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## Nomenclator of Hawaiian *Sicyos* (Cucurbitaceae)

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**ABSTRACT.** In 1987 Harold St. John published 69 names in Hawaiian Cucurbitaceae in four short papers. The nomenclature is analyzed, and the complete nomenclature of the Hawaiian species of *Sicyos* is presented, including 105 names. Names described by St. John in *Sicyos* and the segregate genus *Cladocarpa* were incorporated by Telford in his 1990 treatment, but those names described in the segregate genera *Sarx* (1 name) and *Sicyocarya* (14 names) were not treated and are here placed in Telford's classification. Five of the taxa described by St. John in 1987 were recognized in Telford's taxonomy (*Cladocarpa herbstii* [= *Sicyos herbstii*], *Sicyos hillebrandii* var. *anunu* [= *S. anunu*], *S. erostratus*, *S. waimanaloensis*, and *Sicyocarya lanceoloidea* [as sp. A = *Sicyos lanceoloideus*]). Two of these were transferred to *Sicyos* by Telford, and one of them is here transferred to *Sicyos* [*Sicyocarya lanceoloidea*]. All of the other taxa described by St. John are placed in the synonymy of other species. Five of the names were not validly published (*Cladocarpa kawelaensis*, *Sicyocarya cruralis*, *Sicyocarya hawaiiensis*, *Sicyos erostratus* var. *kealiaensis*, and *Sicyos microcarpus* var. *kealiaensis*).

After the *Manual of the Flowering Plants of Hawai'i* (Wagner et al., 1990) was sent to the publisher, St. John published a hurried series of papers, cited in Wagner et al. (1990), in which he published about 880 manuscript names that he had accumulated over his entire career of studying the Hawaiian flora. Most of the names were validly published, but some were invalid or illegitimate. Over a period of about 30 years, he had developed lengthy manuscripts with accompanying detailed illustrations for a number of genera in a style similar to his treatment of O'ahu *Cyrtandra* (St. John, 1966). Few of them were ever completed and even fewer published. When the Wagner et al. (1990) flora manuscript was in the final stages of being readied for the publisher, St. John published just the new taxa and combinations from all of these manuscripts in *Phytologia* and privately in a series of papers that provided little more than a brief Latin diagnosis and an abbreviated mention of the type. Not only were the treatments of these numer-

ous new taxa extremely brief, they were done without rechecking specimens (unpublished obs. by WLW). This led to many errors in citation of specimens, reusing names in the same genus (often even in the same paper), and reusing the same specimen as the type of more than one name. More importantly, he did not incorporate the taxa in a carefully evaluated taxonomic system. Now, after nearly 10 years, most of the approximately 880 names (including combinations) have been analyzed. St. John names in Campanulaceae published in 1987 and 1988 have been studied by T. Lammers (see Lammers, 1998, and papers cited therein).

This is the second of a series of papers analyzing the names published in 1987 and 1988 by St. John, in which the nomenclature is evaluated and the taxa incorporated in a current classification. Additional papers in this series have already dealt or will in the future deal with names in *Phyllostegia* (Wagner, 1999), *Stenogyne* (both Lamiaceae), and *Cyrtandra* (Gesneriaceae) and the special problems of the invalid and illegitimate names.

Although all names for Hawaiian angiosperms published through 1986 and a few from 1987 were included by Wagner et al. (1990) in the *Manual of the Flowering Plants of Hawai'i*, a rigorous assessment of them has never been done. In 1983, as part of the Hawaiian Flora Project at the Bishop Museum, a Hawaiian nomenclatural database was initiated. It included bibliographic and type information, and current classification. Many of the specialists contributing treatments to the *Manual* also completed database record forms for names based on Hawaiian specimens. Aspects of the project currently being developed include a database intended for WWW publication, a book, and several papers on specific problematic groups. In analyzing the nomenclature for the genus *Sicyos* (Cucurbitaceae), a number of problems were discovered. These included names not validly published or illegitimate, errors in original publications, typification problems, and the incorrect placement of one name (*Sicyos microcarpus* var. *kealiaensis*) in synonymy in the *Manual* treatment of Telford (1990). We here present a complete nomenclator of Hawaiian *Sicyos*,

including a number of not validly published names. One new combination by Wagner and Herbst is provided for an uncommon species from northern Kaua'i and the Wai'anae Mountains, O'ahu, which was treated as "species A" in Telford's (1990) treatment. Telford provided nomenclatural forms for most of the names published through 1986 as part of his contribution to the Hawaiian Flora Project. We have confirmed and added to this information, analyzed the 69 names published in 1987 by St. John (1987a, 1987b, 1987c, 1987d), and added the 3 combinations made by Telford (1989). Names described by St. John in *Sicyos* and the segregate genus *Cladocarpa* were incorporated by Telford in his 1990 treatment, but those described in the segregate genera *Sarx* (one name) and *Sicyocarya* (14 names) were not and are here placed in the classification. Five of the taxa described by St. John in 1987 were recognized in Telford's taxonomy (*Cladocarpa herbstii* [= *Sicyos herbstii*], *Sicyos hillebrandii* var. *anunu* [= *S. anunu*], *S. erostratus*, *S. waimanaloensis*, and *Sicyocarya lanceoloidea* [as sp. A = *Sicyos lanceoloidea*]). Two of these were transferred to *Sicyos* by Telford, and one of them is here transferred to *Sicyos* [*Sicyocarya lanceoloidea*]. All of the other taxa described by St. John are placed in the synonymy of other species. In cases where we have not seen any material of a taxon, the disposition is based on Telford's (1990) placement of the name. There are a number of names for which the holotype is missing or destroyed, a couple of situations where no holotype was designated, and others where no original material can be located. We have refrained from designation of lectotypes or neotypes in all of these cases following recommendation 9A of the ICBN (Greuter et al., 1994). As stability of accepted names does not seem in question, we prefer to leave these selections to those engaged in detailed revision of the genus. Five of the names were not validly published. Since the emphasis of this paper is nomenclature rather than taxonomy, the accepted names are arranged alphabetically. All of the indigenous Hawaiian species of the four segregate genera described by St. John (*Cladocarpa* (H. St. John) H. St. John, *Sarx* H. St. John, *Sicyocarya* H. St. John, *Skottsbergliana* H. St. John) are placed in the genus *Sicyos* as recommended by Jeffrey (1978) and followed by Telford (1990).

#### NOMENCLATURE

- 1. *Sicyos alba*** (H. St. John) Telford, *Phytologia* 67: 210. 1989. *Sarx alba* H. St. John, *Bot. Jahrb. Syst.* 99: 493. 1978. TYPE: Hawaiian Islands [U.S.A.]. Hawai'i: Kulani, Sep. 1974, W. C. Gagné 698 (holotype, BISH-502382; isotypes, BISH [2]).
- 2. *Sicyos anunu*** (H. St. John) Telford, *Phytologia* 67: 211. 1989. *Sicyos hillebrandii* H. St. John var. *anunu* H. St. John, *Phytologia* 63: 187. 1987. TYPE: Hawaiian Islands [U.S.A.]. Hawai'i: Kapapala, Ka'u, 4–7 Aug. 1911, C. N. Forbes 400.H (holotype, BISH-92745).  
*Sicyos hillebrandii* var. *douglasii* H. St. John, *Phytologia* 63: 187. 1987. TYPE: Hawaiian Islands [U.S.A.]. Hawai'i: N slope of Mauna Kea, near where David Douglas was murdered, 23 Aug. 1949, O. Degener & A. Greenwell 21364 (holotype, BISH-522868; isotype, NY).  
*Sicyos hillebrandii* var. *lanaiensis* H. St. John, *Phytologia* 63: 188. 1987. TYPE: Hawaiian Islands [U.S.A.]. Lana'i: Kamoia, 1740 ft., 16 May 1929, G. C. Munro 417 (holotype, BISH-633922; isotypes, PTBG [3]).
- 3. *Sicyos cucumerinus*** A. Gray, *Proc. Amer. Acad. Arts* 3: 54. 1853; U.S. Expl. Exped., *Phan.* 652. 1854. *Sicyocarya cucumerina* (A. Gray) H. St. John, *Phytologia* 38: 407. 1978. TYPE: Hawaiian Islands [U.S.A.]. Hawai'i: [Mauna Kea, upper part of the forests], 1840, U.S. Expl. Exped. s.n. (holotype, US-48017). The material used by A. Gray in descriptions of *S. cucumerinus* and the unnamed  $\beta$  and  $\gamma$  varieties was mounted on two sheets. Gray's species description is of the sheet taken as the holotype, with short descriptions of the two additional taxa given afterward. They are both mounted on US-48018. The specimen of variety  $\beta$  is *S. alba* (St. John) Telford and that of variety  $\gamma$  is a lobed-leaf form of *S. cucumerinus*.  
*Sicyos cucumerinus* var. *triangulata* Cogniaux, *Monogr. Phan.* 3: 898. 1881. Syn. nov. TYPE: Hawaiian Islands [U.S.A.]. Maui: [East Maui, Haleakala], 27 Jan.–12 Feb. 1870, H. Wawra 1916 (syntype, W [presumably destroyed]); H. Wawra 1619 (syntype, W [presumably destroyed]). Locality taken from Wawra (1873). Cogniaux cited H. Wawra 1619 and 1916; however, Wawra (1873) cited only the latter collection, and thus we have no information about the former. Present disposition based on locality and description.  
*Sarx kauaiensis* H. St. John, *Bot. Jahrb. Syst.* 109: 257. 1987. Syn. nov. TYPE: Hawaiian Islands [U.S.A.]. Kaua'i: along Wai'alaie Stream between 1st and 2nd bend above Wai'alaie Cabin, 3600 ft., 10 Sep. 1980, K. M. Nagata 2141 (holotype, BISH-520191).  
*Sicyocarya maiiensis* H. St. John, *Phytologia* 64: 53. 1987. Syn. nov. TYPE: Hawaiian Islands [U.S.A.]. Maui: [East Maui], Haleakala Crater, Kaupo Gap, second cove S of Waikeke'e'ehia, in grove on lower part of N-facing slope, 6000 ft., 27 Aug. 1945, H.

- St. John & A. L. Mitchell 21198* (holotype, BISH-521561; isotypes, BISH [2]).
- Sicyocarya molokaiensis* H. St. John, *Phytologia* 64: 53. 1987. Syn. nov. TYPE: Hawaiian Islands [U.S.A.]. Moloka'i: Kahua'awi Gulch, partly shaded thicket near stream, 4 June 1928, *O. Degener 18398* (holotype, NY-58603).
- Sicyocarya saltuaria* H. St. John, *Phytologia* 64: 54. 1987. Syn. nov. TYPE: Hawaiian Islands [U.S.A.]. Hawaii: South Kona, Honaunau Forest Reserve, 3000 ft., Nov. 1957, *L. W. Bryan s.n.* (holotype, BISH-92762; isotype, BISH).
- Sicyocarya umbellata* H. St. John, *Phytologia* 64: 54. 1987. Syn. nov. TYPE: Hawaiian Islands [U.S.A.]. Maui: [East Maui], Hana Dist., along ridge in central Kipahulu Valley, 3580 ft., 22 July 1980, *P. K. Hingashino & R. A. Holt 9412* (holotype, BISH-463291).
- 4. *Sicyos erostratus*** H. St. John, *Phytologia* 63: 187. 1987. TYPE: Hawaiian Islands [U.S.A.]. Moloka'i: Onini Gulch, 2200 ft., 21 Jan. 1973, *L. E. Bishop 1714* (holotype, BISH-519993).
- Sicyos erostratus* var. *herbstii* H. St. John, *Phytologia* 63: 187. 1987. TYPE: Hawaiian Islands [U.S.A.]. Moloka'i: Kalamalua, past Homalani Cemetery, on jeep road to Moloka'i Forest Reserve, on S side of road, 600 ft., 3 Apr. 1973, *D. Herbst 2944* (holotype, BISH-519978; isotypes, BISH [3], US).
- Sicyos erostratus* var. *paucipilosus* H. St. John, *Phytologia* 63: 187. 1987. TYPE: Hawaiian Islands [U.S.A.]. Moloka'i: Onini Gulch, 2300 ft., 21 Jan. 1973, *L. E. Bishop 1713* (holotype, BISH-519979).
- 5. *Sicyos herbstii*** (H. St. John) Telford, *Phytologia* 67: 210. 1989. *Cladocarpa herbstii* H. St. John, *Phytologia* 63: 185. 1987. TYPE: Hawaiian Islands [U.S.A.]. Kaua'i: Waimea Dist., Queen's Pond area of Barking Sands, 10 ft., 26 Feb. 1976, *D. Herbst & S. Ishikawa 5691* (holotype, BISH-520171 and -520396; isotypes, BISH [4], US).
- Cladocarpa julesii* H. St. John, *Phytologia* 63: 185. 1987. TYPE: Hawaiian Islands [U.S.A.]. Kaua'i: *J. Rémy 542* (holotype, P not seen).
- Cladocarpa pauciramosa* H. St. John, *Phytologia* 63: 186. 1987. TYPE: Hawaiian Islands [U.S.A.]. Kaua'i: Polihale Cliffs, s.d., *C. Christensen 326* (holotype, BISH-520196; isotypes, BISH [3]).
- Sicyocarya lebishopii* H. St. John, *Phytologia* 64: 53. 1987. Syn. nov. TYPE: Hawaiian Islands [U.S.A.]. Kaua'i: Waimea Canyon, Koaie Branch, on floor of gulch, 2050 ft., 3 June 1972, *L. E. Bishop 1316* (holotype, BISH-521557; isotypes, BISH [2]).
- 6. *Sicyos hillebrandii*** H. St. John, *Occas. Pap. Bernice P. Bishop Mus.* 10(12): 7. 1934. *Sicyos laciniatus* Hillebrand, *Fl. Hawaiian Isl.* 138. 1888. Nom. illeg., non L. (1753). TYPE: Hawaiian Islands [U.S.A.]. Maui: East Maui, Kula, 1851–1871, *W. Hillebrand s.n.* (holotype, B [presumably destroyed]; isotypes, BISH, K). The BISH sheet has the label printed by C. N. Forbes for Lydgate's herbarium stating the collectors as Hillebrand and Lydgate, but Hillebrand did not give Lydgate as one of the collectors.
- 7. *Sicyos hispidus*** Hillebrand, *Fl. Hawaiian Isl.* 136. 1888. *Cladocarpa hispida* (Hillebrand) H. St. John, *Bot. Jahrb. Syst.* 99: 491. 1978. TYPE: Hawaiian Islands [U.S.A.]. Maui: East Maui, Kula, 1851–1871, *W. Hillebrand s.n.* (holotype, B [presumably destroyed, photo BISH]; isotypes, BISH, K not seen). The BISH sheet has the label printed by C. N. Forbes for Lydgate's herbarium stating the collectors as Hillebrand and Lydgate, but Hillebrand did not give Lydgate as one of the collectors.
- Cladocarpa capitata* H. St. John, *Phytologia* 63: 185. 1987. TYPE: Hawaiian Islands [U.S.A.]. Hawaii: North Kona Dist., land of Pu'u Anahulu, Pu'u Wa'awa'a Ranch at base of Pu'u Anahulu Ridge near Mamalahoa Hwy., 2100 ft., 26 June 1975, *D. Herbst & S. Ishikawa 5393* (holotype, BISH-520662; isotypes, BISH [2]).
- Cladocarpa discoidea* H. St. John, *Phytologia* 63: 185. 1987. TYPE: Hawaiian Islands [U.S.A.]. Maui: West Maui, Pohakea Gulch, arid rocky valley, 11 July 1927, *O. Degener 9893* (holotype, NY-58605). Degener used this collection number more than once; US sheet of *O. Degener 9893* is *Wahlenbergia gracilis*, collected 5 May 1928.
- Cladocarpa harrisonae* H. St. John, *Phytologia* 63: 185. 1987. TYPE: Hawaiian Islands [U.S.A.]. Moloka'i: Kulaupapa, 1974, *B. Harrison s.n.* (holotype, BISH-520193; isotypes, BISH [2]).
- Cladocarpa lanaiensis* H. St. John, *Phytologia* 63: 186. 1987. TYPE: Hawaiian Islands [U.S.A.]. Lana'i: Maunalei, *J. Jacobi 1979* (holotype, BISH not seen). Holotype missing at least since October 1987. The brief diagnosis by St. John suggests *Sicyos hispidus*; thus this disposition is tentative.
- Cladocarpa munroi* H. St. John, *Phytologia* 63: 186. 1987. TYPE: Hawaiian Islands [U.S.A.]. Lana'i: Ka'ena, 25 Apr. 1914, *G. C. Munro 87* (holotype, BISH-92762).
- Cladocarpa umbellata* H. St. John, *Phytologia* 63: 186. 1987. TYPE: Hawaiian Islands [U.S.A.]. Hawaii: belt road between Huehue and Pu'u Wa'awa'a, North Kona, 1900 ft., 9 Nov. 1950, *W. H. Hatheway 509* (holotype, BISH-92743; isotype, BISH).
- Cladocarpa waimaeensis* H. St. John, *Phytologia* 63: 186. 1987. TYPE: Hawaiian Islands [U.S.A.]. Hawaii: 20 mi. along main road from Waimea toward Kona, 18 Aug. 1926, *O. Degener 17416* (holotype, NY-58613). St. John did not annotate this sheet as the holotype, but it is the only collection with this number from this locality at NY. Degener distributed another collection (type of *Sicyos waimanaloensis* H. St. John) from a different locality and date under the same number.

- 8. *Sicyos lanceoloideus*** (H. St. John) W. L. Wagner & D. R. Herbst, comb. nov. Basionym: *Sicyocarya lanceoloidea* H. St. John, *Phytologia* 64: 52. 1987. TYPE: Hawaiian Islands [U.S.A.]. Kaua'i: Koke'e on left side of Waimea Canyon, on side of gully, 7 July 1917, C. N. Forbes 776.K (holotype, BISH-520175; isotypes, BISH [4]).
- Sicyos cucumerinus* A. Gray var. *tripartita* Cogniaux, *Monogr. Phan.* 3: 898. 1881. Syn. nov. TYPE: Hawaiian Islands [U.S.A.]. Kaua'i: Halemanu, [23 Feb.–29 Mar. 1870], H. Wawra 2091 (syntype, W [presumably destroyed]); Waimea, 2000–3000 ft., 1864–1865, H. Mann & W. T. Brigham 604 (syntype, BISH [2]). Present disposition based on H. Mann & W. T. Brigham syntype.
- Sicyocarya kaalaensis* H. St. John, *Phytologia* 64: 51. 1987. Syn. nov. TYPE: Hawaiian Islands [U.S.A.]. O'ahu: Wai'anae Mts., Mt. Ka'ala, Wai'anae Uka, 2600 ft., 18 Apr. 1948, H. St. John 23365 (holotype, BISH-519980; isotypes, BISH [8]).
- Sicyocarya kalalauensis* H. St. John, *Phytologia* 64: 52. 1987. Syn. nov. TYPE: Hawaiian Islands [U.S.A.]. Kaua'i: Kalalau Valley, 18 July 1909, C. N. Forbes & C. H. Dole 59.K (holotype, BISH-92766; isotype, US).
- Sicyocarya kauaiensis* H. St. John, *Phytologia* 64: 52. 1987. Syn. nov. TYPE: Hawaiian Islands [U.S.A.]. Kaua'i: Koke'e Camp, 25 June 1926, O. Degener 18041 (holotype, NY-19546). St. John's paper indicated that all types are at BISH unless otherwise noted, but there is no Degener 18041 collection at BISH and St. John did not indicate any other institution for the type. The NY sheet is the probable holotype since it is the only sheet of this collection we have seen, and the first set of Degener's collections are deposited at NY or BISH. Perhaps St. John intended to add "NY" to indicate that the type was there.
- Sicyocarya obata* H. St. John, *Phytologia* 64: 53. 1987. Syn. nov. TYPE: Hawaiian Islands [U.S.A.]. O'ahu: Wai'anae Mts., Wai'anae Kai-Makaha ridge, dry native forest, 2250 ft., 4 Nov. 1973, W. C. Gagné, J. Obata & D. Palmer 682 (holotype, BISH-521564; isotypes, BISH [2], PTBG, US).
- 9. *Sicyos lasiocephalus*** Skottsberg, *Acta Horti Gothob.* 10: 184. 1936. *Skottsbergiliana lasiocephala* (Skottsberg) H. St. John, *Pacific Sci.* 28: 458. 1974. TYPE: Hawaiian Islands [U.S.A.]. Hawai'i: N Kona, along road near Huehue, on 'a'a lava, 26 Sep. 1926, C. Skottsberg 1947 (holotype, GB [on 2 sheets] not seen; isotypes, BISH). St. John's lectotypification (1974 [1975]) was superfluous. Skottsberg mentioned three collections in the protologue, but segregated his number 1947 in a separate paragraph and compared it to other collections. He referred to "the type specimen" in the next paragraph, and wrote "type" on the collection label.
- Skottsbergiliana partita* H. St. John, *Pacific Sci.* 28: 460. 1974. TYPE: Hawaiian Islands [U.S.A.]. Hawai'i: 20 mi. from Waimea toward Kona, 'a'a desert along road, 18 Aug. 1926, O. Degener 9896 (holotype, GB not seen; isotype, NY). St. John apparently considered O. Degener 9896 to be a mixed collection, as he added an "A" to the collection number of a sheet at NY and annotated it as *Skottsbergiliana lasiocephala* at the same time he annotated the other NY sheet as an isotype of *S. partita*.
- 10. *Sicyos macrophyllus*** A. Gray, *Proc. Amer. Acad. Arts* 3: 54. 1853; U.S. Expl. Exped., *Phan.* 651. 1854. *Sicyocarya macrophylla* (A. Gray) H. St. John, *Phytologia* 38: 407. 1978. TYPE: Hawaiian Islands [U.S.A.]. Hawai'i: [in the forests of Mauna Kea, toward their upper margin], 1840, U.S. Expl. Exped. s.n. (holotype, US-48022).
- Sicyocarya beccifer* H. St. John, *Phytologia* 64: 51. 1987. Syn. nov. TYPE: Hawaiian Islands [U.S.A.]. Hawai'i: North Hilo Dist., Hilo Forest Reserve, E slope of Mauna Kea, makai of Keanakohi Rd., 5880 ft., 17 Nov. 1977, F. R. Warshauer 1535 (holotype, BISH-463288).
- Sicyocarya kilaueaensis* H. St. John, *Phytologia* 64: 52. 1987. Syn. nov. TYPE: Hawaiian Islands [U.S.A.]. Hawai'i: Kilauea Volcano; mile 23, wet forest, Aug. 1918, J. F. Rock 16006 (holotype, BISH-520200; isotypes, BISH [4]).
- Sicyocarya kīpahuluensis* H. St. John, *Phytologia* 64: 52. 1987. Syn. nov. TYPE: Hawaiian Islands [U.S.A.]. Maui: [East Maui], Kīpahulu Stream, 22 Nov. 1919, C. N. Forbes 1709.M (holotype, BISH-92763; isotype, BISH).
- Sicyocarya konaensis* H. St. John, *Phytologia* 64: 52. 1987. Syn. nov. TYPE: Hawaiian Islands [U.S.A.]. Hawai'i: Kona, McCandless forests, 2500 ft., Feb. 1958, J. F. Rock 26018 (holotype, BISH-520402; isotypes, BISH [2]).
- Sicyocarya puberula* H. St. John, *Phytologia* 64: 54. 1987. Syn. nov. TYPE: Hawaiian Islands [U.S.A.]. Hawai'i: eastern slopes of Mauna Ke'a, near David Douglas Historical Monument, ahupua'a of Laupahoehoe, 5800 ft., 29 Nov. 1969, C. H. Lamoureaux 4382 (holotype, BISH-520676; isotypes, BISH, CBG, US). Specimen label indicates liquid-preserved flowers and fruits at Univ. of Hawaii Botany Dept.
- Sicyocarya rockii* H. St. John, *Phytologia* 64: 54. 1987. Syn. nov. TYPE: Hawaiian Islands [U.S.A.]. Hawai'i: North Kona Dist., Pu'u Wa'awa'a Ranch (Waihou/Waimea Paddock), 3000 ft., 18 July 1975, D. Herbst, S. Montgomery & G. Spence 5433 (holotype, BISH-519989; isotypes, BISH [3]). Holotype does not have Montgomery named as a collector, but isotypes do, and Herbst (pers. comm. 1997) verified that Montgomery was one of the collectors.
- 11. *Sicyos maximowiczii*** Cogniaux, in DC., *Monogr. phan.* 3: 895. 1881. *Cladocarpa maximowiczii* (Cogniaux) H. St. John, *Bot. Jahrb. Syst.* 99: 491. 1978. TYPE: Hawaiian Islands

[U.S.A.]. O'ahu: 1826–1829, *G. Kastalsky s.n.* (holotype, LE not seen).

*Sicyos niuhauensis* H. St. John, Pacific Sci. 13: 175. 1959. *Cladocarpa niuhauensis* (H. St. John) H. St. John, Bot. Jahrb. Syst. 99: 491. 1978. TYPE: Hawaiian Islands [U.S.A.]. Ni'ihau: 1 mi. W of Ki'i, 50 ft., 29 Mar. 1949, *H. St. John 23567* (holotype, BISH-501834, -501835, -501836, and -501837; isotypes, BISH [2], PTBG [4]).

*Sicyos atollensis* H. St. John, Pacific Sci. 24: 446. 1970. *Cladocarpa atollensis* (H. St. John) H. St. John, Bot. Jahrb. Syst. 99: 491. 1978. TYPE: Northwestern Hawaiian Islands [U.S.A.]. Ocean Island [Kure Atoll]: *Scaevola* "islands" in central plain and nearby, 4 m, 18 Apr. 1923, *E. L. Caum 13* (holotype, BISH-501816; isotypes, BISH, NY, W not seen).

*Sicyos caunii* H. St. John, Pacific Sci. 24: 448. 1970. *Cladocarpa caunii* (H. St. John) H. St. John, Bot. Jahrb. Syst. 99: 491. 1978. TYPE: Northwestern Hawaiian Islands [U.S.A.]. Pearl and Hermes Reef, Seal Island, eastern half of higher part of island, 3 m, 27 Apr. 1923, *E. L. Caum 53* (holotype, BISH-501818; isotype, BISH).

*Sicyos lamoureuxii* H. St. John, Pacific Sci. 24: 451. 1970. *Cladocarpa lamoureuxii* (H. St. John) H. St. John, Bot. Jahrb. Syst. 99: 491. 1978. TYPE: Kure, near end of runway on W side, 12 Sep. 1961, *C. H. Lamoureux 1901* (holotype, BISH-501822; isotype, BISH). St. John cited "nos. 1899, 1900, 1902–3 are evidently isotypes (BISH)"; Lamoureux (pers. comm. 1998) indicated he assigned different numbers when specimens came from different plants, thus we do not consider these to be isotypes, but rather paratypes.

*Cladocarpa lehuaensis* H. St. John, Phytologia 63: 186. 1987. TYPE: Hawaiian Islands [U.S.A.]. Lehua: 4 May 1965, *C. R. Long 3017* (coll. *W. King & V. Hoemon*) (holotype, HAW not seen; isotype, BISH). Actually, the sheet at BISH here listed as an isotype may in fact be the holotype. G. Carr (pers. comm. 1998) indicated that there is no sheet of this collection extant at HAW, and that many of the Long collections were given to BISH.

**12. *Sicyos pachycarpus* Hooker & Arnott, Bot. Beechey Voy. 83. 1832. TYPE: Hawaiian Islands [U.S.A.]. O'ahu: Diamond Hill [Head], 1826–1827, *A. Collie s.n.* (lectotype, designated by Telford (1989), K not seen). The K sheet was a mixed collection of two elements: one of *Sicyos waimanaloensis*, annotated by St. John as lectotype, but which was never published (ined.); and the other the same taxon as the type of *Sicyos microcarpus* H. Mann selected by Telford as the lectotype. The two elements have been remounted on separate sheets.**

*Sicyos microcarpus* H. Mann, Proc. Amer. Acad. Arts 7: 167. 1867. TYPE: Hawaiian Islands [U.S.A.]. O'ahu: 1851–1855, *J. Rémy 541* (holotype, A not seen; isotypes, BR not seen, P).

*Sicyos remyanus* Cogniaux, in DC., Monogr. phan. 3: 898. 1881. TYPE: Hawaiian Islands [U.S.A.]. O'ahu:

1851–1855, *J. Rémy 540* (holotype, P not seen; isotypes, BR not seen, P [3] not seen).

*Sicyos laysanensis* H. St. John, Pacific Sci. 24: 440. 1970. *Sicyos microcarpus* subsp. et var. *laysanensis* (H. St. John) H. St. John, Phytologia 63: 190. 1987. TYPE: Hawaiian Islands [U.S.A.]. Laysan: May 1911, *W. A. Bryan A* (holotype, BISH-501827; isotype, BISH). Two other specimens, collected in April 1903, were annotated as "isotype" by St. John, but are not isotypes.

*Sicyos nihoaensis* H. St. John, Pacific Sci. 24: 443. 1970. TYPE: Hawaiian Islands [U.S.A.]. Nihoa: W slope of Tanager Peak, 200 m, 12 July 1924, *E. Christoffersen & T. Dranga 9* (holotype, BISH-501829; isotypes, BISH, US).

*Sicyos microcarpus* var. *ewaensis* H. St. John, Phytologia 63: 190. 1987. TYPE: Hawaiian Islands [U.S.A.]. O'ahu: W side of coral plains at Ewa, near Barber's Point, ocean side of Malakole Rd. near Camp Malakole Military Res., 10 ft., 21 June 1978, *K. M. Nagata & B. Kimura 1656* (holotype, BISH-522860; isotype, BISH).

*Sicyos microcarpus* var. *forbesii* H. St. John, Phytologia 63: 188. 1987. TYPE: Hawaiian Islands [U.S.A.]. Maui: West Maui, Maunaho'oma, May 1910, *C. N. Forbes 11.M* (holotype, BISH-92753).

*Sicyos microcarpus* var. *haleakalaensis* H. St. John, Phytologia 63: 191. 1987. TYPE: Hawaiian Islands [U.S.A.]. Maui: [East Maui], Wai'opai, *C. N. Forbes 1851.M* (holotype, BISH not seen). Holotype missing at least since October 1987.

*Sicyos microcarpus* var. *kalaupapaensis* H. St. John, Phytologia 63: 188. 1987. TYPE: Hawaiian Islands [U.S.A.]. Moloka'i: Kalaupapa beach, 24 May 1918, *J. F. Rock 14061* (holotype, BISH-519999; isotypes, BISH [2]).

*Sicyos microcarpus* var. *kamoensis* H. St. John, Phytologia 63: 189. 1987. TYPE: Hawaiian Islands [U.S.A.]. Lana'i: Kamo, 1740 ft., 16 May 1929, *G. C. Munro 418* (holotype, BISH-91960; isotypes, BISH [3]).

*Sicyos microcarpus* subsp. *kanepuuensis* H. St. John, Phytologia 63: 189. 1987. TYPE: Hawaiian Islands [U.S.A.]. Lana'i: Kanepu'u, 28 May 1927, *G. C. Munro 10* (holotype, BISH-190149; isotype, BISH).

*Sicyos microcarpus* var. *kauensis* H. St. John, Phytologia 63: 191. 1987. TYPE: Hawaiian Islands [U.S.A.]. Hawai'i: Ka'u, on lava, Apr. 1911, *J. F. Rock s.n.* (holotype, BISH-190169).

*Sicyos microcarpus* var. *kilaueaensis* H. St. John, Phytologia 63: 188. 1987. TYPE: Hawaiian Islands [U.S.A.]. Hawai'i: Apua, Hawai'i [Volcanoes] National Park, on slope of pali, 2000 ft., 10 May 1943, *G. O. Fagerlund & A. M. Mitchell 544* (holotype, BISH-519906).

*Sicyos microcarpus* var. *koeleensis* H. St. John, Phytologia 63: 190. 1987. TYPE: Hawaiian Islands [U.S.A.]. Lana'i: mts. near Ko'ele, June 1913, *C. N. Forbes 95.L* (holotype, BISH-519997; isotypes, BISH [4]).

*Sicyos microcarpus* var. *koloaensis* H. St. John, Phytologia 63: 191. 1987. TYPE: Hawaiian Islands [U.S.A.]. Kaua'i: Koloa Dist., ahupua'a of Koloa, 1 mi. W of Poipu Beach Park, 10 ft., 13 Apr. 1963, *C. H. Lamoureux 2346* (holotype, BISH-520014; isotypes, BISH [3]).

*Sicyos microcarpus* subsp. et var. *lanaiensis* H. St. John, Phytologia 63: 189. 1987. TYPE: Hawaiian Islands [U.S.A.]. Lana'i: Kolulu, 24 Mar. 1916, *G. C. Munro*

535 (holotype, BISH-92754; isotypes, BISH [3]). Two of the isotypes have additional collection data, possibly written by Forbes, including a date of "3/29/16." This appears to be a misinterpretation of the original handwritten label on the holotype.

- Sicyos microcarpus* var. *meeboldii* H. St. John, *Phytologia* 63: 191. 1987. TYPE: Hawaiian Islands [U.S.A.]. Hawai'i: North Kona, Kaupulehu, 3 mi. E of Huehue, 2000 ft., 23 June 1948, G. L. Webster & R. L. Wilbur 1837 (holotype, BISH-632025; isotype, TEX not seen). St. John erroneously published the collector number as Webster 1537, which is a specimen of *Phyllostegia grandiflora* collected on O'ahu.
- Sicyos microcarpus* var. *obovoideis* H. St. John, *Phytologia* 63: 191. 1987. TYPE: Hawaiian Islands [U.S.A.]. Maui: s.l., s.d., H. F. Clay s.n. (holotype, BISH-522864; isotype(s), BISH, CTBG, US). Although published by St. John as collected by Clay, the label clearly states: "Sent from Maui to H. F. Clay; given by him to Bishop Museum May 16, 1954." Published as "obovoideis," but St. John's handwriting on the specimen label is "obovoideus."
- Sicyos microcarpus* var. *oniniensis* H. St. John, *Phytologia* 63: 190. 1987. TYPE: Hawaiian Islands [U.S.A.]. Moloka'i: Onini Gulch bottom, 2200 ft., 21 Jan. 1973, L. E. Bishop 1690 (holotype, BISH-513075).
- Sicyos microcarpus* var. *paneensis* H. St. John, *Phytologia* 63: 188. 1987. TYPE: Hawaiian Islands [U.S.A.]. O'ahu: Kamokuiki Valley, between Pu'u Iki and Pu'u Kamaohanui, 12 Apr. 1933, O. Degener 18035 (holotype, NY-58617; isotypes, NY [2]).
- Sicyos microcarpus* var. *pohakeaensis* H. St. John, *Phytologia* 63: 188. 1987. TYPE: Hawaiian Islands [U.S.A.]. Maui: West Maui, Pohakea Gulch, arid valley floor, 11 July 1927, O. Degener 18400 (holotype, NY-58614).
- Sicyos microcarpus* subsp. *puberulus* H. St. John, *Phytologia* 63: 191. 1987. TYPE: Hawaiian Islands [U.S.A.]. O'ahu: Wai'anae, arid roadside near town, 10 Apr. 1932, O. Degener 18391 (holotype, US-1862308; isotypes, NY [2]).
- Sicyos microcarpus* var. *trilobata* H. St. John, *Phytologia* 63: 190. 1987. TYPE: Hawaiian Islands [U.S.A.]. Moloka'i: Makolelau Gulch, 760 m, 15 May 1973, W. C. Gagné 676 (holotype, BISH-522869).
- Sicyos microcarpus* var. *woolfordii* H. St. John, *Phytologia* 63: 189. 1987. TYPE: Hawaiian Islands [U.S.A.]. O'ahu: 'Ewa coral flats, 11 Mar. 1957, H. A. Woolford s.n. (holotype, BISH-522862; isotype, BISH).
- Sicyos niger* H. St. John, *Phytologia* 63: 192. 1987. TYPE: Hawaiian Islands [U.S.A.]. Maui: East Maui, Hana Dist., Nu'u, 10 ft., 28 Mar. 1971, H. St. John 26771 (holotype, BISH-522866; isotypes, BISH [7], US).
- Sicyocarya atrimaculata* H. St. John, *Phytologia* 64: 51. 1987. Syn. nov. TYPE: Hawaiian Islands [U.S.A.]. Maui: East Maui, below Haleakala Ranch pipeline, 3900 ft., 20 Feb. 1928, G. C. Munro 801 (holotype, BISH-521555; isotype, BISH).
- Sicyocarya rostrata* H. St. John, *Phytologia* 64: 54. 1987. Syn. nov. TYPE: Hawaiian Islands [U.S.A.]. Kaua'i: Waimea Dist., in Queen's Pond area of Barking Sands, 10 ft., 26 Feb. 1976, D. Herbst & S. Ishikawa 5691A (holotype, BISH-520406; isotype, BISH).
- John) H. St. John, *Bot. Jahrb. Syst.* 99: 491. 1978. TYPE: Hawaiian Islands [U.S.A.]. Laysan: NW end of lagoon in a flat area, 19 Sep. 1964, C. R. Long 2370 (holotype, BISH-502486 and -502487). Original plate for illustration also mounted and in the collection (BISH). St. John cited "other collections with the same data, Long 2365, 2368, and 2369 (Univ. Hawaii) are evidently duplicates and therefore isotypes." But they must be considered paratypes, since they have different collection numbers.
- 14. *Sicyos waimanaloensis*** H. St. John, *Phytologia* 63: 192. 1987. TYPE: Hawaiian Islands [U.S.A.]. O'ahu: talus SW of Waimanalo Landing, 10 Apr. 1936, O. Degener 17416 (holotype, US-1864571; isotypes, BISH [2], NY [3]). Degener distributed another collection (type of *Cladocarpa waimeaensis* H. St. John, a synonym of *Sicyos hispidus*) from a different locality and date under the same number.
- Sicyocarya kaenaensis* H. St. John, *Phytologia* 64: 51. 1987. Syn. nov. TYPE: Hawaiian Islands [U.S.A.]. O'ahu: Wai'anae Mts., Ka'ena Point, bluffs halfway between Pu'u Pueo and Pu'u Manini, 300 ft., 6 Apr. 1976, G. D. Carr 898 (holotype, BISH-520399; isotypes, BISH [2]).
- Sicyocarya kokocrateris* H. St. John, *Phytologia* 64: 52. 1987. Syn. nov. TYPE: Hawaiian Islands [U.S.A.]. O'ahu: Koko Crater, Maunaloa, on crest of S rim, in thicket, 250 ft., 1 Apr. 1979, H. St. John 26936 (holotype, BISH-521548; isotypes, BISH [2], US).
- Sicyocarya paucifrugalis* H. St. John, *Phytologia* 64: 53. 1987. Syn. nov. TYPE: Hawaiian Islands [U.S.A.]. Moloka'i: Waiakuilani Gulch bottom, 2700 ft., 25 Jan. 1973, L. E. Bishop & T. Pratt 1766 (holotype, BISH-521554).
- Sicyocarya protrusa* H. St. John, *Phytologia* 64: 54. 1987. Syn. nov. TYPE: Hawaiian Islands [U.S.A.]. Lana'i: Maunalei Gulch, Maunalei, 500 ft., 12 Apr. 1938, H. St. John, A. J. Eames & E. Y. Hosaka 18818 (holotype, BISH-521551; isotypes, BISH [2]).

#### INVALIDLY PUBLISHED NAMES

- Cladocarpa kawelaensis* H. St. John, *Phytologia* 63: 185. 1987. No type cited for this name (ICBN Article 37.3; Greuter et al., 1994). = *Sicyos hispidus*
- Sicyocarya cruralis* H. St. John, *Phytologia* 64: 51. 1987. *Sicyocarya hawaiiensis* H. St. John, *Phytologia* 64: 51. 1987. The same collection, Rémy 539 (P), was cited as type of both names. Neither name is validly published under ICBN Art. 34.2 (Greuter et al., 1994). = *Sicyos macrophyllus*
- Sicyos erostratus* H. St. John var. *kealiaensis* H. St. John, *Phytologia* 63: 187. 1987. *Sicyos microcarpus* var. *kealiaensis* H. St. John, *Phytologia* 63: 189. 1987. The same collection, W. C. Gagné 671 (BISH [2]), was cited as type of both names. Neither name is validly published under ICBN Art. 34.2 (Greuter et

**13. *Sicyos semitonsus*** H. St. John, *Pacific Sci.* 24: 453. 1970. *Cladocarpa semitonsa* (H. St.

al., 1994). Telford included *Sicyos erostratus* var. *kealiaensis* in *S. erostratus*; he placed *Sicyos microcarpus* var. *kealiaensis* in the synonymy of *S. pachycarpus*. = *Sicyos erostratus*

EXCLUDED NAME

*Sicyos fauriei* H. Léveillé, Repert. Spec. Nov. Regni Veg. 10: 150. 1911. TYPE: Hawaiian Islands [U.S.A.], O'ahu: Kaliki [Kalihi], Oct. 1909, U. Faurie 877 (holotype, P not seen; isotype, BM not seen). The type of this name is a specimen of the common weed, *Momordica charantia* L. (see Lauener, 1980).

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