*; Adam Cousins: *Corallorhiza maculata* var. *gigas-dormiensis*; James Cheak: *Spiranthes igniorchis*; Dick Pike: *Triphora trianthophoros* var. *texensis*.

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