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Reappraisal of names and lectotype designations in the South American genus *Anchietea* (Violaceae)

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Abstract: Paula-Souza, J. de, Pirani, J. R., Hoffmann, M. H., & Röser, M. 2013: Reappraisal of names and lectotype designations in the South American genus *Anchietea* (Violaceae). Schlechtendalia **25**: 63–67.

Anchietea salutaris was described together with the genus *Anchietea* in 1824 by Saint Hilaire, in the same year as Martius's publication of *Noisettia pyrifolia* and both taxa were soon considered conspecific. Following Eichler's treatment of Violaceae for "Flora Brasiliensis" in 1871, *Anchietea salutaris* became the commonly used name for this tall woody liane of Violaceae from South America. However, a careful analysis showed that *Noisettia pyrifolia* was published a few months earlier and thus has priority over *A. salutaris*. Maintenance of the latter name would require nomenclatural conservation, but we consider *A. salutaris* not as a strong candidate for conservation. Disagreement prevailed on the authorship of *A. pyrifolia*, as reflected by contradictory entries in plant name databases (e.g., IPNI, Tropicos). Based on our extended survey of Saint-Hilaire's works and our recent taxonomic revision of *Anchietea*, it seems clear that this author did not create this binomial, but instead, the new combination was made by G. Don in "A General History of the Dichlamydeous Plants", a work cited, though not personally seen by Eichler in his "Flora Brasiliensis" account. A detailed historical background of these binomials, a proper reference for *A. pyrifolia* and a complete list of synonyms are provided. Original voucher specimens, either types or "typoid material", were located in different herbaria, and our lectotype designations rest on this extended survey.

Zusammenfassung: Paula-Souza, J. de, Pirani, J. R., Hoffmann, M. H., & Röser, M. 2013: Eine Neubewertung von Namen und Lectotypisierungen in der südamerikanischen Gattung *Anchietea* (Violaceae). Schlechtendalia **25**: 63–67.

Anchietea salutaris wurde 1824 durch Saint Hilaire zusammen mit der Gattung *Anchietea* beschrieben, im selben Jahr wie Martius' Veröffentlichung des Namens *Noisettia pyrifolia*. Beide Taxa wurden in der Folgezeit recht schnell als konspezifisch betrachtet. Nach Eichlers Bearbeitung der Violaceae für "Flora Brasiliensis" in 1871 wurde *Anchietea salutaris* zum gebräuchlichen Name für diese großwüchsige, verholzte Liane Südamerikas. Eine genauere Analyse zeigt jedoch, dass *Noisettia pyrifolia* ein paar Monate früher publiziert wurde und daher Priorität gegenüber *A. salutaris* hat. Eine Beibehaltung des letzteren Namens würde nomenklatorische Konservierung erfordern, jedoch halten wir eine Konservierung im Falle von *A. salutaris* für verzichtbar. Unklarheit herrscht bezüglich der Autorschaft für die Kombination *Anchietea pyrifolia*, was sich in widersprüchlichen Eintragungen in den Datenbanken für Pflanzennamen zeigt (z.B. IPNI, Tropicos). Nach gründlichem Studium der Werke Saint-Hilaires und aus unserer taxonomischen Revision von *Anchietea* ergibt sich, dass nicht Saint-Hilaire diese Kombination geschaffen hat, sondern dass sie auf G. Don in "A General History of the Dichlamydeous Plants" zurückgeht – ein Werk, dass Eichler in seiner Bearbeitung für die "Flora Brasiliensis" zwar zitiert, aber nicht persönlich gesehen hat. Der genaue historische Hintergrund all dieser Namen, das korrekte Zitat für *A. pyrifolia* und eine vollständige Liste der Synonyme werden angeführt. Originalmaterial an Pflanzenbelegen, entweder Typus- oder "typoides" Material, konnte in unterschiedlichen Herbarien lokalisiert werden, und unsere Lectotypisierungen beruhen auf diesen umfänglichen Nachforschungen.

Key words: *Anchietea salutaris*, *Noisettia pyrifolia*, Martius, Saint-Hilaire, typification, Violaceae

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Introduction

In the course of our revisionary studies on the taxonomy of neotropical lianes of Violaceae (Paula-Souza 2009) and the flower biology of *Anchietea pyrifolia* (Hoffmann et al. 2010) we came across several nomenclatural problems connected with the correct naming of this species. Following Eichler's authoritative treatment of Violaceae for the "Flora Brasiliensis" in 1871, *A. salutaris* is the most widely used name for this species both in literature and herbarium collections, but this has recently raised much controversy. Among the names listed as synonyms of *A. salutaris*, Eichler (1871: 353) cited "*Noisettia pyrifolia* Mart. et Zucc. l. c. !" [= Martius & Zuccarini (1823–1824); the reference marked by Eichler as examined] and "*Anchietea pyrifolia* G. Don, Gen. Syst. I. 340" [= Don (1831); marked by Eichler as not seen]. The online databases "International Plant Names Index" (http://www.ipni.org) and "Tropicos" (http://www.tropicos.org) contained a further name, "*A. pyrifolia* A. St.-Hil., Hist. Pl. Remarq. Bresil 290, 1826". Thus we examined all of these names nomenclaturally, checked a number of hardly available publications Saint-Hilaire's, and searched all type specimens or comparable

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"typoid" original material of these taxa. In this paper we report on the results of our research on the authorship of *A. pyrifolia* and the priority of this name over *A. salutaris*. Also, we provide a full nomenclatural profile for *A. pyrifolia* by adding new synonyms to its current synonymy and designate lectotypes for four names, which belong as synonyms to this species.

History of Martius's and Saint-Hilaire's names

Noisettia pyrifolia was described by Martius on pp. 24–25 with an accompanying colour illustration Tab. XVI in a fascicle of "Nova Genera et Species Plantarum" (Martius & Zuccarini 1823–1826) that appeared in late 1823 or Jan–Feb 1824 (Stafleu & Cowan 1981).

Anchietea salutaris was described by Saint-Hilaire (1824) together with the new genus *Anchietea* in the "Annales des Sciences Naturelles (Paris)". This is most likely Saint-Hilaire's original and earliest description of the genus *Anchietea* and of *A. salutaris*, because of the brief protologue starting on p. 252 with "*ANCHIETEA* (gen. nov.)" and ending with just mentioning "I. *Anchietea salutaris*." as single species. This published description is almost identical with Saint-Hilaire's hand-written diagnosis on one of the type specimens held in P (P 00594936). The precise publication date of Saint-Hilaire's (1824) article in the "Annales des Sciences Naturelles (Paris)" is yet unknown, but judging from the page numbers (248–255) it seems certain that it was later than Martius's description of *N. pyrifolia*.

Two book projects of Saint-Hilaire started likewise in 1824 and continued in form of fascicles or parts through subsequent years, i.e., "Plantes Usuelles des Brasiliens" (Saint-Hilaire 1824–1828) and "Histoire des Plantes les Plus Remarquables du Brésil et du Paraguay" (Saint-Hilaire 1824–1826). In a fascicle of the first work with the accompanying text to plate XIX illustrating *A. salutaris*, Saint-Hilaire made reference to his publication in the "Annales des Sciences Naturelles (Paris)" by footnote on p. 3: "Il y a quelques différences entre cette description et celle qui a été imprimée par extrait dans le vol. II des Annales des Sciences naturelles. La description que je publie ici est la seule exacte." This fascicle of the "Plantes Usuelles" appeared on 6 November 1824 (Stafleu & Cowan 1983).

An inserted footnote at the end of the text to plate XIX (p. 4) is particularly interesting, because it shows that Saint-Hilaire just shortly before got to know Martius's description of *Noisettia pyrifolia*: "(2) Depuis que cet article est rédigé, je reçois le bel ouvrage de M. Martius, intitulé: Nova genera et species plantarum. L'espèce décrit sous le nome de *Noisettia pyrifolia* appartient évidemment au même genre que l'*Anchietea salutaris*. Dans le 7^{c} livraison des mes Plantes les plus remarquables du Brésil et du Paraguay, qui s'imprime dans ce moment, j'aurai occasion de dire quelques mots de la plante du savant Bavarois".

In the "Histoire des Plantes" Saint-Hilaire (1824–1826) cited for *A. salutaris* on pp. 290–292 only the "Plantes Usuelles", but not his earlier publication in the "Annales des Sciences Naturelles (Paris)", apparently for reasons cited above. In front of the chapter on *Anchietea* and *A. salutaris*, dealing mainly with the delineation of *Anchietea* against other genera of Violaceae, a very short comment is inserted in small font (p. 290): "OBS. La plante que je viens de décrire [which is on p. 291: "ANCHIETEA SALUTARIS A. de S. Hil. Pl. us. Bras., n^{o}. XVIII", which was actually plate XIX in print] a les plus grands rapports avec l'espèce d'*Anchietea* que le savant Martius a décrite sous le nom de *Noisettia pyrifolia* (Nov. gen. Bras.), et je serois porté à croire que son fruits obligera de la réunir également aux *Anchietea*."

Saint-Hilaire thus stated only that *N. pyrifolia* belonged in his view to genus *Anchietea* rather than to *Noisettia* Kunth, but made no comment on a potential conspecific status of *N. pyrifolia* and *A. salutaris*. His remark on p. 290 (cited above) therefore represents no transfer of *N. pyrifolia* to the genus *Anchietea* acknowledgeable according to Art. 35.2 of the "International Code of Nomenclature" (McNeill et al. 2012), and the corresponding entries in IPNI and Tropicos databases thus are misleading.

Publication dates of the different parts of the "Histoire des Plantes" are not yet fully explored. Saint-Hilaire's statement from no later than November 1824 (see above) announced the treatment of *Anchietea* to appear in the delivery of fascicle 7^{c} [as we interpret it; see above] of the "Histoire des Plantes". It implies that this enumeration is not fully compatible with that

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reported as six parts by Stafleu & Cowan (1983). The pages on *Anchietea* (pp. 290–292), however, belong to the rather final parts of this work encompassing in total apparently 355 pages. The treatment of *Anchietea* thus must be expected as belonging to the later issued fascicles of this work and was probably distributed in 1826 (Stafleu & Cowan 1983).

A formally correct transfer of *Noisettia pyrifo*lia to *Anchietea* was made by Don (1831) in "A General History of the Dichlamydeous Plants", a work that was frequently abbreviated as "Gen. Syst." (Stafleu & Cowan 1976) as done by Eichler (1871; see above). On p. 340 Don listed *A. pyrifolia* without author and reference (in contrast to other species) and added at the end of the description "*Noisettia pyrifolia*, Mart. fl. bras. I. p. 24. t. 16." This means that he was aware of creating a new combination that must be acknowledged as valid according to Art. 35.2 of the "International Code of Nomenclature" (McNeill et al. 2012).

Type material

Our examination of type or 'typoid' specimens in the herbaria of M and P confirmed that *Noisettia pyrifolia* and *Anchietea salutaris* are conspecific as argued already by Eichler (1871).

A voucher of *Noisettia pyrifolia* held at M has a printed label "Herbarium Zuccarinii" and the following partly printed, partly hand-written entries by Zuccarini, the latter put here into {}: "*Noisettia pyrifolia*, Mart.; Legi{t in Brasilia; Herb. Martii 171}; Communicavit {Martius} anno {1839}. A second label on this sheet carries the entry "Martii Herbar. Flor. Brasil Nr 171." This herbarium sheet was evidently part of the exsiccate collection of Brazilian plants Martius started to distribute under the title "Herbarium Florae Brasiliensis" (Martius 1837–1841: 121). The sheet has a flowering and a fruiting shoot, but obviously none of them served as template for the illustration of *Noisettia pyrifolia* by Martius & Zuccarini (1823–1826: Tab. XVI). Nevertheless, this plant material belongs most likely to Martius's original collections and we designate the right-hand (fruiting) branch as lectotype of *Noisettia pyrifolia*.

Herbarium P harbours three sheets with specimens of *A. salutaris* (P 00594936–38), all of which belong to Saint-Hilaire's original material. We select the plant on the sheet P 00594936 as lectotype, because it resembles one of twigs illustrated by Saint-Hilaire (1824–1826: plate XIX) and the sheet has the hand-written diagnosis mentioned above.

Nomenclature and typification

Anchietea pyrifolia (Mart.) G. Don, Gen. Hist. 1: 340, 1831.
≡ *Noisettia pyrifolia* Mart., Nov. Gen. Sp. Pl. 1: 24, t. 16, late 1823 or Jan–Feb 1824.
≡ *Calyptrion pyrifolium* (Mart.) Sweet ex Steud., Nomencl. Bot., ed. 2, 1: 263, 1840.
≡ *A. salutaris* A. St.-Hil. var. β. *martiana* Eichler in Mart., Fl. Bras. 13(1): 354, 1871.
Type: Legit in Brasilia; Herb. Martii 171 (lectotype, designated here, M [pro parte, fruiting branch]; duplicates, BR, E, F, G, K, L, LE, M [pro parte, flowering branch], NY, P, W).

= *Anchietea salutaris* A. St.-Hil., Ann. Sci. Nat. Ser. 1, 2: 252, 1824.
≡ *A. salutaris* var. α *hilariana* Eichler in Mart., Fl. Bras. 13(1): 354, 1871.
≡ *A. pyrifolia* (Mart.) G. Don var. *hilariana* (Eichler) Marquete & Dames e Silva, Rodriguésia 27(39): 174, 1974.
Type: Brésil, Province de Rio de Janeiro, à Guaxindiba près Rio de Janeiro. Saint-Hilaire 56 (lectotype, designated here, P 00594936; duplicates, K, P 00594937, P 00594938).

= *Noisettia roquefeuillana* A. St.-Hil., Ann. Sci. Nat. Ser. 1, 2: 252, 1824.
≡ *Anchietea roquefeuillana* (A. St.-Hil.) Spreng., Syst. Veg. 4(2): 98, 1827.
Type: Brésil, forêts vierge à Tejuca près R. de Janeiro. Saint-Hilaire Cat. C2, n. 19 (lectotype, designated here, P).

= *Anchietea suma* (Vell.) Stellfeld, Tribuna Farm. (Curitiba) 13: 133, 1945.
≡ *Viola suma* Vell., Arch. Mus. Nac. Rio de Janeiro 5: 354, 1881.
Type: Type material not yet located. Lectotype, designated here, Vellozo, Fl. Flumin. Icon. 8, t. 161, 1831.

= *Anchietea parvifolia* Hallier f., Meded. Rijks-Herb. 19: 64, 1913.

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Type: Bolivia, häufige Schlingpflanze im Niederwald zwischen Tartagal und Yacuiba, 23 Oct 1910. Herzog 1040 (lectotype, designated here, G; duplicates, L, S, W).

Excluded name

Anchietea salutaris A. St.-Hil. var. γ. *pubescens* Eichler in Mart., Fl. Bras. 13(1): 354, 1871.
Type: Brasilia. Minas Geraes. P. Claussen 632 (lectotype, designated here, G; duplicates, F, K).

Note: Eichler cited two specimens (syntypes) for variety (γ) of *A. salutaris*. The specimen chosen here as lectotype fully agrees with Eichler's description due to the villose indumentum of calyx, flower pedicels and young branches. The other syntype (Gardner 4413; K, BM, E, F, G, NY, P, W) was commented by Eichler as "forma vix pubescens, transitoria ad typum", the latter representing his var. β. *martiana*. The collection of Gardner thus appears less suitable for lectotypification of var. γ. *pubescens*. According to recent taxonomic results (Paula-Souza 2009), Eichler's var. γ. *pubescens* must be transferred rather to another species, viz., *A. exalata* Eichler, and *A. salutaris* var. *pubescens* thus has to be excluded from synonymy of *A. pyrifolia*.

Conclusion

The combination *Anchietea pyrifolia* (Mart.) G. Don has priority against the name *A. salutaris* A. St.-Hil., because it is based on *Noisettia pyrifolia* Mart., a name shortly but almost certainly earlier published than *A. salutaris*. *Anchietea salutaris*, unfortunately, became the name most widely used in the floristic literature and in herbarium collections, induced by the treatment of Violaceae for the "Flora Brasiliensis" (Eichler 1871). Future use of the name *A. salutaris* would require conservation against *A. pyrifolia*, but we do not consider this as demanding. Following the history of the species names, we suggest to accept this exchange as a normal instance of synonymy. *Anchietea* A. St.-Hil. remains valid as a genus name, anyway.

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