

DIAGNOSES OF NEW SPECIES OF CLADOCARPA (CUCURBITACEAE)

HAWAIIAN PLANT STUDIES 142

Harold St. John

Bishop Museum Box 19000A, Honolulu, Hawaii 96817, USA

Unless otherwise located, the type specimens are in the Bishop Museum, Honolulu, Hawaii

Cladocarpa capitata sp. nov.

Laminis 11-13.5 cm longis reniformibus vadosiore palmatis lobatis, floribus masculis cum lobis corollae 1.2 mm longis, floribus femineis cum lobis corollae 1.5 mm longis ovatis, nucibus cum corporibus 5 mm longis ovoideis. Typus: Hawaii I., Puu Anahulu, D. Herbst 5,393,

C. discoidea sp. nov.

Laminis 7-8.7 cm longis cordatis suborbicularibus vadosiore palmatis lobatis, floribus masculis in gemma 2 mm diametro, nucibus 7-8 mm longis corporibus 6-7 mm longis obovoideis puberulis seminibus 4.2 mm longis ellipsoideis. Typus: Maui I., O. Degener 9,893 (NY).

C. Harrisonae sp. nov.

Laminis 2.2-2.5 cm diametro cordate suborbicularibus 1/3 lobatis, floribus masculis cum lobis corollae 2 mm longis ovati-deltoides, nucibus cum corporibus 7-8 mm longis ellipsoideis puberulis, seminibus 2.9-4 mm longis late ellipsoideis. Typus: Molokai I., Kalaupapa, B. Harrison.

C. Herbstii sp. nov.

Laminis 8-10.5 cm longis cordate suborbicularibus 1/4 lobatis, floribus masculis cum lobis corollae 2.5 mm longis ovatis acutis, floribus femineis cum lobis corollae 1.3-1.5 mm longis ovatis subacutis, nucibus 7-8.5 mm longis ovoideis acutis puberulis, seminibus 4.5 mm longis ellipsoideis. Typus: Kauai, Barking Sands, D. Herbst 5,691.

C. Julesii sp. nov.

Laminis 5-7 cm diametro suborbicularibus non lobatis, floribus masculis cum lobis corollae 2-2.5 mm longis ovatis subacutis, floribus femineis cum lobis corollae 0.6-0.7 mm longis ovatis subacutis. Typus: Kauai I., J. Remy 542. (P).

C. kawelaensis sp. nov.

Laminis 3.7 cm longis cordate suborbicularibus vadosiore lobatis, floribus masculis cum lobis corollae 1.3-1.5 mm longis ovatis, floribus femineis cum lobis corollae 1.2 mm longis ovatis, nucibus 7-7.5 mm diametro hemisphaericis puberulis, seminibus 4 mm longis suborbicularibus. Typus: Molokai I., Kawela,

C. lanaiensis sp. nov.

Laminis 6-11 cm longis cordate suborbicularibus vadosiore lobatis, floribus masculis cum lobis corollae 2 mm longis deltoideis, floribus femineis cum lobis corollae 0.7 mm longis ovatis acutis, nucibus 5-6 mm longis obovoideis puberulis, seminibus 2 mm longis late ellipsoideis. Typus: Lanai I., Maunalei, J. D. Jacobi 1,979.

C. lehuaensis sp. nov.

Laminis 3.2-8 cm latis late cordatis minime lobatis, floribus masculis cum lobis corollae 1.7 mm longis late ovatis subacutis, floribus femineis cum lobis corollae 0.8 mm longis ovatis acutis, nucibus 7 mm diametro late ellipsoideis pilosulis, seminibus 4 mm longis ellipsoideis. Typus: Lehua I., W. King 3,017 (HAW).

C. Munroi sp. nov.

Laminis 9-16 mm diametro suborbicularibus 1/3-3/8-lobatis, floribus masculis cum lobis corollae 4-4.4 mm longis ovatis, floribus femineis cum lobis corollae 1-1.2 mm longis ovatis, nucibus 9 mm longis lanceoloideis puberulis. Typus: Lanai I., Kaena, G. C. Munro 87.

C. pauciramosa sp. nov.

Laminis 7-10 cm diametro cordate suborbicularibus 1/4-2/5-lobatis, floribus masculis cum lobis corollae 2 mm longis ovatis acutis, floribus femineis cum lobis corollae 1.5 mm longis lanceolatis, nucibus 5.5-6 mm longis lanceoloideis puberulis, seminibus 4 mm longis ellipsoideis. Typus: Kauai I., Polihale, C. Christensen 326.

C. umbellata sp. nov.

Laminis 4-7.2 cm longis late hastatis 1/4-lobatis, floribus masculis cum lobis corollae 2-2.5 mm longis ovatis subacutis, floribus femineis cum lobis corollae 1.5 mm longis late ovatis subacutis, nucibus 7-8 mm longis late obovoideis pilosulis, seminibus 3.8 mm longis late ellipsoideis. Typus: Hawaii I., Huehue, W. H. Hatheway 509.

C. waimeaensis sp. nov.

Laminis 7-11.5 cm diametro suborbicularibus 1/3-2/3-lobatis, floribus masculis cum lobis corollae 2.7-3 mm longis ovatis subacutis, floribus femineis cum lobis corollae 1.8-2 mm longis ovatis, nucibus 6 mm longis lanceoloideis glabris, seminibus 4 mm longis ellipsoideis. Typus: Hawaii I., Waimea, O. Degener 17,416 (NY).

DIAGNOSES OF NEW SPECIES OF SICYOS (CUCURBITACEAE)

HAWAIIAN PLANT STUDIES 143

Harold St. John

Bishop Museum, Box 19000A, Honolulu, Hawaii 96817, USA

Included are diagnoses of various new species, subspecies, and varieties of Hawaiian Sicyos (Cucurbitaceae). Unless otherwise specified, the types are in the Bishop Museum, Honolulu.

Sicyos erostratus, var. erostratus sp. & var. nov.

Laminis 1/8-lobatis, paniculis masculis cum pedicellis 2-3 mm longis, gemmis puberulis, lobis perianthium 1.8 mm longis ovatis acutis, floribus femineis cum lobis 0.5-0.6 mm longis ellipticis acutis, utriculis 3-3.4 mm longis ovoideis erostratis, seminibus 1.8-2 mm longis late ellipsoideis. Typus: Molokai I., Onini, L. E. Bishop 1,714.

S. erostratus St. John, var. Herbstii var. nov.

Laminis 6-11 cm longis 1/7-1/9-lobatis, paniculis masculis cum pedicellis 3-7 mm longis, lobis perianthium 1.8-2 mm longis ovatis subacutis glandulose puberulis, floribus femineis cum lobis 0.8-0.9 mm longis ovatis subacutis glandulose puberulis, utriculis 5 mm longis ellipsoideis hirsutis, seminibus 2 mm longis ellipsoideis. Typus: Molokai I., Kalamalua, D. Herbst 2,944.

S. erostratus St. John, var. kealiaensis var. nov.

Laminis 9.5-12 cm longis, paniculis masculis cum pedicellis 2-3.5 mm longis glandulose hirsutulis, lobis perianthium 1.4 mm longis late deltoideis, floribus femineis cum 3 lobis 0.4 mm longis hemisphaericis, utriculis 3-4 mm longis obovoideis parte libera capitate glandulose hirsuta, seminibus 2.3-2.6 mm longis obovoideis. Typus: Oahu I., Kealia Gulch, W. C. Gagne 671.

S. erostratus St. John, var. paucipilosus var. nov.

Laminis 12-13 cm longis 2/3-lobatis, paniculis masculis cum gemmis pauce puberulis, lobis perianthium 1.5 mm longis deltoidei-ovatis, floribus femineis cum lobis perianthium 0.7-0.9 mm longis ellipticis acutis, utriculis cum corpore 2.2-2.6 mm longo ellipsoideo, seminibus 2.3 mm longis late ellipsoideis. Typus: Molokai I., Onini, L. E. Bishop 1,713.

S. Hillebrandii St. John, var. Anunu var. nov.

Nucibus 11-13 mm longis parte libera corporis puberulis, seminibus 3.6 mm longis. Typus: Hawaii I., Kapapala, C. N. Forbes 400.H.

S. Hillebrandii St. John, var. Douglasii var. nov.

Nucibus 10-13 mm longis parte libera ad centrum pilosula parte supera puberula, seminibus 3.2-3.5 mm longis. Typus: Hawaii I., N. slope Mauna Kea,

O. Degener & Greenwell 21,364.

S. Hillebrandii St. John, var. *lanaiensis* var. nov.

Nucibus 11-12 mm longis late deltoideo-obovoideis ad circulum aequinoctialem hirsutulum ad apicem puberulum, rostro 2.5-4 mm longo ad basim puberulo, seminibus 3.5 mm longo. Typus: Lanai I., Kamoia, G. C. Munro 417.

S. microcarpus H. Mann, subsp. *microcarpus*, var.

Forbesii var. nov.

Laminis 2.8-4.5 cm longis 1/5-2/3-lobatis, paniculis masculis cum pedicellis 1-2 mm longis hirsutulis, lobis perianthium 1.3-1.8 mm longis ovatis subacutis glandulose puberulis, floribus femineis cum 3 lobis corollae 0.5 mm longis ovatis, glandulose puberulis, utriculis 4.5-6.5 mm longis corpore anguste oblanceoloideis dimidio libero puberulo rostro 1.5-1.7 mm longo puberulo, seminibus 1.7-1.8 mm longis ellipsoideis. Typus: Maui I., Maunahooma, C. N. Forbes 11.M.

S. microcarpus H. Mann, subsp. *microcarpus*, var.

kalaupapaensis var. nov.

Laminis 4.5-8.2 cm longis 1/6-1/9-lobatis, paniculis masculis cum pedicellis 4-5 mm longis puberulis, lobis corollae 2.5-2.7 mm longis late lanceolatis, floribus femineis cum 4 lobis corollae 0.8 mm longis ellipticis acutis puberulis, utriculis 2-2.5 mm longis ellipticis supra puberulis rostro 0.5 mm longo, seminibus 1.7 mm longis late ellipsoideis. Typus: Molokai I., Kalaupapa, J. F. Rock 14,061.

S. microcarpus H. Mann, subsp. *microcarpus*, var.

kilaueaensis var. nov.

Laminis 4-6.5 cm longis 2/5-lobatis, paniculis masculis cum pedicellis 2-3.5 mm longis hirsutulis, utriculis 4.5 mm longis obovoideis viscidis parte supera hirsutula rostro 1-1.2 mm longo glabro. Typus: Hawaii I., Apua, G. O. Farerlund 544.

S. microcarpus H. Mann, subsp. *microcarpus*, var.

paneensis var. nov.

Laminis 12.4-18.5 cm longis 1/11-lobatis, paniculis masculis cum pedicellis 2-3.5 mm longis, lobis corollae 2-2.3 mm longis lancei-ovatis, floribus femineis cum 5 lobis perianthium 0.7 mm longis ovatis, utriculis 3-3.3 mm longis late obovoideis dimidio supera puberulo rostro 0.3 mm longo puberulo, seminibus 2.5 mm longis ellipsoideis. Typus: Oahu I., Kamokuiki, O. Degener 18,035. (NY).

S. microcarpus H. Mann, subsp. *microcarpus*, var.

pohakeaensis var. nov.

Laminis 7 cm diametro 1/5-1/6-lobatis, paniculis masculis cum pedicellis 1-3 mm longis puberulis, lobis perianthium 2-2.5 mm longis ovatis, floribus femineis cum 3 lobis corollae 0.8 mm longis ellipticis, utriculis 5.5-6 mm longis oblanceoloideis parte supera puberula rostro 1.5-1.6 mm longo puberulo, semin-

ibus 2.3-2.4 mm longis ellipsoideis. Typus: Maui I., Poha-
kea, O. Degener 18,400 (NY).

S. microcarpus H. Mann, subsp. *microcarpus*, var.
Woolfordii var. nov.

Laminis 5-9 cm longis 1/3-1/2-lobatis, paniculis
masculis cum pedicellis 3-5 mm longis puberulis, lobis
perianthium 2.5-3 mm longis lanceolatis obtusis, flor-
ibus femineis cum 5 lobis corollae 0.9-1.1 mm longis
lanceolatis subacutis, utriculis 7-8 mm longis obovoid-
eis parte supera puberula, rostro 3-4 mm longo puber-
ulo, seminibus 2.5 mm longis late ellipsoideis. Typus:
Oahu I., March 11, 1957, H. A. Woolford.

S. microcarpus H. Mann, subsp. *kanepuuensis* subsp. nov.

Laminis 3.5-7 cm longis 2/3-1/8-lobatis, panic-
ulis masculis cum pedicellis 1-3 mm longis puberulis,
4 lobis perianthium 1.4 mm longis ovati-suborbicular-
ibus acutis, floribus femineis cum 4 lobis corollae 0.4
mm longis ellipticis, utriculis 5.5 mm longis late
rhombicis parte supera glandulose puberula rostro
0.5-0.8 mm longo puberulo, seminibus 2.5 mm longis
elliptici-discoideis. Typus: Lanai I., Kanepuu,
G. C. Munro 10.

S. microcarpus H. Mann, subsp. *lanaiensis*, var.
lanaiensis subsp. & var. nov.

Laminis 5-7.5 cm longis cordatis 1/7-1/10-lobatis,
paniculis masculis cum pedicellis 2-4 mm longis hirsutis,
lobis perianthium 2-2.3 mm longis ovatis subacutis,
floribus femineis cum 4 lobis 0.7 mm longis ellipticis
acutis, utriculis 4-4.6 mm longis late obovoideis
tertia supera catenulate hirsuta rostro 0.5-1 mm longo,
seminibus 2 mm longis ellipsoideis. Typus: Lanai I.,
Kalulu, G. C. Munro 535.

S. microcarpus H. Mann, subsp. *lanaiensis* St. John,
var. *kealiaensis* var. nov.

Laminis 9.5-12 cm longis orbiculari-reniformibus
sublobatis, inflorescentia mascula cum pedicellis
2-2.5 mm longis glandulose hirsutulis, lobis perianthium
1.4 mm longis late deltoideis obtusis, floribus femin-
eis cum 3 lobis 0.7 mm longis hemisphaericis, utriculis
3-4 mm longis obovoideis parte libere glandulose caten-
ulate hirsuta, seminibus 2.3-2.6 mm longis obovoideis.
Typus: Oahu I., Kealia, W. C. Gagne 671.

S. microcarpus H. Mann, subsp. *lanaiensis* St. John,
var. *kamoaensis* var. nov.

Laminis 8-15 cm longis reniformibus fere elobatis,
floribus masculis cum lobis perianthium 1.3 mm longis
late ovatis, floribus femineis cum 4 lobis corollae
1.5 mm longis angustiore ellipticis obtusis, utriculis
4.5-5.2 mm longis late ellipsoideis dimidio supero

glandulose catenulate hirsutulo, rostro 0.3-1 mm longo, seminibus 2.5 mm longis late ellipsoideis. Typus: Lanai I., Komoa, G. C. Munro 418.

S. microcarpus H. Mann, subsp. *lanaiensis* St. John, var. *koeleensis* var. nov.

Laminis 6-19 cm diametro suborbicularibus 1/13-1/23-lobatis, paniculis masculis cum pedicellis 2-3 mm longis hirsutulis, lobis perianthium 2-2.2 mm longis ellipticis subacutis, floribus femineis cum 5 lobis 1.3 mm longis ellipticis subacutis, utriculis 5 mm longis ellipticis rhomboideis parte supera libera catenulate hirsutula, seminibus 1.5-1.7 mm longis late ellipsoid-eis. Typus: Lanai I., Koele, C. N. Forbes 95.L.

S. microcarpus H. Mann, subsp. *lanaiensis* St. John, var. *oniniensis* var. nov.

Laminis 6-9 cm longis cordatis 1/5-1/3-lobatis, paniculis masculis cum pedicellis 1-2 mm longis, floribus cum 4 lobis perianthium 1.2 mm longis ovatis, floribus femineis cum 4 lobis corollae 0.8 mm longis ovatis, utriculis 4 mm longis lanceoloideis in medio hirsutis. Typus: Molokai I., Onini Gulch, L. E. Bishop 1,690.

S. microcarpus H. Mann, subsp. *lanaiensis* St. John, var. *trilobata* var. nov.

Laminis 3-5 cm longis cordate suborbicularibus 1/3-1/2-lobatis, paniculis masculis cum pedicellis 3-8 mm longis glandulose puberulis, floribus cum lobis corollae 1.8 mm longis ovate deltoideis acutis, floribus femineis cum 3 lobis corollae 0.6-0.7 mm longis ovatis subacutis, utriculis 3.6-4 mm longis ovoideis dimidio supero hirsuto, rostro 0.7-1 mm longo, seminibus 2.5 mm longis ellipsoideis. Typus: Molokai I., Mokolelau, W. C. Gagne 676.

S. microcarpus H. Mann, subsp. & var. *laysanensis* comb. nov.

S. laysanensis St. John, Pacif. Sci. 24: 440-443, fig. 1, 1970.

S. microcarpus H. Mann, subsp. *laysanensis* (St. John) St. John, var. *ewaensis* var. nov.

Laminis 3.5-6.5 cm longis suborbicularibus 1/9-lobatis, paniculis masculis cum pedicellis 2-3.5 mm longis, lobis perianthium 1.5 mm longis anguste ellipticis, floribus femineis cum lobis corollae 0.8-0.9 mm longis ellipticis puberulis, utriculis 6-7 mm longis late obovoideis puberulis, rostro 1.5-2.5 mm longo, seminibus 2-2.5 mm longis ellipsoid-eis. Typus: Oahu I., K. M. Nagata 1,656.

S. microcarpus H. Mann, subsp. *laysanensis* (St. John)
St. John, var. *haleakalaensis* var. nov.

Laminis 3.5-8 cm longis reniformibus 1/6-1/5-lobatis infra nervis puberulis, paniculis masculis cum pedicellis 1.5-2.5 mm longis glandulose puberulis, gemma caitate glandulose puberula, utriculis 5.5-7 mm longis lanceoloideis, seminibus 2-2.3 mm longis late ellipsoideis. Typus: Maui I., Waiopai, C. N. Forbes 1,851.M.

S. microcarpus H. Mann, subsp. *laysanensis* (St. John)
St. John, var. *kauensis* var. nov.

Laminis 3-5.5 cm diametro suborbicularibus 1/4-lobatis infra hispidulis, paniculis masculis cum pedicellis 1-2 mm longis puberulis, lobis perianthium 3.5-4 mm longis ovatis acutis, floribus femineis cum 4 lobis corollae 1 mm longis ellipticis acutis, utriculis 6-6.3 mm longis oblanceoloideis dimidio supero catenulate pilosulo rostro 1.5-2 mm longo. Typus: Hawaii I., Kau, J. F. Rock.

S. microcarpus H. Mann, subsp. *laysanensis* (St. John)
St. John, var. *koloaensis* var. nov.

Laminis 6-12 cm diametro suborbicularibus 1/6-1/8-lobatis infra hispidulis, paniculis masculis cum pedicellis 1-3 mm longis puberulis, gemma puberula, lobis perianthium 1.8 mm longis ovatis acutis, floribus femineis cum 4 lobis corollae 0.6-0.7 mm longis anguste ovatis, utriculis 7-7.3 mm longis oblanceoloideis parte supera puberula, rostro 1.6-2 mm longo. Typus: Kauai I., Poipu, C. H. Lamoureux 2,346.

S. microcarpus H. Mann, subsp. *laysanensis* (St. John)
St. John, var. *Meeboldii* var. nov.

Laminis 3-6 cm latis reniformibus 1/5-1/6-lobatis infra hispidulis paniculis masculis cum pedicellis 2-3 mm longis glandulose puberulis, lobis perianthium 2-2.5 mm longis ovatis subacutis, utriculis 6-7.2 mm longis obovoideis tertia apicali in basi puberula, rostro 1-1.5 mm longo. Typus: Hawaii I., Huehue, G. L. Webster 1,537.

S. microcarpus H. Mann, subsp. *laysanensis* (St. John)
St. John, var. *obovoideis* var. nov.

Laminis 4-8.2 cm longis ovatis 1/5-7/8-lobatis infra hirsutulis, paniculis masculis puberulis, utriculis 6-7.2 mm longis oblanceoloideis parte supera puberula, seminibus 3-3.3 mm longis ellipsoideis. Typus: Maui I., H. F. Clay.

S. microcarpus H. Mann, subsp. *puberulus* subsp. nov.

Laminis 6.3-8 cm diametro suborbicularibus 1/8-1/11-lobatis infra puberulis, paniculis masculis cum pedicellis 2-3 mm longis glandulose puberulis, gemmis puberulis, lobis perianthium 2.8-3.2 mm longis ovatis floribus femineis cum 4 lobis corollae 1.5-1.7 mm longis lanceolatis subobtusis, utriculis 7-7.5 mm

longis obcvoideis parte libera glandulose puberula, seminibus 2.7-3 mm longis ellipsoideis. Typus: Oahu I., Waianae, O. Degener 18,391 (US).

S. niger sp. nov.

Laminis 3.5-12 cm diametro cordate suborbicularibus 1/6-1/4-lobatis infra puberulis, paniculis masculis cum pedicellis 2-3 mm longis puberulis, gemmis puberulis, lobis perianthium 2.1-2.4 mm longis ellipticis, utriculis 6-7.5 mm longis oblanceoloides glabris, rostro 1.5-2 mm longo, seminibus 2-2.2 mm longis late ellipsoideis.

Typus: Maui I., Nuu, H. St. John 26,771.

S. waimanaloensis sp. nov.

Laminis 4-9 cm diametro suborbicularibus infra hispidulis, paniculis masculis cum pedicellis 1-2 mm longis, lobis perianthium 2.2-2.5 mm longis ovatis glabris, floribus femineis cum lobis corollae 1.5-2 mm longis ovatis, utriculis 7-9 mm longis lanceoloideis glabris, rostro 2.5-3 mm longo, seminibus 3.8 mm longis ovati-ellipsoideis. Typus: Oahu I., Waimanalo, O. Degener 17,416 (US).



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