Monographic studies in the genus *Annona* L. (Annonaceae): 
Inclusion of the genus *Rollinia* A.ST.-HIL.

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Abstract

Recent molecular studies in the genus *Annona*, which included two species of *Rollinia* and one, formerly placed in *Raimondia*, revealed the very close relationship of these genera. If *Rollinia* would be kept as a separate entity, *Annona* would become polyphyletic. No satisfactory possibility was found to split up *Annona* for maintaining *Rollinia* as a distinct genus. On the basis of these findings the necessary nomenclatural changes are presented here.

Key words: Annonaceae, *Annona*, *Rollinia*, Flora Neotropica, new combinations, new names, nomenclature, systematics.

Zusammenfassung


Introduction

The genus *Rollinia* was established by Antoine de SAINT-HILAIRE in the “Flora Brasiliae meridionalis” (1825: 28 - 29, tab. 5) as a result of his collecting activities in the early 19th century in south eastern Brazil. The genus was subsequently expanded by SCHLECHTEN (1834), MARTIUS (1841), TRIANA & PLANCHON (1862), and SAFFORD (1916b). SAFFORD (1916a) segregated the new genus *Rolliniopsis* because some species show a peculiar fruit morphological pattern, namely almost free but sessile carpidia in ripe fruiting stage. FRIES (1934) gave a first comprehensive overview in the series “Monographien der Arten einiger Annonaceen-Gattungen”, keeping *Rolliniopsis* as a separate genus, even until his treatment of the family for ENGLER & PRANTL’S “Natürliche Pflanzenfamilien” (FRIES 1959). In MAAS & WESTRA (1989) *Rolliniopsis* was sunk into synonymy of *Rollinia*. The monographic treatment by MAAS et al. (1992), in which 42 species were listed, with two more taxa mentioned as new but not formally described, represents the up to date state of knowledge. In this monograph MAAS though did not discuss taxa placed in *Annona*, but mentioned by FRIES (1934: 113) as being closely

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related or even representing the group within *Annona* from where *Rollinia* might have derived (Fries 1943: 8). Some very closely related taxa described in *Annona*, e.g., *Annona amazonica* R.E.Fr. *A. duciei* Diels, *A. neglecta* R.E.Fr., and *A. symphyocarpa* Sandwith, all of which show *Rollinia*-characters (baccate outer petals, though not dorsally winged, inner petals connate and adnate to outer ones, fruits with a comparatively long and thin pedicel, pollen in monads) have been omitted from the discussion on the systematic position of *Rollinia* by Koek-Noorman & Maas (1992).

**Results and discussion**

On the basis of recent molecular studies in the genus *Annona* (Rainer et al. in prep.), in which two taxa of *Rollinia* (*R. cuspidata* and *R. mucosa*) and one of *Raimondia* (*R. deceptrix*) were included, and a phylogenetic analysis (Rainer et al. in prep.) revealed that *Rollinia* and *Raimondia* are nested within *Annona*. These findings are in full accordance with recently published results on biogeographic aspects in the family Annonaceae (Richardson et al. 2004). As a result of morphological, karyological, and palynological studies, and evidence from numerous additional publications on seed anatomy (van der Heijden & Bouman 1988), palynology (Walker 1971), and chapters on wood anatomy (Ter Welle 1992), palynology (Le Thomas et al. 1992) and karyology (Morawetz & Hemmer 1992) included in the revision of the genus *Rollinia* by Maas et al. (1992), it becomes clear that *Rollinia* and *Raimondia* cannot be maintained as separate genera. The genus *Raimondia* was already placed in synonymy of *Annona* in an earlier paper (Rainer 2001) and the necessary changes in *Rollinia* are presented in this paper to provide the basis for the monographic treatment of *Annona* (Rainer in prep.).

In the following new combinations, new names, and reestablishment of names originally published under *Annona* are provided. Actually accepted names are given in bold face. Citation of the type material is added where known, the “!” sign is added after citation of herbarium acronyms for specimens seen by the author. Herbarium acronyms follow the Index Herbariorum (Holmgren & Holmgren 1998-2007).

**Annona L.**, Sp. pl. 536 - 537 (1753)
Type species: *Annona muricata* L., Sp. pl. 536 (1753).

Type species: *Raimondia monoica* Saff. (= *Annona cherimolioides* Triana & Planch.)

= *Rollinia* A.St.-Hil., Fl. Bras. merid. 1 (1): 28, tab. 5 (1825)
Lectotype species (designated by Hutchinson 1923: 260): *Rollinia longifolia* A.St.-Hil. (= *Annona dolabripetala* Radi)
Contrary to the citation of *Annona dolabripetala* Radi (= *Rollinia dolabripetala* (Radi) R.E.Fr.) as the lectotype for the genus (Maas 1992: 65; Greuter et al. 1993: 1000), which follows the citation of *Annona dolabripetala* Radi in Pfeiffer (1874: 984) the latter did neither make the new combination for “*Rollinia dolabripetala*” nor selected this taxon as the type species for the genus *Rollinia* but merely listed “*Annona dolabripetala* Radi” in brackets without any comments.
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  Type species (SAFFORD 1916a): *Rolliniopsis discreta* SAFF. (= *Annona leptopetala* (R.E.FR.) H.RAINER)

New combinations

*Annona andicola* (MAAS & WESTRA) H.RAINER, comb.n.
  Type: J.A. Steyermark 52903 [holotype: F]

*Annona bahiensis* (MAAS & WESTRA) H.RAINER, comb.n.
  Type: S.A. Mori & J.A. Kallunki 9888 [holotype: CEPEC; isotype: U!]

*Annona boliviana* (R.E.FR.) H.RAINER, comb.n.
  Type: B.A. Krukoff 11258 [holotype: S!; isotypes: A!, F!, G!, MO!, NY!, S!, U!]

*Annona calcarata* (R.E.FR.) H.RAINER, comb.n.
  Type: B.A. Krukoff 5315 [holotype: S!; isotypes: A!, B!, BM!, F!, G!, M!, MICH, MO!, NY!, U!, UC]

*Annona centrantha* (R.E.FR.) H.RAINER, comb.n.

*Annona cuspidata* (MART.) H.RAINER, comb.n.
≡ *Rollinia cuspidata* MART., Fl. bras. 13 (1): 20, tab. 6: fig. 2 (1841)
  Type: E. Ule 5002 [holotype: B!; isotypes: G!, MG, S!]
  Type: G. Tessmann 4704 [holotype: B!; isotypes: F!, G!, S!]
  Type: R. Spruce s.n., Nov. 1856 [holotype: K!; isotypes: K!, S!]
  = *Rollinia sphaerantha* R.E.FR., Acta Horti Berg. 12 (1): 184, fig. 13a - b (1934)
Annona danforthii (STANDL.) H.RAINER, comb.n.
   Type: R.E. Danforth 30 [holotype: F; isotypes: BM!, GH!, S!]
   18 (1948)
   Type: E.P. Killip 35501 [holotype: S!; isotypes: NY!, UC, US!]

Annona dolichopetala (R.E.FR.) H.RAINER, comb.n.
   Type: E. Asplund 19768 [holotype: S!; isotypes: C, G, K!, NY!, P!, S!]
   Type: E. Asplund 18467 [holotype: S!; isotypes: C, G, K!, NY!, P!, S!]

Annona edulis (TRIANA & PLANCH.) H.RAINER, comb.n.
   Type: J.J. Triana s.n., s.d. [holotype: P!; isotypes: BM!, G, K!]
   Type: J. Cuatrecasas 4665-A [holotype: US]

Annona emarginata (SCHLTDL.) H.RAINER, comb.n.
≡ Rollinia emarginata SCHLTDL., Linnaea 9 (3): 318 (1834)
   Type: F. Sellow s.n., s.d. [lectotype (selected by MAAS 1992: 95): B!]; F. Sellow 2137
   [syntypes: G, HAL!, L!, LE!]
≡ Rollinia glaucescens SOND., Linnaea 22: 557 (1849)
≡ Rollinia sonderiana WALP., Ann. bot. syst. 3 (5): 813 (1852), nom. illeg.
   Type: A.F. Regnell II 5 b [syntypes: S (6 sheets)!]
≡ Rollinia longifolia var. paraguariensis CHODAT, Bull. Herb. Boissier 6, App. 1: 11
   (1898)
   Type: E. Hassler 1720 [holotype: G; isotypes: K!, NY!]
≡ Rollinia hassleriana R.E.FR. in CHODAT & HASSLER, Bull. Herb. Boissier, sér. 2, 4:
   1172 (1904)
   Type: E. Hassler 7862 [holotype: G]
≡ Rollinia intermedia R.E.FR. in CHODAT & HASSLER, Bull. Herb. Boissier, sér. 2, 4:
   1172 (1904)
   Type: E. Hassler 3475 [lectotype (selected by FRIES 1934: 172): G; isolectotypes: A!,
   B!, K!, MICH, NY!]; E. Hassler 4797 [syntypes: F, G, K!]; E. Hassler 5202 [syntypes:
   G, GH!, K!, NY!, UC]

≡ **Rollinia emarginata** Schltdl. var. longipetala (R.E.Fr.) R.E.Fr., Acta Horti Berg. 12 (1): 169 - 170, fig. 6 (1934)
Type: E. Hassler 7407 [holotype: G; isotypes: A!, B!, F, G, K!, MO!, NY!, S!, U!, UC]

Type: Anonymous collector s.n., s.d. [type not located]

≡ **Rollinia occidentalis** R.E.Fr., Acta Horti Berg. 12 (1): 165 - 166, tab. 18 (1934)
Type: R.W. Pearce s.n., Nov. 1866 [holotype: K!]

≡ **Rollinia glaziovii** R.E.Fr., Acta Horti Berg. 12 (1): 166, 168, fig. 10a - c (1934)
Type: A.F.M. Glaziou 12407 [holotype: B!; isotypes: A!, C, K!, LE!, MG, P!, S!]

Type: T.C.J. Herzog 1283 [holotype: L!; isotype: S (fragm.)!]

\**Annona fendleri (R.E.Fr.) H.Rainer, comb.n.**
Type: A. Fendler 196 [holotype: K!; isotypes: G!, GH!, GOET, MO!, OXF!]

≡ **Rollinia subracemosa** Pittier, Bol. Soc. Venez. Ci. Nat. 4: 349 (1938)
Type: Ll. Williams 10011 [holotype: VEN!; isotypes: A!, F, MICH, S (fragm.)!]

\**Annona ferruginea (R.E.Fr.) H.Rainer, comb.n.**


\**Annona fosteri (MAAS & WESTRA) H.Rainer, comb.n.**
Type: R.B. Foster 9657 B [holotype: U!; isotypes: F, MO!]

\**Annona glomerulifera (MAAS & WESTRA) H.Rainer, comb.n.**
Type: R. Vásquez & N. Jaramillo 790 [holotype: MO!]

\**Annona helosioides (MAAS & WESTRA) H.Rainer, comb.n.**
Type: W. Palacios 1295 [holotype: MO!; isotype: QCNE!]

\**Annona herzogii (R.E.Fr.) H.Rainer, comb.n.**
Type: T.C.J. Herzog 1368 [holotype: L!; isotypes: G, S!]
**Annona hispida** (Maas & Westra) H. Rainer, comb.n.


Type: J. Schunke V. 2657 [holotype: F; isotypes: COL, G, GH!, NY!, K!, P!, S!]

**Annona jucunda** (Diels) H. Rainer, comb.n.


Type: G. Tessmann 5341 [holotype: B!; isotypes: F, G, NY!, S!]


Type: E. Ule 6426 [holotype: B!; isotypes: F, G, K!, L!, MG, S!]

non: Annona peruviana Humb. & Bonpl. ex Dunal, Monogr. Anonac. 67 (1817), (= Annona glabra L.)

≡ Rollinia rigidiiflora R.E.Fr., Acta Horti Berg. 12 (1): 154, fig. 9 (1934)

Type: Ll. Williams 3886 [holotype: F; isotype: S (fragm.)!]

**Annona leptopetala** (R.E.Fr.) H. Rainer, comb.n.

≡ Rollinia leptopetala R.E.Fr., Kongl. Svenska Vetensk.-Akad. Handl. 34 (5): 50 - 51, tab. 7: fig. 3 - 4 (1900)


Type: P.H. Dorsett 371 b [holotype: US!]


≡ Rollinia leptopetala var. angustifolia R.E.Fr., Kongl. Svenska Vetensk.-Akad. Handl. 34 (5): 51, tab. 7: fig. 5 (1900)

Type: A.F.M. Glaziou 13508 [holotype: B!; isotypes: C, K!, LE!, P!]

**Annona mammifera** (Maas & Westra) H. Rainer, comb.n.


Type: P.J.M. Maas et al. 6025 [holotype: U!; isotypes: COL, K!, MO!, NY!, USM!]

**Annona maritima** (Zâchia) H. Rainer, comb.n.


Type: B. Rambo s.n. (= PACA 54826) [holotype: B!; isotypes: HBR!, PACA]

**Annona pachyantha** (Maas & Westra) H. Rainer, comb.n.


Type: A.H. Gentry et al. 53389 [holotype: MO!; isotype: U!]
Annona papilionella (Diels) H.Rainer, comb.n.
Type: G. Tessmann 4664 [holotype: B!; isotypes: G, F (fragm.), GH (fragm.), NY (fragm.)!]
Type: H.F. Pittier 4358 [holotype: US!]
Type: G.P. Cooper & G.M. Slater 102 [holotype: F; isotypes: G (fragm.), S (fragm.)!]

Annona parviflora (A.ST.-Hil.) H.Rainer, comb.n.
≡ Rollinia parviflora A.ST.-Hil., Fl. Bras. merid. 1 (1): 30 (1825)
≡ Rollinia parviflora var. angustifolia Mart., Fl. bras. 13 (1): 19 (1841)
Type: A.F.C.P. de Saint-Hilaire 454 [holotype: P!]
≡ Guatteria apodocarpa Mart., Fl. bras. 13 (1): 30 (1841)
Type: C.F.P. von Martius s.n., Aug. 1817 [holotype: M!; isotype: B (fragm.)!]
≡ Rollinia parviflora var. latifolia Mart., Fl. bras. 13 (1): 19 (1841)
≡ Rolliniopsis parviflora var. latifolia (Mart.) R.E.Fr., Acta Horti Berg. 12 (1): 195 (1934)
Type: J. Lhotsky s.n., s.d. [syntypes: B! (photos: F, GH!, MO!, NY!, U!), G, HAL!]

Annona pickelii (Diels) H.Rainer, comb.n.
Type: B.D. Pickel 3004 p.p. [holotype: B!, isotype: SPSF (?)]

Annona rensoniana (Standl.) H.Rainer, comb.n.
Type: P.C. Standley 23022 [holotype: US!; isotypes: GH!, NY!]
≡ Rollinia membranacea R.E.Fr., Acta Horti Berg. 13 (3): 115, fig. 2a (1941)
Type: P.C. Standley & J. Valerio 45920 [holotype: US!; isotype: S!]
Type: H. Karsten s.n., s.d. [holotype: W (destr., photos: A, F, MO!); isotype: S!]
  Type: E. Bourgeau 2448 [holotype: LE!; isotypes: BR, F, G, GH!, L!, P!, S!]

  Type: J. Mutis 3842 [holotype: US!; isotypes: MA!, S (fragm.)!]

Annona rufinervis (TRIANA & PLANCH.) H.RAINER, comb.n.
  Type: J. Goudot s.n., Sep. 1844 or Sep. 1845 [holotype: P!; isotypes: G, K!]

Annona rugulosa (SCHLTDL.) H.RAINER, comb.n.
= Rollinia rugulosa SCHLTDL., Linnaea 9 (3): 316 (1834)
  Type: F. Sellow s.n., s.d. [holotype: B!]

  Type: J. Tweedie s.n., s.d. [holotype: K!; isotypes: E, S (fragm.)!]

Annona schunkei (MAAS & WESTRA) H.RAINER, comb.n.
  Type: J. Schunke V. 14117 [holotype: U!; isotypes: F, K!, MO!, NY!, P!, U!, USM!,
  WU!]

Annona ubatubensis (MAAS & WESTRA) H.RAINER, comb.n.
  Type: P.E. Gibbs et al. 3501 [holotype: SP!; isotypes: E, NY!]

Annona williamsii (RUSBY ex R.E.FR.) H.RAINER, comb.n.
  nud.

New names

Annona neoamazonica H.RAINER, nom.n.
  Type: R.E. Schultes 6758 [holotype: US!; isotype: S (fragm.)!]

Annona neochrysocarpa H.RAINER, nom.n.
  Type: B. Berlin 738 [holotype: MO!; isotype: U!]
  non: Annona chrysocarpa LEPR. ex GUILL. & PERR., Fl. Seneg. tent. 1: 6 (1831),
  (= Annona glabra L.)
**Annona neoecuadorensis** H. Rainer, nom.n.

Type: H. Schultze-Rhonhof 2155 [holotype: B (destr.?); isotype: S!]

**Annona neoelliptica** H. Rainer & Maas, nom.n.

Type: BW (Boschwezen Suriname) 6507 [holotype: U!; isotypes: BM!, BR, COL, K!, NY!, RB!, SI!, U!, VEN!]
non: *Annona elliptica* R.E. Fr., Ark. Bot. 21A (9): 13, fig. 3: 1 - 3 (1927), (= *Annona cascarilloides* C. Wright ex Griseb.)

**Annona neoinsignis** H. Rainer, nom.n.

Type: Ll. Williams 2685 [holotype: F; isotypes: B!, S!]

≡ *Rollinia insignis* var. pallida R.E. Fr., Acta Horti Berg. 12 (3): 565 (1939)
Type: A. Ducke 141 [holotype: S!; isotypes: A!, F, K!, MO!, NY!, RB!, SI!]

**Annona neolaurifolia** H. Rainer, nom.n.

≡ *Rollinia laurifolia* Schltld., Linnaea 9 (3): 319 (1834)
≡ *Rollinia laurifolia* var. erecta R.E. Fr., Acta Horti Berg. 12 (1): 150, fig. 6e (1934)
Type: F. Sellow 1190 [lectotype (selected by Fries 1934: 149): B!]; F. Sellow 809 [syntype: LE!]
non: *Annona laurifolia* Dunal, Monogr. Anonac. 65 (1817), (= *Annona glabra* L.)

≡ *Rollinia laurifolia* var. divergens R.E. Fr., Acta Horti Berg. 12 (1): 150, fig. 6f - g (1934)
Type: Y. Mexia 5311 [holotype: S!; isotypes: A!, BM!, F, G, GB, K!, MICH, MO!, NY!, SI!, U!, UC]

≡ *Rollinia laurifolia* var. longipes R.E. Fr., Ark. Bot. 5 (4): 20, tab. 1: fig. 3 - 4 (1905)
Type: L. Riedel s.n., Oct. 1823 [holotype: S!; isotypes: A!, K!, LE!]

≡ *Rollinia laurifolia* var. reflexa R.E. Fr., Acta Horti Berg. 12 (1): 150 - 151, fig. 6h (1934)
Type: Y. Mexia 5350 [holotype: S!; isotypes: A!, BM!, F, G, GB, MICH, MO!, NY!, SI!, U!]

**Annona neosalicifolia** H. Rainer, nom.n.

≡ *Rollinia salicifolia* Schltld., Linnaea 9 (3): 317 (1834)
Annona neosericea H.RAINER, nom.n.
  [syntypes: B!, UC]; F. Sellow 490 [syntypes: B!, UC]
non: Annona sericea DUNAL, Monogr. Anonac. 69, tab. 5 (1817)
  Type: A. von Luederwaldt 8900 [holotype: S!; isotype: SP!]

Annona neoulei H.RAINER, nom.n.
  Type: E. Ule 6425 [holotype: B!; isotypes: F (fragm.), G, L!, MG, S (fragm.)]

Annona neovelutina H.RAINER, nom.n.
≡ Rollinia microcarpa RUIZ & PAV. ex G.DON, Gen. hist. 1: 90 (1831)
  Type: H. Ruiz s.n., s.d. [lectotype (selected by MAAS 1992: 153): B! (photo K!); iso-
  types: G, MA!]
non: Annona microcarpa JACQ., Fragm. bot. 6: 40, tab. 44: fig. 7 (1809), (= Diospyros
cargillia F. MUELL.)

  (2): 394 (1820)
≡ Rollinia dolabripetala (RADDI) R.E.Fr., Kongl. Svenska Vetensk.-Akad. Handl. 34
  (5): 45 (1900)
≡ Annona xestropetala SPRENG., Syst. veg., ed. 16 (Sprengel) 2: 641 (1825), nom. illeg.
  merid., vol. 1(1) (1825)
≡ Rollinia longifolia A.St.-Hil., Fl. Bras. merid. 1 (1): 29, tab. 5 (1825)
  Type: A.F.C.P. de Saint-Hilaire s.n., s.d. [syntypes: F, G, P!]
≡ Annona minensis GLAZ., Mém. Soc. Bot. Fr. 3 (a): 14 (1905)
  Type: A.F.M. Glaziou 14467 [holotype: P!; isotypes: C, K!, P!, S!]
Annona exsucca DC. in Dunal, Monogr. Anonac. 77 (1817)
Type: A. Anderson s.n., s.d. [holotype: G; isotypes: B!, BM!]

Type: Anonymous collector s.n., s.d. [holotype: G!; isotype: B (fragm.)]

≡ Rollinia multiflora Splittg., Tijdschr. Natuur. Ges. 9: 97 (1842)
Type: F.L. Splitgerber 595 [holotype: L!; isotypes: K!, L!, S (fragm.)]

≡ Rollinia tinifolia Klotzsch in Schomburgk, Reis. Br.-Guiana 3: 1163 (1849)
Type: M.R. Schomburgk 1302 [holotype: B!]

≡ Rollinia glaucescens Miq., Stirp. surinam. select. 108 (1850)
≡ Rollinia exsucca subsp. resinosa (Spruce ex Benth.) R.E.Fr., Acta Horti Berg. 12 (1): 144 - 145 (1934)
Type: H.C. Focke 642 [holotype: U; isotypes: K, S (fragm.)]

Type: S.L.M. Moore 522 [holotype: BM!; isotypes: B!, K!, NY!, P!, WU!]

Type: W.E. Broadway 7580 [holotype: S!; isotypes: F, G, K!, MO!, S!, US!]

Type: F.C. Hoehne 5129 [holotype: S!]


≡ Rollinia surinamensis R.E.Fr., Acta Horti Berg. 12 (1): 147, 149, fig. 8a - b (1934)
Type: A.A. Pulle 230 [holotype: U!; isotype: S!]


Type: A. Ducke s.n. (= RB 19645) [holotype: S!; isotypes: K!, RB!, US!]

≡ Rollinia broadwayi var. cuneata R.E.Fr., Acta Horti Berg. 12 (1): 146 - 147 (1934)
Type: H.A. Gleason 576 [holotype: US!; isotypes: GH, K!, NY!, S (fragm.!!!)]

Annona mucosa Jacq., Observ. bot. (Jacquin) 1: 16 (1764)
≡ Annona mucosa Jacq. in Aublet, Hist. pl. Guiane 1: 618 (1775), orth. err.
≡ Rollinia mucosa (Jacq.) Bail., Adansonia 8: 268 (1868)
≡ Annona reticulata var. mucosa (Jacq.) Willd., Sp. pl., ed. 4., 2 (2): 1266 (1799)
Type: N. von Jacquin s.n., s.d. (not located); P. Duss 4620 [neotype (designated by Maas 1992: 126): NY!]
= *Annona obtusiflora* Tussac, Fl. Antill. 1: 191, tab. 28 (1813)
≡ *Annona obtusifolia* DC., Prodr. (DC.) 1: 84 (1824), orth. err.
Type: tab. 28 in Tussac, Fl. Antill. (1813)

≡ *Rollinia biflora* Ruiz & Pav. ex G.Don, Gen. hist. 1: 91 (1831)
≡ *Annona biflora* Ruiz & Pav. ex G.Don, Gen. hist. 1: 91 (1831), nom.nud.
Type: J.A. Pavón s.n., s.d. [lectotype (selected here): MA!; isotypes: G, OXF!]

≡ *Rollinia pterocarpa* G.Don, Gen. hist. 1: 91 (1831)
Type: H. Ruiz s.n., s.d. [lectotype (selected here): MA!; isotypes: B!, G, P!]

≡ *Rollinia micrantha* G.Don, Gen. hist. 1: 91 (1831)
≡ *Annona parviflora* Ruiz & Pav. ex G.Don, Gen. hist. 1: 91 (1831), nom.nud.
Type: H. Ruiz s.n., s.d. [type: MA!]

Type: C.S. Parker 238 [holotype: G; isotype: E]

Type: Franz W. Sieber, Fl. Trinitatis 96 [holotype: G-DC; isotypes: BP (3 sheets)!, E, G, L!, LE!, M!, MO!, P!, PRC (4 sheets)!, S!, WU!]

Type: Anonymous collector s.n., s.d. [holotype: G-DC]

≡ *Annona biflora* Sessé & Moç., Fl. mexic, éd. 2, 133 (1894)
Type: M. Sessé & J.M. Moçino 2310 [holotype: MA!; isotypes: F, G, OXF!]

≡ *Rollinia deliciosa* Saff., J. Wash. Acad. Sci. 6: 375, fig. 2 (1916)


Type: G.P. Cooper 645 [holotype: F; isotypes: G, K]

Type: G. Klug 333 [holotype: US!; isotypes: F, NY!, S!]

≡ *Rollinia curvipetala* R.E.Fr., Acta Horti Berg. 12 (1): 178 - 179, fig. 11a - c (1934)
Type: E. Ule 9371 [holotype: B!; isotypes: G, K!, MG, S!]
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Type: R. Spruce 2403 [holotype: B!; isotypes: BM!, E, G, GH!, GOET, K!, M!, OXF!, P!]

Type: P. Sintenis, Pl. portoricensis 4170 [holotype: S!; isotypes: B!, BM!, BP!, E, F, G, GH!, GOET, HAC!, L!, LE!, M!, MO!, NY!, P!, S!, UC, WU!]

Type: E.L. Ekman H12420 [holotype: S!; isotype: NY!]

Type: E.W. Nelson 406 [holotype: US!]

*Annona sylvatica* A.St.-Hil., Pl. usuel. bras. 6: tab. 29 (1825)
≡ **Rollinia sylvatica** (A.St.-Hil.) Mart., Fl. bras. 13 (1): 18 (1841)

≡ **Rollinia fagifolia** A.St.-Hil., Fl. Bras, merid. 1 (1): 29 (1825)
Type: A.F.C.P. de Saint-Hilaire s.n., s.d. [holotype: P!; isotype: P!]

≡ **Annona silvestris** Vell., Fl. flumin. 239 (1829), Fl. flumin. icon. 5: tab. 128 (1831)
Type: tab. 128, in Vellozo, Fl. flumin. icon. 5 (1831)

≡ **Annona exalbida** Vell., Fl. flumin. 240 (1829), Fl. flumin. icon. 5: tab. 131 (1831)
≡ **Rollinia exalbida** (Vell.) Mart., Fl. bras. 13 (1): 19 (1841)
Type: tab. 131, in Vellozo, Fl. flumin. icon. 5 (1831)

Type: C. Gaudichaud s.n. (= Herbier Impérial du Brésil 636) [holotype: P!; isotype: P (fragm.)!]

≡ **Rollinia xylopiifolia** (A.St.-Hil. & Tul.) R.E.Fr., Acta Horti Berg. 10 (2): 315 (1931)
Type: A. Richard s.n., s.d. [holotype: P!]

≡ **Rollinia lanceolata** R.E.Fr., Kongl. Svenska Vetensk.-Akad. Handl. 34 (5): 49 - 50, tab. 6: fig. 6 (1900)

≡ **Rollinia warmingii** R.E.Fr., Kongl. Svenska Vetensk.-Akad. Handl. 34 (5): 49, tab. 6: fig. 7 (1900)
Type: A.F.M. Glaziou 6079 [holotype: B!; isotypes: C, K!]
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References


