

NEW COMBINATIONS AND A LECTOTYPIFICATION IN BRAZILIAN VERNONIEAE (ASTERACEAE)

BENOÎT LOEUILLE

Departamento de Botânica, Instituto de Biociências
Universidade de São Paulo
Rua do Matão, 277, Herbário SPF
São Paulo, SP 05508-090, Brazil
benoit.loeuille@gmail.com

ABSTRACT

Three new nomenclatural combinations are proposed: *Lepidaploa xiquexiquensis* (D.J.N. Hind) Loeuille, *Lessingianthus pottii* (R. Esteves) Loeuille and *Vernonanthura rubriramea* (Mart. ex DC.) Loeuille & P.N. Soares. Additionally, the name *Vernonia rubriramea* Mart. ex DC. is lectotypified.

The polyphyletic nature of *Vernonia* Schreb. sensu lato is now acknowledged from phylogenetic studies (Keeley et al. 2007; Keeley & Robinson 2009; Loeuille et al. 2015) and the genus is actually restricted to 22 species, mostly from eastern North America; only five species occur in Mexico and two in South America (Keeley & Robinson 2009). However, in the course of floristic works and routine identifications in Brazilian herbaria I came upon with some *Vernonia* species which have not yet been transferred to one of the segregate genera in Vernonieae, even though they do not exhibit any diagnostic feature of *Vernonia* sensu stricto. Publishing these combinations allows inclusion of these species in the List of Species of the Brazilian Flora (2015), where they are presently lacking.

Vernonia xiquexiquensis D.J.N. Hind is a perennial herb or subshrub from the sand dunes at margins of the Rio São Francisco near Xique-Xique in Bahia State (Hind 2000). This dune habitat in the semi-arid Caatinga Domain is rich in plant endemism (Rocha et al. 2004). As stated by the author of the taxon, the species displays the following characters typical of *Lepidaploa* (Cass.) Cass.: non-glandular anther appendages, basal style node, and tricolporate, echinolophate pollen grains with poral lacunae prominent (type C) (Robinson 1990; Hind 2000). I propose the following new combination.

LEPIDAPLOA XIQUEXIQUENSIS (D.J.N. Hind) Loeuille, **comb. nov.** Basyonym: *Vernonia xiquexiquensis* D.J.N. Hind, Kew Bull. 55: 182. 2000. **TYPE. BRAZIL. BAHIA:** Mun. Xique-Xique, dunas do Rio São Francisco, 548 m alt., 23 Jun 1996, *A.M. Giulietti et al.* 29280 (holotype: ALCB; isotypes: HUEFS, K).

Vernonia pottii R. Esteves is a subshrub endemic from western Brazilian Pantanal, a large wetland plain extending along the western boarder of the Cerrado Domain (Hueck 1972). Several features of this species, such as non-glandular anther appendages, lack of basal style node, and tricolporate, echinolophate pollen grains with irregular areoles and colpi lacking polar lacunae (type B) (Esteves et al. 2005) clearly relate the species to *Lessingianthus* H. Rob. (Robinson 1988; Angulo & Dematteis 2010). I propose the following new combination.

LESSINGIANTHUS POTTII (R. Esteves) Loeuille, **comb. nov.** Basyonym: *Vernonia pottii* R. Esteves, Bradea 11: 19. 2005. **TYPE. BRAZIL. MATO GROSSO DO SUL:** Mun. Corumbá, Reserva Acurizal, Serra do Amolar, borda oeste do Pantanal, 17°51'38" S, 57°33'12" W, 200 m alt., 7 May 2003, *A. Pott & V.J. Pott* 11026 (holotype: HMS !; isotypes: HB, HRJ).

Robinson (1999) noted that *Vernonia rubriramea* Mart. ex DC. belongs to *Vernonanthura* H. Rob. but he did not provide a combination in that genus, perhaps suspecting that it would be a

synonym of *Vernonanthura membranacea* (Gardner) H. Rob. (Almeida et al. 2005). Nonetheless, *V. rubriramea* differs from *V. membranacea* by its more congested panicles, capitula with outer phyllaries squarrose, stramineous and obtuse apices (vs. adpressed, rarely slightly squarrose, chestnut to purple and acute apices), and non-glandular cypselae (vs. glandular) (Soares 2012). *Vernonia rubriramea* is a shrub or treelet from Goiás, Mato Grosso, Mato Grosso do Sul, Minas Gerais, Tocantins, and São Paulo states (Hattori & Nakajima 2008; Medeiros et al. 2012). Candolle used one of the specimens housed at M to describe the species, as noted in the protologue: “v.s. in h. Acad. reg. Monac.” (Candolle 1836). The fragmentary material at G-DC (barcode G00327449) probably originates from M material but it lacks an original Martius label with locality description; therefore I here designate one of the sheets housed at M as lectotype. The two Martius sheets at M (barcodes M-0029398 and M-0029399) are very similar (quality of specimen, label information) and I chose as lectotype the one (M-0029398) which is labeled as “holotype.” The following new combination is proposed.

VERNONANTHURA RUBRIRAMEA (Mart. ex DC.) Loeuille & P.N. Soares, **comb. nov.**
 Basionym: *Vernonia rubriramea* Mart. ex DC., Prodr. 5: 38. 1836. **TYPE. BRAZIL.**
 Habitat in campis prope Gongonhas de Sabará, Provinciae Minas Geraës, *M. von Martius* 1158 (271) (lectotype, here designed: M [scan seen] [barcode no. M-0029398];
 isolectotypes: G-DC [scan seen] [barcode no. G00327449] [fragments], M [scan seen]
 [barcode no. M-0029399], P [scan seen] [barcode no. P00682921] [fragments]).

ACKNOWLEDGEMENTS

I would like to thank José Rubens Pirani and Jimi Naoki Nakajima for their suggestions on the manuscript.

LITERATURE CITED

- Almeida, A.M. de, C.R. Fonseca, P.I. Prado, M. Almeida-Neto, S. Diniz, U. Kubota, M.R. Braun, R.L.G. Raimundo, L. Alves dos Anjos, T.G. Mendonça, S. de Melo Futada, and T.M. Lewinsohn. 2005. Diversidade e ocorrência de Asteraceae em cerrados de São Paulo. *Biota Neotrop.* 5: 1–17.
- Angulo, M.B. and M. Dematteis. 2010. Pollen morphology of the South American genus *Lessingianthus* (Vernoniaeae, Asteraceae) and its taxonomic implications. *Grana* 49: 12–25.
- Candolle, A.P. de. 1836. Vernoniaceae. Prodr. 5: 9–103.
- Esteves, R.L., Gonçalves-Esteves, V., and C.B.F. Mendonça. 2005. Uma nova espécie de *Vernonia* do Mato Grosso do Sul, Brasil. *Bradea* 11: 17–28.
- Hattori, E.K.O. and J.N. Nakajima. 2008. A família Asteraceae na Estação de Pesquisa e Desenvolvimento Ambiental Galheiro, Perdizes, Minas gerais, Brasil. *Rodriguésia* 59: 687–749.
- Hind, D.J.N. 2000. A new species of *Vernonia* (Compositae: Vernoniaeae) from Bahia, Brazil. *Kew Bull.* 55: 181–187.
- Hueck, K. 1972. As florestas da América do Sul. Editora da Univ. de Brasília, Polígono, São Paulo.
- Keeley S.C. and H. Robinson. 2009. Vernoniaeae. Pp. 439–469, in Funk, V.A., A. Susana, T.F. Stuessy, and R.J. Bayer (eds). *Systematics, Evolution, and Biogeography of Compositae*. International Association for Plant Taxonomy (IAPT), Vienna, Austria.
- Keeley S.C., Z.H. Forsman, and R. Chan. 2007. A phylogeny of the “evil tribe” (Vernoniaeae: Compositae) reveals Old/New World long distance dispersal: Support from separate and combined congruent datasets (trnL-F, ndhF, ITS). *Molec. Phylog. Evol.* 44: 89–103.
- List of Species of the Brazilian Flora. Rio de Janeiro Botanical Garden. <<http://floradobrasil.jbrj.gov.br/>> Accessed January 2015.
- Loeuille, B., S.C. Keeley, and J.R. Pirani. 2015 (in press). Systematics and evolution of syncephaly in American Vernoniaeae (Asteraceae) with emphasis on the Brazilian subtribe Lychnophorinae. *Systematic Botany*.

- Medeiros, M.B. de, Walter, B.M.T., Silva, G.P. da, Gomes, B.M., Lima, I.L.P., Silva, S.R., Moser, P., Oliveira, W.L., and T.B. Cavalcanti. 2012. Vascular flora of the Tocantins River middle basin, Brazil. Check List 8: 852–885.
- Robinson, H. 1988. Studies in the *Lepidaploa* complex (Vernoniae: Asteraceae). IV. The genus *Lessingianthus*. Proc. Biol. Soc. Wash. 101: 929–951.
- Robinson, H. 1990. Studies in the *Lepidaploa* complex (Vernoniae: Asteraceae). VII. The genus *Lepidaploa*. Proc. Biol. Soc. Wash. 103: 464–498.
- Robinson, H. 1999. Generic and subtribal classification of American Vernoniae. Smithsonian Contr. Bot. 89: 1–116.
- Rocha, P.L.B. da, Queiroz, L.P. de, and J.R. Pirani. 2004. Plant species and habitat structure in a sand dune field in the Brazilian Caatinga: A homogeneous habitat harbouring an endemic biota. Revista Brasil. Bot. 27: 739–755.
- Soares, P.N. 2012. Taxonomia de *Acilepidopsis*, *Chrysolaena*, *Echinocoryne*, *Stenocephalum* e *Vernonanthura* (Vernoniae, Asteraceae) de Minas Gerais, Brasil. MS thesis, Univ. de Uberlândia, Uberlândia, Brazil.



Loeuille, Benoît. 2015. "New combinations and a lectotypification in Brazilian Vernoniae (Asteraceae)." *Phytoneuron* 2015-9, 1–3.

View This Item Online: <https://www.biodiversitylibrary.org/item/185229>

Permalink: <https://www.biodiversitylibrary.org/partpdf/186251>

Holding Institution

Missouri Botanical Garden, Peter H. Raven Library

Sponsored by

Missouri Botanical Garden

Copyright & Reuse

Copyright Status: Permission to digitize granted by rights holder

Rights: <https://www.biodiversitylibrary.org/permissions>

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.