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Taxonomy, distribution and conservation status of the fern genus *Cyclodium* (*Dryopteridaceae*)

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Appendix 1. Specimens examined and selected.

1. *Cyclodium akawaiorum* A. R. Sm.

GUYANA: Cuyuni–Mazaruni, top of waterfall above Kako river, 05°36'53.2"N, 60°42'4.9"W, 677 m, 18 May 2009, K. J. Wurdack & al. 5061 (NY, US); ± 2 km NW of northern tip of “prow” of Roraima, 05°15'N, 60°35'W, 1000–1500 m, 23 Feb 1989, W. Hahn & D. Gopaul 5424 (CAY, US); riverine rain forest, on E side of Waruma river (a tributary of Kako & Mazaruni rivers), NNW of N prow of Mt Roraima, 05°21'20"N, 60°45'50"W, [518] m, 1 Apr 1978, J. F. Warrington & al. 167 (UC); N–W facing slopes of Mt Roraima, vicinity of Camp 6 (near end of “Waruma Trail”), N of “prow” W, 05°16'30"N, 60°44'45"W, 1280–1310 m, s.d. [collected from cultivation on 9 Jul 1980], J. F. Warrington & al. K. E. R. 1207 (K, UC); upper Mazaruni river region, Karowtipu mountain, 05°45'N, 60°35'W, 920 m, 17 Apr 1987, B. M. B. Boom & D. Gopaul 7412 (NY); upper Potaro river region, Wokomung base camp and vicinity, 05°05'N, 59°50'W, 1070–1160 m, 29 Jun 1989, B. M. B. Boom & G. J. Samuels 8931 (NY); upper Potaro river region, Wokomung base camp and vicinity, 05°05'N, 59°50'W, 1070–1160 m, 29 Jun 1989, B. M. B. Boom & G. J. Samuels 8942 (NY); Potaro–Siparuni, Mt Ayanganna, east face, plateau above first escarpment, 2 km N of camp, 05°20'0920'9"N, 59°56'46"W, 1100 m, 14 Jun 2001, H. D. Clarke & al. 9150 (CAY); Pakaraima mts, Mt Wokomung, Wusupubaru Creek, 2 km from juncture with Suruwabaru Creek, 05°03'N, 59°53'W, 975–1125 m, 13 Feb 1993, T. W. Henkel & al. 1372 (CAY, US); Pakaraima mts, Mt Wokomung, W slope on sub-plateau near head of Mo-toy-mabaru Creek, 05°04'N, 59°53'W, 1150–1200 m, 11 Nov 1993, T. W. Henkel & al. 4269 (CAY, NY, US); Pakaraima mts, Mt Wokomung, NE-facing slopes above second of four escarpments, 05°5'55.9"N, 59°50'15.6"W, 1400 m, 1 Jul 2003, H. D. Clarke & al. 10414 (US); Pakaraima mts, Mt Wokomung, NE facing slopes above second of four escarpments, 05°04'N, 59°53'W, 1000–1100 m, 12 Nov 1993, T. W. Henkel & al. 4321 (CAY, US); Pakaraima mts, Mt Wokomung, toe slope 0.5–2 km NW from northern escarpment, 05°04'N, 59°53'W, 1300–1400 m, 13 Nov 1993, T. W. Henkel & al. 4349 (CAY, MO, US). — **VENEZUELA:** Bolívar, northwestern slopes of Cerro Venamo, southeast of camp 125, [05°59'51"N,

61°24'38"W], 1200 m, 14 Apr 1960, J. A. Steyermark & Nilsson 124 (US); Mt Roraima, Paikwa Trail, on tree trunk, [05°09'16"N, 60°47'28"W], [1402] m, 28 Oct 1973, R. Persaud 110 (NY).

2. *Cyclodium alansmithii* Bohn & Labiak

GUYANA: Cuyuni–Mazaruni, below 1st escarpment (of four) of Kamakusa mountain, 0–1.5 mi. SW of Micrandra (4th) Camp, 05°51'08"N, 60°11'17"W, 840 m, 29 May 2012, K. J. Wurdack & al. 5749 (CAY, US); Kako river, Chinakuruk mountain, cliff foot of mountain, [05°31'47"N, 60°42'39"W], 1226 m, 21 May 2009, K. M. Redden & al. 6709 (NY, US); At headwaters of Kangu river, W branch, ± 4 km NW of E peak of Mt Ayanganna, first talus slope of plateau, 05°25'N, 60°00'W, 700 m, 5 Mar 1987, J. J. Pipoly & al. 11045 (US); upper Mazaruni river basin, [05°22'03"N, 59°56'52"W], 800 m, 27 Jul 1960, S. S. Tillett & al. 44942 (MO, NY, US); Potaro–Siparuni, upper Kuribrong river, 05°34'20"N, 59°54'22"W, 475 m, 20 Mar 2011, C. E. Zartman & al. 9172 (INPA, US); Marina falls, 05°22'43"N, 59°28'93"W, 449 m, 28 Mar 2011, C. E. Zartman & al. 9359 (INPA, US); Mt Ayanganna, east face, camp at base of first of four escarpments, 05°22'22"N, 59°57'34"W, 1120 m, 16 Jun 2001, H. D. Clarke & al. 9199 (NY, US); Potaro river gorge, [05°10'59"N, 59°28'00"W], 17 May 1944, B. Maguire & D. B. Fanshawe 23525 (NY, US). — **VENEZUELA:** Bolívar, Chimantá Massif, Southwestern-facing forested slopes of Chimantá-tepuí (Torono-tepuí) between Base Camp and steep slopes above valley of Río Tirica, [05°18'43"N, 62°07'23"W], 1000–1400 m, 15 May 1953, J. A. Steyermark 75376 (F, US).

3. *Cyclodium calophyllum* (C. V. Morton) A. R. Sm.

BRAZIL: Mato Grosso, Vila Bela da Santíssima Trindade, Fazenda Cabixi, junto ao Rio Cabixi, c. 12 km da divisa com Rondônia, 13°S, 60°10'10"W, 11–14 Jan 1987, J. Prado & A. Salino 18 (UC, UEC). — **COLOMBIA:** Santander, vicinity of Barranca Bermeja, Magdalena valley, between Sogamoso and Colorado rivers, [07°12'19"N, 73°48'39"W], 100–500 m, 4 Sep 1934, O. Haught 1353 (NY, US); Catatumbo, Campo Tibú, [08°28'18"N, 72°55'08"W], 200 m, 16 May 1959, Bischler 2461 (COL). — **PERU:** Loreto, about 2

km N of village San Antonio at lower Río Marañón, 04°32'S, 73°38'W, 100–200 m, 15 Jan 1996, *H. Tuomisto & al. 8113* (UC); Maynas, R. B. Alpuhuayo-Mishana, [03°58'25"S, 73°33'33"W], 122 m, 23 Nov 2000, *A. Flores 1602* (NY); upper Río Itaya, about 5 km SSE of village Carbajal, 04°19'S, 73°35'W, 100–200 m, 5 Mar 1996, *H. Tuomisto & al. 10068* (UC). — **VENEZUELA:** Bolívar, Sifontes, en la base de los tepuyes (Paraitepuy y Guytepu) del sector “La Hoyada” (Paraitepuy), 7 km al N-W del Caserío “El Pílon”, 58 km al W de Sta Elena de Uairén, 04°40'N, 61°33'W, 850–1100, 23 Oct 1986, *C. Aymard 4862* (UC); Selvas húmedas del Río Oris, a la altura de “Los Picachos”, 06°8'N, 63°55'W, 175 m, 13 Apr 1987, *B. Stergios 10604* (UC); Zulia, 6 km ENE of Río de Oro, 09°06'N, 72°50'W, 100–350 m, 28 Mar 1982, *R. L. Liesner & A. González 13307* (MO, UC).

4. *Cyclodium chocoense* (A. R. Sm.) Bohn & Labiak

COLOMBIA: Antioquia, Anorí, Vereda Puntadero o la Concha abajo, quebradas El Salto y El Claro, sector la Concha abajo, 07°17'01.2"N, 75°05'17.1"W, 720 m, 16 Jan 2004, *W. D. Rodríguez & al. 4461* (COL); Mutatá, Finca El Dárien, [07°14'47"N, 76°26'00"W], 200 m, 18 May 1976, *L. Atehortúa & H. J. Hoyos 216* (HUA); Corregimiento Longaní, margen derecha del Río Longaní, 2 km al norte de Mutatá, [07°14'21"N, 76°26'03"W], 80–100 m, 19 Nov 1987, *A. Arbeláez & al. 248* (HUA); San Luis, Vía Medellín-Bogotá, Quebrada La Tebaida, 06°8'N, 75°10'W, 1010–1060 m, 22 Jun 1987, *R. Callejas & al. 4002* (HUA, MO, NY); Planta Providencia, 26 km S and 23 km W (air) of Zaragoza, in valley of río Anorí between Dos Bocas and Anorí, 07°13'N, 75°03'W, 400–700 m, 2 Mar 1977, *S. White & al. 140* (HUA); Planta Providencia, 26 km S and 23 km W (air) of Zaragoza, in valley of río Anorí between Dos Bocas and Anorí, 07°13'N, 75°03'W, 400–700 m, 13 Jun 1976, *J. D. Sheperd 432* (HUA); 28 km SW of Zaragoza, valley of Río Anorí in area surrounding confluence of Quebrada La Tirana and Río Anorí, approx. 3 km upriver from Plant Providencia, 07°18'N, 75°04'W, 400–700 m, 4 Mar 1977, *W. S. Alverson & al. 143* (HUA, NY); Bajo Calima, Buenaventura, Secretaria de Agricultura, [03°59'47"N, 76°58'35"W], 80 m, 31 Mar 1984, *L. A. de Escobar & al. 4000* (HUA); Bajo Calima, Buenaventura, Secretaria de Agricultura, [03°59'47"N, 76°58'35"W], 70 m, 1 Apr 1984, *L. A. de Escobar & J. Folsom 4025* (HUA); Caldas, Sanamá, El Carmén, 05°31'36"N, 75°02'26"W, 7 May 1992, *B. César 6973* (HUA); Cauca, Timbiquí, east side of Gorgona island, dense forest along stream, [02°49'58"N, 77°42'24"W], 50–100 m, 11 Feb 1939, *E. P. Killip & H. Garcia 33172* (COL, US); Chocó, Bahía Solano, dense forest along Quebrada Jella, near ciudad Mutis, [06°12'34"N, 77°18'08"W], 0–75 m, 21–23 Feb 1939, *E. P. Killip & H. Garcia 33622* (COL, US); km

11 between El Valle and ciudad Mutis, [06°13'47"N, 77°22'54"W], 50 m, 15 Feb 1986, *J. R. I. Wood 5296* (COL); low hills behind beach 1–1.5 km NW of El Valle, N of lagoon, [06°07'48"N, 77°26'26"W], 25–75 m, 13 Feb 1971, *D. B. Lellinger & E. R. de la Sota 343* (COL, US); near Punta San Francisco Solano, c. 10 km NE of Puerto Mutis (Bahía Solano), [06°14'40"N, 77°23'15"W], 10–100 m, 27 Jan 1971, *D. B. Lellinger & E. R. de la Sota 82* (HUA, US); NW side of Alto del Buey, trail along ridge from confluence of forks of río Mutatá above Río Dos Bocas toward top of Alto del Buey, [06°08'08"N, 77°19'38"W], 950–1450 m, 8–10 Feb 1971, *D. B. Lellinger & E. R. de la Sota 211* (HUA, US); NW side of Alto del Buey, trail along ridge from confluence of forks of río Mutatá above Río Dos Bocas toward top of Alto del Buey [06°08'08"N, 77°19'38"W], 1450–1750 m, 9 Feb 1971, *D. B. Lellinger & E. R. de la Sota 253* (COL, US); Canton Del San Pablo, Pan-American Highway (under construction), c. 10 km W of las Animas, [05°17'41"N, 76°41'01"W], 100 m, 12 Jan 1979, *A. Gentry & E. Renteria 24057* (COL, MO); Condoto, Carretera Andagoya-Condoto, cerca de Andagoya, 05°06'N, 76°40'W, 14 Apr 1979, *L. E. Forero & al. 5288* (COL, MO); Istmina, dense forest near junction of Río Condoto and río San Juan, [05°05'50"N, 76°41'47"W], 100–150 m, 20 Apr 1939, *E. P. Killip 35084* (COL, US); Río Bicordó, arriba de Noanamá, orillas del río, 04°42'N, 76°55'W, 6 Apr 1979, *L. E. Forero & al. 4753* (COL); Río El Salto (tributary of Río Suruco), 9 km W of Andagoya, [05°05'32"N, 76°44'17"W], 75–100 m, 23 Feb 1971, *D. B. Lellinger & E. R. de la Sota 478* (COL, US); Río Fujiadó, afluente del Río San Juan, 04°36'N, 76°54'W, 7 Apr 1979, *L. E. Forero & al. 4813* (COL, MO); Litoral Del Bajo San Juan, Region del río Pichimá, comunidad indígena Waunana, 04°25'N, 77°17'W, 23 Nov 1976, *L. E. Forero 746* (COL); Nóvita, Quebrada Mánamo, afluente del Río Tamaná, cerrito en la margen izquierda, 04°57'N, 76°38'W, 11 Apr 1979, *L. E. Forero & al. 5051* (COL, MO); Nuqui, Corregimiento Termales, Quebrada Piedra Piedra, [05°42'32"N, 77°15'55"W], 0–25 m, 6 Sep 1994, *P. Acevedo-Rodríguez & al. 6807* (HUA, US); Quibdó, Carretera Quibdó-Tutunendo, 15 km de Quibdó, [05°43'39"N, 76°36'10"W], 45 m, 6 Sep 1976, *L. E. Forero & R. Jaramillo 2528* (COL, MO); Margen izquierda del río Munguidó, afluente del río Atrato, en pequeño cerro cerca de Altagracia, [05°42'38"N, 76°46'27"W], 50 m, 4 May 1975, *L. E. Forero & al. 1535* (COL, MO); Río Serrano, afluente del río Atrato, 4–6 km arriba del Guayabal, [05°44'37"N, 76°38'37"W], 50 m, 29 Apr 1975, *L. E. Forero & al. 1342* (COL, NY); Tadó, Corcovada region, upper Río San Juan, ridge along Yeracüí valley, [05°20'15"N, 76°15'05"W], 200–275 m, 25–26 Apr 1939, *E. P. Killip 35287* (COL, MO, US); Mojarras de Tadó, 8.5 km E of Istmina, [05°16'14"N, 76°33'04"W],

150–250 m, 20 Feb 1971, *D. B. Lellinger & E. R. de la Sota 417* (COL, US); Unión Panamericana, Quebrada Peña Negra, 8 km W of Quibdó-Istmina road on new Pan American Highway, [05°17'04"N, 76°39'33"W], 90 m, 10 Jan 1979, *A. Gentry & E. Renteria E. 23937* (COL, HUA, MO); Nariño, Barbacoas, al W de El Diviso, [01°22'40"N, 78°13'59"W], 350 m, 3 Jun 1973, *N. Leist 2158* (COL); Carretera Barbacoas-Junin, km 8, [01°32'58"N, 78°05'44"W], 140 m, 18 Dec 1972, *W. Hagemann & N. Leist 1702* (COL); San Andres de Tumaco, km 80, [01°45'33"N, 78°47'07"W], 300 m, 1 Nov 1967, *L. E. Mora 4222* (COL); Valle del Cauca, Buenaventura, about 18 km east of Buenaventura, [03°53'56"N, 76°58'58"W], 50 m, 14 Feb 1939, *E. P. Killip & H. Garcia 33246* (COL, US); Bajo Calima, [03°53'04"N, 77°00'39"W], 2 Apr 1984, *L. A. de Escobar 4061* (HUA); Bajo Calima, Concesión Pulpapel/Buenaventura, 03°55'N, 77°00'W, 100 m, 20 Sep 1984, *B. M. Monsalve 433* (UC); Corregimiento San Cipriano, Reserva Natural de Escalerete, bajando de la casa blanca, [03°55'59"N, 77°10'00"W], 100 m, 14 Apr 1993, *A. Cruz & al. 4044* (COL); *J. M. Costa* del Pacífico, río Cajambre, Quebrada del Corosal, [03°30'47"N, 77°14'03"W], 17 May 1944, *J. Cuatrecasas 17731* (F, UC); dense forest near highway bridge over Río Dagua, about 20 km east of Buenaventura, [03°50'34"N, 76°47'26"W], 40 m, 15 Feb 1939, *E. P. Killip & H. Garcia 33320* (COL, US); Hoya del río San Juan, alrededores de Palestina, 04°10'N, 77°10'W, 5 m, 26 Mar 1979, *L. E. Forero & al. 4035* (COL, MO); Quebrada Taparal, afluente del río San Juan, alrededores de la comunidad indígena Waunaná de Taparalito, 04°10'N, 77°10'W, 5–10 m, 28 Mar 1979, *L. E. Forero & al. 4269* (COL); Quebrada La Sierpe, afluente del Río San Juan, 04°10'N, 77°10'W, 5 m, 1 Apr 1979, *L. E. Forero & R. Jaramillo 4449* (COL, MO); Quebrada La Sierpe, afluente del Río San Juan, 04°10'N, 77°10'W, 5 m, 1 Apr 1979, *L. E. Forero & R. Jaramillo 4450* (COL); Dagua, Agua Clara, along highway from Buenaventura to Cali, [03°44'50"N, 76°43'11"W], 100 m, 6 Jun 1944, *E. P. Killip & J. Cuatrecasas 38991* (US); Carretera Cali-Buenaventura, río Danubio inferior, [03°43'38"N, 76°40'09"W], 200 m, 15 Sep 1967, *W. Hagemann 424* (COL). — **ECUADOR:** Esmeraldas, San Lorenzo, Territorio Indígena Awá, Mataje village, 500 m west of Río Mataje, 01°13'00"N, 78°34'01"W, 150 m, 14 Feb 2000, *D. Neill & al. 12453* (UC, MO); further along trail to Río Mataje), Awá encampment from Río Palaví encampment, 01°07'N, 78°37'W, 200–230 m, 11 Feb 1988, *W. S. Hoover & al. 3935* (UC, MO). — **PANAMA:** Panama, Cerro Azul, cabecera del río San Cristobal, [09°13'52"N, 79°21'02"W], 900 m, 28 Dec 1986, *I. A. Valdespino & E. Rios 289* (UC, US); Cerro Jefé, [09°13'58"N, 79°21'01"W], 16 Feb 1985, *H. van der Werff & H. van Hardeveld 6986* (MO, UC); San Blas, Kuna Yala, Hills

of Sperdi, near Puerto Obaldía, San Blas coast, [08°39'57"N, 77°25'05"W], 20–200 m, Sep 1911, *H. Pittier 4415* (US).

5. *Cyclodium guianense* (Klotzsch) van der Werff ex L. D. Gómez

BOLIVIA: Cochabamba, Shinahota, [17°0'S, 65°13'59"W], 306 m, 2009, *P. Weigelt 90147* (GOET, LPB, TUR, Z); Santa Cruz: Velasco, Parque Nacional Noel Kempff Mercado, Campamento Huanchaca, 13°54'S, 60°48'W, 650 m, 18 May 1994, *L. Arroyo & al. 716, 717* (MO, UC, USZ). — **BRAZIL:** Acre, Projeto de Colonização Sta Luzia, a 45km de Cruzeiro do Sul da estrada Cruzeiro do Sul–Rio Branco (BR 364), 07°45'S, 72°15'W, 13 Sep 1985, *J. Jangoux & al. 85–34* (INPA); Alagoas, Ibataguara, Usina Serra Grande, Engenho Coimbra, Grota do Dudé, 09°00'03"S, 35°51'14.2"W, 390–415 m, 9 Feb 2001, *M. R. Pietrobom & A. C. P. Santiago 4822* (UFP, NY); Between Murici e Messias, Estação Ecológica de Murici, 09°11'05"S–09°16'48"S, 35°45'20"W–35°55'12"W, 100–650 m, 6 May 2009, *A. F. N. Pereira & I. A. A. Silva 1066* (UFP); Amapá, Rivière Haut Jari, [01°17'4.4"S, 53°31' 2.8"W], 400 m, 17 Aug 1993, *J. J. de Granville & al. 12328* (CAY, P, US); Amazonas, Manaus, km 167, BR 174, Manaus–Caracará road, [02°6'33"S, 59°59'34"W], 18 Sep 1974, *G. T. Prance & al. 22686* (INPA, NY); Presidente Figueiredo, Usina Hidrelétrica de Balbina, em trilha da grade do PPBio, aproximadamente 1h e 30m de barco, 20°13'45"S, 59°17'39"W, 4 Oct 2006, *G. Zuquim 237* (INPA); São Gabriel da Cachoeira, Rio Negro, vicinity of Base Camp, Cano Tucano, Rio Cauaburi, [00°8'15.7"S, 66°4'50.4"W], 125 m, 24 Nov 1965, *B. Maguire & al. 60279* (MO, NY, UC); Mato Grosso, Aripuanã, c. 37 km da MT 170, 4 km de Cidade Morena direção Juínia, 09°31'S, 60°30'W, 300 m, 10 Oct 1996, *P. G. Windisch 8603* (BHCB); Nova Canaã do Norte, Resgate de FLORA da UHE Colíder, Lote A de supressão, Floresta do “Planalto dos Parecís”, 10°57'42"S, 55°45'29"W, 274 m, 17 Apr 2015, *M. E. Engels & D. C. Dias 3206* (MBM); Pará, Brejo Grande do Araguaia, road BR 22, Capanema to Maranhão, vicinity of Cachoeira, km 96, [05°40'44"S, 48°19'13"W], 30 Oct 1965, *G. T. Prance & T. D. Pennington 1825* (MO, NY, RB, US); Canaã dos Carajás, Floresta Nacional dos Carajás, Serra sul, corpo A, 06°18'36"S, 50°27'16"W, 582 m, 29 Jun 2010, *F. Marino & al. 2422* (BHCB); Goianésia, Zona de preservação da Vida Silvestre, Base 4, Trilha 8, 04°15'0.6"–04°15'47"S, 49°31'01.7"–49°30'17.6"W, 102–179 m, 25 Sep 2008, *R. S. Fernandes & S. Maciel 299* (RB); Marabá, Coleta no acampamento azul, [05°25'45"S, 49°8'31"W], 24 May 1982, *R. S. Secco & al. 303* (NY); Paraupébas, Serra dos Carajás, AMZA camp AZUL, an abandoned manganese exploration camp, 06°06'S, 50°17'W, 500–550 m, 31 May 1982, C.

R. Sperling & al. 5907 (MO, NY); Pernambuco, Ibateguara, Usina Serra Grande, Engenho Coimbra, Grota do Taquari/Porcos, 09°00'19"S, 35°51'50.8"W, 390–415 m, 10 Feb 2001, *M. R. Pietrobom & A. C. P. Santiago 4888* (UFP); Jaqueira, Usina Colônia, (Mata Córrego da Guariba), 08°43'0.2"S, 35°50'20.2"W, 652 m, 3 Apr 2002, *M. S. Lopes & M. R. Pietrobom 575* (MBM, UFP); Lagoa dos Gatos, RPPN Pedra D'Antas, [08°41'39"S, 35°51'22"W], 12 Aug 2012, *R. P. Farias & al. 34* (UFP); São Vicente Ferrer, Complexo do Maciço do Mascarenhas, "Mata do Estado", 07°35'00"S, 35°30'00"W, 304–394 m, 17 Aug 1998, *M. R. Pietrobom 4384* (MBM, UFP); Timbaúba, Complexo da Serra do Mascarenhas, Usina Cruangi, Engenho Água Azul, 07°36'47.5"S, 35°23'26.7"W, 304–394 m, 30 Jan 2001, *M. R. Pietrobom & A. C. P. Santiago 4759* (MBM, UFP); Vicência, Pedra Mole, Mata do Engenho Jundiá, [07°37'27"S, 35°19'56"W], 24 Aug 1961, *S. Tavares 765* (UFP); Rondônia, Espigão do Oeste, 11°31'S, 61°00'W, 260 m, 10 Dec 2006, *M. S. da J. M. Costa 33* (UPCB); Roraima, Cantá, upper slopes of Serra da Lua, 02°25–29'N, 60°11–14'W, 1200 m, 24 Jan 1969, *G. T. Prance & al. 9452* (INPA, MO, NY, US); Caracará, Parque Nacional do Viruá, rio Baruana, em morro à esquerda da trilha perpendicular ao módulo do PPBio, [01°16'49"S, 61°0'47"W], 2 Dec 2006, *F. A. Carvalho & R. Nascimento 1093* (INPA). — **COLOMBIA:** Caquetá, Solano, upper Apaporis basin, Rio Apaporis near confluence of Rios Ajaju and Macaya, cerro del Castillo, [00°6'54"N, 71°20'42"W], 548 m, 27 Jul 1943, *R. E. Schultes 5661* (US). — **FRENCH GUIANA:** Arrondissement of Cayenne, Camopi, Embouchure de la rivière Grand Tamouri (affluent du Camopi), Saut Bambaye, [02°52'19"N, 52°56'37"W], 15 Mar 1974, *J. J. de Granville 2123* (CAY); Gros Montagne, Mont Bakra, Région des Emérillons, 03°18'N, 52°57'W, 550 m, 15 Apr 1993, *G. Cremers 13114* (CAY, UC); Regina, Mont Chauve, 03°49'N, 52°44'W, 100 m, 19 Apr 1997, *G. Cremers & F. Crozier 15105A* (CAY); Roura, Montagne Tortue, Bassin de la Comté, 04°18'N, 52°28'W, 200 m, 2 Jun 1988, *G. Cremers 10063* (CAY); Saint-Ellie, Base camp at Pic Matécho, c. 22.5 km NE of Les Eaux Claires, 03°45'N, 53°2'W, 500 m, 10 Sep 2000, *S. Mori & N. P. Smith 25094* (CAY, NY, P); Saint-Laurent-du-Maroni, Mana, Haute crique Baboune, affluent de la rivière Mana, [05°39'52"N, 53°46'36"W], 31 Jul 1981, *G. Cremers 7370* (CAY); Maripasoula, Montagne de l'inini, extrêmité NW, 03°30'40"N, 53°36'W, 550–600 m, 15 Aug 1985, *G. Cremers & al. 8913* (CAY, INPA); Papaïchton, Monts Kotika, plateau latéritique sommital, 03°55'10"N, 54°11'10"W, 730 m, 21 Feb 2005, *J. J. de Granville & al. 16867* (CAY, UC); Monts Atachi Bakka, Mont Atachi Bacca, región de l'inini, plateau sommitale, 03°33'N, 53°55'W, 650 m, 16 Jan 1989, *G. Cremers & al. 10271* (CAY, UC, US); Paul-Isnard, Montagne Lucifer, sud du plateau sommital, bassin amont de la crique Reine, à 80 km au sud de Saint-Laure, 04°46'N, 53°55'W, 500 m, 20 Nov 1999, *M. Boudrie & al. 3428* (CAY); Saül, Sentier Botanique, E of Eaux Claires, at one of tributary streams of St Eloi river, 03°37'N, 53°12'W, 250 m, 1 Sep 1994, *S. Mori & al. 23753* (CAY). — **GUYANA:** upper Takutu-upper Essequibo, Essequibo, Acarai mts, Tinarnau Creek at NW base of Tinarnau Peak, 01°16'N, 58°36'W, 500 m, 5 Mar 1994, *T. W. Henkel & al. 4970* (CAY, MO, US). — **SURINAME:** Brokopondo, Tafelberg, wet walls, cataract, lower north ridge, [04°39'51"N, 55°14'30"W], 19 Sep 1944, *B. Maguire 24815* (US); Sipaliwini, Amékan Tabiki, Nassau mountains, Marowijne river, [04°47'60"N, 54°36'0"W], 400–550 m, 1 Jan 1955, *B. Maguire & al. 39064* (MO, NY, US); Boven Coppename, Grace Camp, Tafelberg mountain, hardwood forest on north side of Grace Kreek camp, 1 km north of Grace falls, 03°54'32"N, 56°12'44"W, 800–820 m, 4 Jul 1998, *T. Hawkins 1885* (MO, NY). — **TRINIDAD:** locality unknown, [10°21'33"N, 61°13'50"W], 1877–80, *A. Fendler 97* (NY, UC, US). — **VENEZUELA:** Amazonas, Atabapo, Alto Rio Casiquiare, 15 km al S-W de Tama Tama, 03°1'N, 65°57'W, 160 m, 6 Mar 1990, *C. G. Aymard & L. Delgado 8487* (MO, UC); Alto Orinoco, [02°45'43"N, 64°42'5"W], 3 Oct 1951, *L. Croizat 782* (F, NY); Atures, Base E del Cerro Cuao, Caño Piedra, 75 km SE de Puerto Ayacucho, 05°05'N, 67°19'W, 1050 m, Sep 1989, *A. Fernandes & al. 6169, 6174* (UC); Rio Negro, Neblina Base Camp of Río Barío (=Rio Mawarinuma), Lima de las Piñas (Pineapple Ridge), 1.5 km south of Neblina Base Camp, a saddle on upland trail, 00°49'15"N, 66°09'38"W, 215 m, 15 Feb 1985, *J. Beitel 85197* (NY); Mavaca, Rio Metacuni, pic 2, frente no. 4, selvas húmedas siempre-verdes de lomerío y ladera, faldas del Tepuy-Altiplanicie Sedukerawa y áreas ayacentes, 03°15'N, 64°56'W, 210–650 m, 26 Feb 1990, *B. Stergios & J. Velazco 14244-a* (UC); Bolívar, Barceloneta, Bosques a lo largo de la frontera Venezolano-Brasilera, noreste de la Serranía Pia-soi (Pia-shauhy, Pia- Savi), 03°53'N, 62°46'W, 650–800 m, 5–6 Jan 1962, *J. A. Steyermark 90656* (NY, US); Canaima, Río Ataperé, sabanas de Guayaraca, camino hacia el Auyantepui, cuenca alta del Río Cucurital, 05°43'16"N, 62°32'21"W, 1150 m, 5 Nov 2002, *L. Rodríguez & O. Hokche 1603* (UC); Raúl Leoni, Asukupá (Los Frijoles), 16 km (por aire) al sur de Uriman, 05°15'N, 62°40'W, 0 m, Mar 1986, *A. Fernandez 2360* (UC); Delta Amacuro, East side of Río Cuyubini, vicinity of large granitic boulders, [08°6'55"N, 63°7'5"W], 100–200 m, 18 Nov 1960, *J. A. Steyermark 87654* (MO, NY, US); Táchira, Uribante, Empresa Las Cuervas, near La Fundación, 08°50'N, 71°47'W, 900 m, 7 Jul 1983, *H. van der Werff & A. González 4990* (MO, NY).

6. *Cyclodium heterodon* (Schrad.) T. Moore

BRAZIL: Bahia, Almadina, Serra do Corcovado, 9.8 km ao SW de Coaraci na estrada para Almadina, daí N até Fazenda São José – Proprietário Senhor Francisco, 14°42'S, 39°36'12"W, 650–750 m, 29 Jan 2005, *F. B. Matos & al.* 228 (CEPEC, NY, MBM, RBR, UPCB); Arataca, Serra do Peito de Moça, estrada que liga Arataca à Una, ramal c. 22.4 km de Arataca com entrada no Assentamento Santo Antônio, RPPN “Caminho das Pedras”, 15°23'30"S, 39°20'30"W, 750 m, 6 Aug 2006, *P. H. Labiak & al.* 3697 (CEPEC, NY, UPCB); Camacan, RPPN Serra Bonita, 9.7 km de Camacã na estrada para Jacarecí, daí 6 km SW na estrada para a RPPN e Torre, 15°23'30"S, 39°33'55"W, 835 m, 3 Mar 2006, *F. B. Matos & al.* 1095 (CEPEC, MBM, UPCB); Coaraci, Serra do Corcovado, próximo à propriedade do Sr. Vitorino, 14°15'35"S, 39°35'27"W, 550 m, 10 Dec 2014, *A. Salino & al.* 16010 (BHCB); Maraú, Rod. BR 030, trecho Ubaitaba/Maraú, km 33, Folha SD 24 (14-39c), 16°25'19"S, 39°10'59"W, 5 Feb 1979, *S. Mori & al.* 11351a (CEPEC, RB); Porto Seguro, BR-5, K.18, [16°25'19"S, 39°07'48"W], 25 Aug 1961, *O. Duarte* 6053 (RB, UPCB); Prado, Reserva Florestal da Brasil de Holanda Industrias S.A., entrance at km 18 east of Itamaraju on road to Prado, 8 km from entrance, 14°29'59"S, 39°20'W, 22 Oct 1993, *W. W. Thomas & al.* 10135 (ALCB, CEPEC, MBM); Uruçuca, Estrada de Serra Grande para Uruçuca, mata da torre do celular, área do inventário do plano de manejo do Parque Estadual Serra do Conduru, 14°29'6"S, 39°6'54"W, 380 m, 18 Jul 2005, *F. B. Matos & al.* 694 (CEPEC, UPCB); Ceará, Locality unknown, s.d., *G. Gardner* 1218 (P); Espírito Santo, Águia Branca, Prop. Sr. Voito, 18°58'43"S, 40°44'49"W, 180–250 m, 5 Jul 2007, *R. R. Vervloet & al.* 2826 (MBML, UPCB); Cariacica, Reserva Biológica Duas Bocas, localidade de Alegre, trilha do Pau Oco, 20°17'29"S, 40°31'10"W, 600 m, 18 Jan 2009, *P. H. Labiak & al.* 5174 (CEPEC, MBML, RB, UPCB); Conceição da Barra, Floresta Nacional do Rio Preto, 18°22'23"S, 39°50'59"W, 5 m, 10 Jun 2009, *A. Salino & al.* 14303 (BHCB); Itaguaçu, Alto Limoeiro, 19°48'08"S, 40°50'44"W, 11 May 1946, *A. C. Brade & al.* 18130 (NY, RB, UPCB); Nova Venécia, [18°42'41"S, 40°23'33"W], 14 Nov 1953, *A. P. Duarte & J. C. Gomes* 3610 (RB, UPCB); Santa Teresa, localidade de Julião, floresta de costa semidecídua, abaixo de Inselberg, 19°44'50"S, 40°32'16"W, 500 m, 10 Jul 2007, *P. H. Labiak & al.* 3987 (CEPEC, MBM, MBML, NY, RB, UPCB); Sooretama, Reserva Biológica de Sooretama, floresta de tabuleiro, 19°01'21"S, 39°58'28"W, 20 m, 12 May 2008, *G. Heringer & al.* 13342 (BHCB); Minas Gerais, Caratinga, Estação biológica de Caratinga, [19°43'28"S, 41°48'39"W], 7 Jul 1987, *I. R. Andrade & J. M. Costa* 151 (BHCB); Jequitinhonha, Reserva Biológica da mata escura, 16°21'04"S, 40°59'58"W, 660 m, 26 Mar 2008,

A. Salino & al. 13168 (BHCB); Pocrane, Serra do Azeite, margens do rio Manhuaçu, 19°30'07"S, 41°38'40"W, 300 m, 1 Jun 2009, *T. E. Almeida & al.* 2012 (BHCB); Santa Maria do Salto, Divisa entre Bahia e Minas Gerais, Fazenda Duas Barras, Reserva do Alto Cariri, trilha da caixa d'água, 16°24'23"S, 40°3'16"W, 950 m, 8 Feb 2006, *F. B. Matos & al.* 905 (CEPEC, UPCB); Pernambuco, Jaqueira, Mata da Pedra do Cruzeiro, 08°43'21.1"S, 48°30'16"W, 600–700 m, 26 Mar 2003, *R. A. G. Gueiros* 238 (UFP); Lagoa dos Gatos, RPPN Pedra D'Antas, [08°41'39"S, 35°51'22"W], 12 Aug 2012, *R. P. Farias & al.* 169 (UFP); São Vicente Ferrer, Complexo do Maciço do Mascarenhas, “Mata do Estado”, 07°35'00"S, 35°30'00"W, 640 m, 31 Mar 1998, *M. R. Pietrobom* 4207 (NY, MBM, UFP); Timbaúba, Complexo da Serra do Mascarenhas, Usina Cruangi, Engenho Água Azul, 07°37'0.6"S, 35°23'28.9"W, 304–394 m, 31 Mar 2001, *M. R. Pietrobom & A. C. Santiago* 5050 (MBM, UFP); Rio de Janeiro, Dois Irmãos, 22°59'37"S, 43°14'15"W, Jul 1946, *O. Duarte* 154 (NY, RB); Santa Maria Madalena, Pedra Dubois, [21°57'13"S, 42°00'44"W], 800 m, 27 Feb 1935, *A. C. Brade* 14341 (RB, UPCB); Silva Jardim, Reserva Biológica de Poço das Antas, trilha do Morro do Calcário, ponto 850, 22°35'11"S, 42°15'00"W, 100 m, 5 Feb 1993, *A. Piratininga & al.* 22 (MBM, RB).

7. *Cyclodium inerme* (Fée) A. R. Sm.

BRAZIL: Amapá, Porto Grande, Cupixi, fazenda Boa Esperança, 00°32'N, 51°47'W, 14 Sep 2001, *L. A. Pereira & J. P. Reis* 627 (BHCB); Porto de Moz, Rio Oiapoque, Igarapé Pontanarri, [02°09'42"S, 52°55'42"W], 14 Feb 1950, *R. L. Froes* 26025 (IAN, UC); Amazonas, Manaus-São Gabriel, slopes and summit of Serra de Jacumim, NW of Santa Isabel, 00°25'S, 65°32'W, 100 m, 2 Jul 1979, *J. M. Poole* 1822 (INPA, NY, BHCB); Médio Rio Negro, Rio Marié, local Maraúna, [01°14'56"S, 68°43'53"W], 6 Jul 1979, *L. A. Maia & al.* 441 (INPA); Presidente Figueiredo, terra-firme adjacente ao lago da Usina Hidrelétrica de Balbina, em trilha da grade do PPBio, aproximadamente 1h e 30m de barco, 01°47'29"S, 59°17'10"W, 27 Sep 2006, *G. Zuquim & A. C. C. Jakovac* 205 (INPA); São Gabriel da Cachoeira, Parque Nacional do Pico da Neblina – Trilha para o Pico da Neblina, entre o sítio Yanomami na beira da “cachoeira” e o acampamento Bebedouro velho, 00°41'54"S, 65°56'40"W, 25 Dec 2004, *F. A. Carvalho & al.* 224 (INPA); Mato Grosso, Novo Mundo, Parque Estadual Cristalino, mata próxima a estrada, 09°35'22.0"S, 55°52'37.4"W, 342 m, 14 Jan 2009, *G. S. Henicka & al.* 293 (NY); Pará, Ananindeua, tapaná, near Pará, [01°17'45"S, 48°24'12"W], 29 Oct 1929, *E. P. Killip* 30335 (NY, US); Belém, Ilha de Mosqueiro, mata da Fazenda Itatuba, 01°10'56.7"S, 48°22'36.2"W, 23 Nov 2005, *J. M. Costa & M. R.*

Pietrobon 383 (RB); Estação Ecologia do Jari, projeto reserva genética, SEMA, between campina and road firme, 00°75'S, 52°30'W, 13 Oct 1987, *H. T. Beck & al.* 81 (NY); Parauapebas, Serra da Bocaina, 06°18'53"S, 49°53'37"W, 670 m, 13 Feb 2012, *A. J. Arruda & al.* 603 (BHC, NY); Monte Alegre, Trilha para a cachoeira Chuva de Prata no Igarapé do Ambrósio, 01°26'11"S, 54°32'40"W, 302 m, 9 Dec 2015, *T. E. Almeida & al.* 4176 (BHC, HSTM). — **FRENCH GUIANA:** Arrondissement of Cayenne, Camopi, Montagne Cacato, SE de Cayenne, [02°20'58"N, 53°12'36"W], 17 Jan 1983, *G. Cremers* 7828 (CAY); Gros Montagne, Mont Bakra – Région de Emérillons, 03°18'N, 52°57'W, 450 m, 17 Apr 1993, *G. Cremers & J. J. de Granville* 13163 (CAY, UC); Matouri, Mont Grand Matoury – Ile de Cayenne, [04°52'00"N, 52°21'W], 60 m, 27 Mar 1995, *G. Cremers & al.* 13797 (CAY); Mont Inéri, Bassin de l'Approuague, 04°22'N, 52°10'W, 300 m, 9 Sep 1997, *G. Cremers & al.* 15364 (CAY); Montagne Plomb, 05°00'N, 52°57'W, 4 Jul 2005, *C. Delnatte* 8 (CAY); Montsinéry-Tonnegrade, bassin de la crique Bellevue-Nord, à 11 km au Sud de Montsinéry, le long de la piste partant vers le S-O depuis la D5, à 2.5 km à l'ouest du pont des Cascades, 04°47'N, 52°29'W, 8 Oct 2000, *V. Hequet* 931 (CAY); Ouanari, Route Regina – Saint Georges, D.Z. 5 – P.K. 43 – Bassin du Ba, 04°3'N, 52°1'W, 60 m, 4 Sep 1991, *G. Cremers & S. Gautier* 12096 (CAY); Regina, Montagne de Kaw, environs du camp Caiman, [04°29'54"N, 52°03'27"W], 11 Jun 1979, *G. Cremers* 5697 (CAY, UC); Roura, Route de l'est au PK 85, piste vers Bélizon a environ 1 km de son embranchement, [04°26'04"N, 52°22'45"W], 22 Mar 1982, *G. Cremers* 7724 (CAY); Saint-Ellie, Camp Eugène – Bassin du Sinnamary, forêt sur cuirasses latéritiques, layon R4 entre T2 e S3, 04°51'N, 53°4'W, 100 m, 7 Feb 1995, *G. Cremers & J. J. de Granville* 13721 (CAY, UC); Sinnamary: Rivière Sinnamary à petit saut, [05°23'43"N, 52°57'47"W], 12 Feb 1979, *G. Cremers* 5389 (CAY); Saint-Laurent-du-Maroni, Citron, Ascencion du massif Lucifer au depart de Citron, [04°44'38"N, 53°56'32"W], 100 m, 9 Nov 1982, *F. Billiet & B. Jadin* 1624 (CAY); Edwin, Monts Dékou-Dékou, versant est, 04°41.940'N, 53°55.9'W, 300–500 m, 31 May 2008, *C. Delnatte* 1832 (CAY); Maripasoula, Gombaya Soula, bassin du Maroni, camp I, 03°37'N, 53°58'W, 125 m, 6 Jan 1989, *G. Cremers & al.* 10135a (CAY, UC); Papaichton, Mont Kotika, versant ouest, 03°55'N, 54°12'W, 200–600 m, 9 Sep 2007, *C. Delnatte* 1251 (CAY, UC); Saül, Layon du Grand "Circuit Boeuf Mort", p.k. 5.4 env., forêt sur colline, [03°34'36"N, 53°10'51"W], 13 Dec 1971, *J. J. de Granville* 886 (CAY). — **GUYANA:** upper Demerara-Berbice, Pubu, Arisau mountain; Essequibo R., western peak of mountain, 05°19'N, 58°32'W, 250 m, 14 Jun 1995, *A. Chanderbali & D. Gopaul* 77 (CAY); upper Takutu-upper Essequibo, Kurukuru-Baibari, Gunn's, Essequibo river, 01°39'N, 58°37'W, 240–490 m, 7 Sep 1989, *M. J. Jansen-Jacobs & al.* 1507 (CAY, NY, P); Bolívar, Guaniamo, Hoja NB20-5, serreria Maigualida, frente 9, HP 4, quebrada que dreña hacia el riachuelo y sus riberas, 06°9.3'N, 65°53.7'W, 250–350 m, 17 Apr 1989, *B. Stergios & L. Delgado* 13814 (UC); Cuyuni-Mazaruni, Kamarang, Right bank of Kamarang river c. 1.5 miles above Kamarang, along trail up to 2 miles N from river, 05°53'N, 60°40'W, 487–579 m, 16 Oct 1985, *D. B. Lellingner* 2000 (CAY, US); Kokadai, upper Mazaruni river region, vicinity of Kako, na Akawaio Indian village on Kako river near its junction with Mazaruni river, 05°45'N, 60°35'W, 500 m, 14 Apr 1987, *B. B. Boom & D. Gopaul* 7296 (NY); Paruima, 1.5 km S summit of Konuktipu, [05°48'04"N, 61°03'25"W], 690 m, 22 Jul 1997, *H. D. Clarke & al.* 5946 (NY); Potaro-Siparuni, Pakaraima mountains, upper Ireng R. watershed, E bank Kaatnang river at base of Achiknang, 04°59'N, 60°08'W, 700 m, 19 Jul 1994, *T. W. Henkel & M. Chin* 5723 (CAY, INPA); Tumatumari, Base/Saddle of Eagle Mountain, [05°14'06"N, 59°05'12"W], 102 m, 9 Sep 2006, *K. M. Redden & al.* 4126 (CAY). — **SURINAME:** Brokopondo, Brownsveg, Brownsberg Forest, [04°57'23"N, 55°10'15"W], 450 m, 1 Aug 1974, *R. Ingham & H. Ingham* 33935 (NY); Kabelstation, Brownsberg Nature Park, Koemboeval, forest on laterite near waterfall, 04°56'N, 55°11'W, 400–500 m, 8 Mar 2003, *M. J. M. Christenhusz & S. Bollendorff* 2625 (NY); Sipaliwini, Amékan Tabiki, Nassau mountains, Marowijne river, 04°48'N, 54°36'W, 400–550 m, 1 Jan 1955, *B. Maguire & al.* 39071 (NY); Boven Coppename, Summit of Tafelberg, between Lisa creek and Augustus creek, c. 100 m from western rim of tepui, 03°55'30"N, 56°11'50"W, 575 m, 2 Jul 1998, *R. Evans & al.* 3026 (UC); Kabalebo, Exploration of Wilhelmina gebergte, 03°36'W–3°41'W, 56°30'N–56°34' N, 275 m, 31 Jul 1963, *H. S. Irwin & al.* 54523 (NY); Tapanahony, Hab. in Montibus, qui dicuntur Nassau, in ravine along small creek near km 6.8, 04°56'33"N, 54°27'46"W, 2 Mar 1949, *J. Lanjouw & J. C. Linderman* 2457 (US). — **VENEZUELA:** Amazonas, Rio Negro, Neblina Base Camp on rio Mawarinuma, second forested hill behind camp, 00°50'N, 66°10'W, 300–340 m, 4 a 5 Jul 1984, *G. Davidse & J. S. Miller* 26945 (UC); Atabapo, Planicie del río Jénita, 15 km antes de desembocadura em el río Ocamo, 02°46'N, 64°52'W, 175 m, Feb 1990, *A. Fernandez* 7234 (UC); Bolívar, Guanamarú, Amaruay-tepui, slope S of SW corner of tepui, 05°54'N, 62°15'W, 470–770 m, 23 Apr 1986, *R. L. Liesner & B. Holst* 20204 (UC); Heres, bosques húmedos intervenidos por actividades mineras, 2 km al NE de la margen derecha del Rio Asa, sobre coraza ferruginosa, 62 km al S-E de La Paragua, 06°16'N, 63°18'W, 370 m, 17 May 1987, *C. G. Aymard* 6116 (UC); Poci, km 88–100 route 10, Sierra de Lema,

05°55'N, 61°28'W, 80–300 m, 1 Aug 1993, *R. Rivero & W. Diaz 2347-A* (UC); Roscio, zona minera “Supamo-Parapoy”, en Parapapoy, 06°35'N, 62°40'W, 450 m, 1993, *W. Diaz & L. Nico 1320* (UC); Sección Capital Sifontes, a lo largo de la quebrada Acarabisi, límites del Estado Bolívar con la zona de reclamación, [06°56'26"N, 60°27'25"W], 3 Feb 1982, *C. G. Aymard & al. 954* (UC).

8. *Cyclodium meniscioides* (Willd.) C. Presl

ARGENTINA: Corrientes, Ituzaingó, desembocadura del Ayo, garapé em el Río Paraná, 45 km al E de Ituzaingó, [27°34'58"S, 56°46'53"W], 24 Apr 1975, *A. Schinini & al. 11245* (MBM). — **BOLIVIA:** Beni, Santa Cruz, Luisita, [13°04'59"S, 67°15'W], 180 m, 3 May 1984, *S. G. Beck 10214* (LPB); Vaca Diez, 3.3 km from road between Riberalta and Guayamerín, on old road to Cachuela Esperanza, c. 18 km E of Riberalta, 11°05'S, 65°50'W, 230 m, 9 Sep 1981, *J. C. Solomon 6186* (MO, NY, UC); La Paz, Iturralde, San José de Uchupiamonas, [14°12'59"S, 68°04'59"W], 550 m, s.d., *R. S. Williams 1202* (NY); Pando, Abuna, al norte del río Orton Barraca, San Juan de Nuevo Mundo, campamento 18, hasta Democracia, a 18 km al norte de la barraca, [10°45'59"S, 66°43'59"W], 170 m, 7 Jun 1992, *L. Vargas 655* (LPB); Manuripi, c. 20 km South of Rio Manuripi on road to Chivé, 11°58'S, 68°35'W, 12 Aug 1982, *C. R. Sperling & S. King 6596* (LPB, NY, UC, US); Nicolás Suárez, camino Cobija-Puerto Rico, comunidad Santa Elena, entrando por un camino a 4 km de esta localidad, en dirección a Cobija, [11°03'59"S, 67°51'59"W], 220 m, 8 Feb 2003, *I. Jiménez 1987* (LPB); Santa Cruz, Velasco, Parque Nacional Noel Kempff Mercado, campamento La Torre, 13°39'20"S, 60°49'08"W, 200 m, 21 Nov 1993, *L. Arroyo & Gutierrez 377* (NY, USZ). — **BRAZIL:** Acre, Cruzeiro do Sul, Japiim, Igapó de Brasília, 07°37'34"S, 72°48'16"W, 26 Jul 1972, *I. Francisca & O. Marquete 676* (RB); Mâncio Lima, PARNA Serra do Divisor, trilha para a Cachoeira do Ar Condicionado, 07°27'13.4"S, 73°41'30.7"W, 240 m, 23 Aug 2008, *P. Fiaschi & al. 3383* (NY, RB); Alagoas, Ibataguara, Engenho Coimbra, Grota do Varjão, 09°00'12.4"S, 35°51'55.9"W, 380–400 m, 19 Dec 2000, *M. R. Pietrobon & A. C. Santiago 4719* (UFP); Murici e Messias, Estação Ecológica de Murici, 09°16'48"S, 35°45'20"W, 100–650 m, 7 May 2009, *A. F. N. Pereira & I. A. A. Silva 1121* (UFP); Amapá, Porto Grande, Horto do IEPA, 00°42'N, 51°28'W, 27 Aug 2001, *L. A. Pereira & al. 572* (BHCB); Amazonas, Manaus, c. 90 km. N de Manaus, Distrito Agropecuario da SUFRAMA, Rodovia BR 174, km 64, depois 7 km leste na ZF3, Fazenda Porto Alegre, 02°22'S, 59°57'W, 50–125 m, 21 May 1992, *M. Nee 42791* (INPA, MBM, NY, US); Maraã, Rio Japurá, environs of town of Maraã, Headwaters of lago Maraã, 01°47'S, 65°37'W, 7 Dec

1982, *T. Plowman & al. 12309* (INPA); Santa Isabel do Rio Negro, Parque Nacional do Pico da Neblina – Trilha para a cachoeira do Anta, entre o acampamento e Cuiabixi e Mao, subindo a Serra da Neblina, 00°00'S, 65°00'W, 1250 m, 28 Dec 2004, *F. A. Carvalho & al. 261* (INPA); Santo Antônio do Içá, Unidade de conservação federal Javari-Buriti, flooded region abutted by Amazon river to north and two small blackwater canals to west and east, [03°07'34"S, 67°49'36"W], 60 m, 15 Jun 2013, *J. E. Householder & P. Moreira 2935* (INPA); São Gabriel da Cachoeira, Camanaus-Uaupés road, near Camanaus, [00°06'17"S, 66°54'37"W], 1 Nov 1971, *G. T. Prance & al. 15945* (INPA, NY, US); Bahia, Arataca, Serra das Lontras, c. de 7 km no ramal que liga o povoado de Itatinguí à Serra das Lontras, 15°12'10"S, 39°24'29"W, 600 m, 12 Feb 2005, *F. B. Matos & al. 406* (NY, UPCB); Camacan, RPPN Serra Bonita, 10 km W de Camacan na estrada para Jacarecí, 6 km SW na estrada para a RPPN e Torre de transmissão, 15°23'35"S, 39°33'53"W, 850 m, 11 Aug 2006, *P. H. Labiak & al. 3706* (CEPEC, UPCB); Ilhéus, Litoral Sul, assentamento Bom Gosto, 14°41'S, 39°07'W, 23 Jun 2001, *M. L. Guedes & al. 9390* (ALCB, CEPEC, MBM); Santa Teresinha, 14.5 km da rod. Elísio Medrado/Sta Teresinha, Torre da Embratel, c. 7 km do Distr. de Pedra Branca, Serra da Jibóia, 12°51'13"S, 39°28'33"W, 750 m, 24 Feb 2000, *A. Jardim & al. 2853* (CEPEC, MBM, NY); Ceará, Maranguape, Serra do Maranguape, [03°54'51"S, 38°43'02"W], 27 Jun 1981, *E. Nunes & P. Martins 18* (UFP); Espírito Santo, Linhares, Reserva Florestal de Linhares, Aceiro Ceolin, 19°09'40.4"S, 40°04'16.4"W, 30–60 m, 12 Feb 2007, *T. E. Almeida & al. 708* (BHCB, CVRD); Santa Teresa, Alto de Santo Antonio, terreno do Bozza, 19°54'31"S, 40°35'28"W, 760 m, 12 Jul 2007, *P. H. Labiak & al. 4059* (MBML, NY, UPCB); Goiás, Aporé, Rio Correntes, 18°57'55"S, 51°55'35"W, 2 Aug. 1995, *M. R. Pietrobon 2367* (MBM, SJRP); Caçu, Fazenda Boa Vista da Felicidade, 18°33'24"S, 51°07'51"W, 300–400 m, 13 Nov 1994, *M. R. Pietrobon 1484* (MBM, SJRP); Goiânia, [16°40'54"S, 49°15'43"W], Dec 1936, *A. C. Brade 15360* (MO, NY, RB); Goiatuba, Rod. GO-211, próximo de Venda Seca, 18°00'45"S, 49°21'17"W, 24 Jan 1996, *M. R. Pietrobon 2721* (MBM, SJRP); Jataí, Queixada, 17°52'53"S, 51°42'52"W, 11 Apr 1959, *Macedo 1839* (MBM, MO, US); Marzagão, Rod. GO-413, c. 2 km do rio Bajé, 17°58'53"S, 48°38'25"W, 23 Jan 1996, *M. R. Pietrobon 2658* (MBM, SJRP); Portelândia, vereda com buritizal, 17°22'S, 52°39'W, 850 m, 5 Jul 1996, *P. G. Windisch 8148* (BHCB); Quirinópolis, Rod. GO-206, c. 4 km de Quirinópolis, próximo da rodovia, 18°26'54"S, 50°27'06"W, 24 Jan 1996, *M. R. Pietrobon 2743* (MBM, SJRP); Mato Grosso, Alta Floresta, c. 12 km da cidade de Alta Floresta, 10°S, 56°W, 5 May 1986, *P. G. Windisch 4743* (UC); Barra do Garças, 256 km along

new road NNE of village of Xavantina, at Royal Society-Royal Geographic Society Base Camp, area of 10 km radius around Base Camp is situated on crest of Serra do Roncador, a gently-sloped divided between Xingu drainage (via Rio Suiá Miçu), 12°51'S, 51°45'W, 450 m, 9 Sep 1968, *G. Eiten & L. T. Eiten 8639* (NY, UB, US); Chapada dos Guimarães, Parque Nacional da Chapada dos Guimarães, caminho para as cabeceiras do rio, 15°18'48"S, 55°30'22"W, 286 m, 1 Mar 2011, *T. E. Almeida & al. 2665* (BHCB); Colíder, Resgate de Flora da UHE Colíder, lote B estrada para supressão, floresta do "Planalto dos Parecís, 10°57'02"S, 55°34'10"W, 272 m, 17 Mar 2015, *M. Lautert & al. 489* (MBM); Nova Canaã do Norte, Resgate de FLORA da UHE Colíder, lote A de supressão, floresta do "Planalto dos Parecís", 10°58'09"S, 55°41'26"W, 274 m, 25 May 2015, *M. E. Engels & al. 3539* (MBM, TANG); Rondonópolis, Rod. BR-163, Rio Poxoreu, [16°28'24"S, 54°37'56"W], 12 Nov 1975, *Hatschbach 37462* (MBM); Santo Antônio do Leverger, 2 km de São Vicente, estr. Velha de São Lourenço, antiga cabeceira, [15°51'49"S, 56°05'01"W], 30 Nov 1990, *P. G. Windisch & al. 5749* (NY, RB, SJPR); Vera, c. 4 km da BR 163, 12°19'27"S, 55°18'56"W, 6 Oct 1997, *P. G. Windisch 8843* (BHCB, PACA); Vila Bela da Santíssima Trindade, Parque estadual serra de Ricardo Franco, mata de galeria do Córrego Cascata, cachoeira dos Namorados, 14°56'20"S, 60°01'33"W, 301 m, 6 Mar 2011, *T. E. Almeida & al. 2749* (BHCB); Mato Grosso do Sul, Jatei, Parque Estadual das Várzeas do rio Ivinhema, [22°55'07"S, 53°39'12"W], 6 Sep 2003, *L. P. Clemente & al. 122* (UPCB); Ponta Porã, Fazenda, [22°32'27"S, 55°42'43"W], s.d., *I. A. Carneiro 64* (BHCB); Minas Gerais, Araguari, distrito de Paracaíba, fazenda mata da água fria, 18°29'49.6"S, 48°24'16"W, 860 m, 27 Jan 2007, *A. Salino & al. 11542* (BHCB); Catuji, BR-116, Teófilo Otoni em direção a Catuji, margem esquerda da estrada, 17°24'22"S, 41°30'56"W, 7 Jan 2011, *L. F. A. Paula & al. 74* (UPCB); Santa Maria do Salto, Divisa entre Bahia e Minas Gerais, fazenda Duas Barras, Reserva do Alto Cariri, trilha da caixa d'água, 16°24'23"S, 40°3'16"W, 950 m, 8 Feb 2006, *F. B. Matos & al. 924* (CEPEC, MBM, UPCB); Pará, Belém, Ilha de Mosqueiro, mata do Pirajucara, 01°10'38.9"S, 48°22'08"W, 8 Aug 2005, *J. M. Costa 271* (RB); Itaituba, Estrada Santarém-Cuiabá, BR 163, km 794, Serra do Cachimbo, ± 7km dentro da mata, [05°26'03"S, 56°35'29"W], 23 Apr 1983, *I. L. Amaral & al. 922* (INPA, NY); Monte Alegre, área de reserva da Pousada Vale do Paraíso, trilha entre a sede da pousada e a cachoeira Preciosa, na área da cachoeira, 01°29'17"S, 54°30'W, 121 m, 12 Feb 2018, *T. E. Almeida & al. 4743* (BHCB, HSTM); Parauapebas, Serra sul, corpo C, 06°24'01"S, 50°23'18"W, 700 m, 18 Mar 2009, *P. L. Viana & al. 4137* (BHCB); Pernambuco, Bonito, Estrada para a Colônia, Reserva Biológica Municipal, região com formação de colinas e vales em forma de "V", 08°31'10"S, 35°43'33"W, 5 May 1998, *M. R. Pietrobom 4297* (BHCB, MBM, SJRP); Igarassu, Refúgio Ecológico Charles Darwin, 07°49'27"S, 34°56'52"W, 18 Feb 1999, *A. Santiago 18* (UFP); Jaqueira, Mata do Fervedouro, 08°42'37"S, 35°50'01"W, 600–700 m, 27 Mar 2003, *R. A. G. Gueiros 180* (UFP); Lagoa dos Gatos, RPPN Pedra D'Antas, [08°41'39"S, 35°51'22"W], 14 Oct 2012, *R. P. Farias & al. 94* (UFP); São Vicente Ferrer, Complexo da Serra do Mascarenhas, "Mata do Estado", 07°35'00"S, 35°30'00"W, 600–650 m, 17 Aug 1998, *M. R. Pietrobom 4395* (UFP, MBM); Timbaúba, Complexo da Serra do Mascarenhas, Usina Cruangi, Engenho Água Azul, área do poço caudaloso, 07°36'47.5"S, 35°23'26.7"W, 304–394 m, 30 Jan 2001, *M. R. Pietrobom & A. C. Santiago 4761* (UFP, MBM); Piauí, Santa Filomena, 09°39'54"S, 45°47'32"W, 14 May 2013, *P. M. Santos & al. 337* (MBM); Rondônia, Pimenta Bueno, Parque municipal de Pimenta Bueno, 11°40'21"S, 61°11'37"W, 180 m, 1 Dec 2006, *J. M. Costa 19* (UPCB); Porto Velho, Estação Ecológica Cuniã, Grade PPBio, LO2-2800, 8S°03'45"S, 63°28'45"W, 24 5 2013, *G. S. Cabral & A. F. Sampaio 30* (RON); Vilhena, local alagável, temporariamente seca, ponto 1201, 13°00'51"S, 60°22'02"W, 6 Dec 2013, *N. C. Bigio & al. 1201* (RB, RON); São Paulo, Casa Branca, Rodovia (SP-215) BR-267 Casa Branca/Várzea Grande do Sul, c. 2 km da cidade, 21°46'S, 47°04'W, 650 m, 17 Jul 1995, *M. R. Pietrobom 2013* (MBM, SJRP); Itirapina: Estação Ecológica de Itirapina, 22°14'S, 47°56'W, 705 m, 12 Mar 2002, *V. A. de O. Dittrich & al. 1096* (BHCB, MBM); Patrocínio Paulista, Reserva de Carrado da UFSCar, 20°45'59"S, 47°14'55"W, 15 Feb 2013, *B. K. Canestraro & F. B. Matos 537* (MBM); Tocantins, Palmas, Fazenda Mundial, [10°15'56"S, 48°19'49"W], 10 Jan 2006, *M. Sobral & J. Larocca 10365* (BHCB); Ponte Alta do Tocantins, Cachoeira da Fumaça, Jalapão, [11°09'20"S, 47°00'40"W], 27 May 2008, *J. Cordeiro & al. 2717* (CESJ, MBM). — **COLOMBIA:** Amazonas, La Chorrera, Gran Resguardo Prédio Putumayo, Asociación Indígena (ASICACH), Cabildo Capitanía, San Isidro, rio Igará-Parana, 01°24'56.51"S, 72°45'52.6"W, 161 m, 26 Aug 2015, *W. D. Rodriguez & al. 8572* (HUA); La Pedrera, Comisaría del Amazonas, lado oeste del Cerro de Cupatí (Cerro de la Pedrera), cerca de la Pedrera, lado norte del Río Caquetá, 01°16'S, 69°36'W, 325–390 m, 8 Mar 1990, *S. Churchill & al. 16039* (HUA, MO); Leticia, 7 km N of Leticia near road, [04°10'07"S, 69°56'27"W], 8 Feb 1969, *T. Plowman 2452* (F, NY, US); Puerto Arica, Rio Igará-Parana (affl. Rio Putumayo), corr. La Chorrera, occidente (Bella Vista) piste menant au fleuve, bord du fleuve, [02°08'14"S, 71°59'32"W], 29 May 1974, *C. Sastre 3017* (P); Caquetá, La Montañita, vereda Itarca, Reserva natural

- Itarca, quebrada Las Lajas, 01°32'42.1"N, 75°28'02.2"W, 350 m, 31 Oct 2010, *W. D. Rodríguez & al. 7115* (NY); Putumayo, Orito, resguardo indígena Cañaverál Miraflores, finca Alto Bonito La Esperanza, 00°44'42.4"N, 76°48'27.7"W, 408 m, 21 Nov 2013, *W. D. Rodríguez & al. 8075* (NY); Puerto Leguizamo, Comisaría del Putumayo, selva higrófila del río Putumayo em Puerto Ospina, [00°08'19"N, 75°51'19"W], 230 m, 14 Nov 1940, *J. Cuatrecasas 10563* (US); Vaupés, Carurú, Medio Caqueta entre los raudales El Tijereto y El Quinché, 01°1'19"N, 71°33'7"W, 14 Mar 2001, *A. M. Benavides & al. 640* (HUA). — **ECUADOR:** Morona-Santiago, Limon Indanza, Región de la Cordillera del Condor, cuenca del Río Coangos, Comunidad Shuar de Kuankus, sendero que conduce hacia la comunidad Yunkumas, 03°02'36"S, 78°13'03"W, 850 m, 14 Jun 2005, *C. Morales & M. Tupiza 1205* (MO, UC); Logroño, Región de la Cordillera de Cutucú, Centro Shuar Tumpaim, cordillera de Saunto y Satap., 02°41'05"N, 77°55'14"W, 540 m, 11 Dec 2003, *G. Toasa & al. 9400* (MO, UC); Taisha Canton, El Centro Shuar Kankaim (Cangaime) y alrededores, 6 horas a pie al oeste del Taisha, cerca el Río Kankaim!, [02°20'43"S, 77°00'30'55"W], 16 Sep 1985, *M. A. Baker & al. 6381* (NY); Pastaza, Chichirata, Oil exploration camp Chichirota, on Río Bobonaza, 02°22'S, 76°40'W, 30 m, 26 Jul 1980, *B. Øllgaard & al. 35360* (F, NY, UC, US). — **FRENCH GUIANA:** Arrondissement of Cayenne, Arataï, Camp Arataï on Arataye river, a short distance from mouth of Arataye river at junction with Approuague river, layon Montagne Kwata, 03°59'N, 52°34'W, below 200 m, 7 Nov 2003, *S. Mori & al. 25659* (NY); Camopi, Mont Saint-Marcel, zone sud-est du massif, petite crique à l'est du sommet central, 02°23'00"N, 53°00'20"W, 380 m, 25 Jul 2002, *J. J. de Granville & al. 15488* (CAY); Cayenne, Petit Montagne Tortue-Tibourok, along trail from Corbet to waterfall, [04°55'18"N, 52°19'01"W], 16 Mar 2010, *H. van der Werff 23484* (MO, UC); Montsinéry-Tonnegrande, Ancien bagne des Annamites, région de Cayenne 2, bord du Bagne des Annamites, à 8km au sud de Montsinéry, 04°49'N, 52°30'W, 10 m, 8 Mar 1997, *M. Boudrie 2836* (CAY); Ouanary, Route Régina – Saint Georges D.Z. 5 – P.K. 43 – Bassin du Ba, 04°3'N, 52°1'W, 20 m, 6 Apr 1991, *G. Cremers & S. Gautier 11983* (CAY, US); Regina, Mont Chauve, 03°49'N, 52°44'W, 100 m, 16 Apr 1997, *G. Cremers & F. Crozier 15020* (CAY); Remire-Montjoly, Environs de Cayenne, [04°51'42"N, 52°17'49"W], 1836, *M. Mille s.n.* (P); Roura, Camp Caïman – ASARCO – Montagne de Kaw, 04°32'N, 52°13'W, 10 m, 12 Mar 2004, *B. Bordenave & L. Betian 7927* (CAY); Saint-Elie, Station des Nouragues – Bassin de l'Approuague – arataye berge des cascades, 04°3'N, 52°42'W, 90 m, 19 Nov 1989, *G. Cremers 10851* (UC); Roche du Quatorze Juill& – Bassin du Bas-oyapock, 03°58'N, 51°52'W, 50 m, 19 Apr 1991, *G. Cremers 12313* (CAY); Saint-Laurent-du-Maroni, Sinnamary, Saut Parasol – Bassin du Sinnamary, 02°30'53"N, 51°20'04"W, 2 Jun 2009, *S. Gonzalez 1752* (CAY); Élysée, Collines et criques situées à l'ouest de la vallée de la crique Elysée & de la piste allant d'Elysée à Emmanuel, à 9.5 km à l'WNW de Citron, à 80 km au sud de Saint-Laurent- du-Maroni, 04°45'N, 54°2'W, 100 m, 13 Jul 1999, *M. Boudrie 3212* (CAY); Mana, Crique Jean-Pierre – Bassin de l'Approuague, 04°17'N, 52°12'W, 30 m, 7 Dec 1994, *G. Cremers & al. 13573* (CAY, US); Maripasoula, Gombaya Soula – Bassin du Maroni. Camp I, 03°37'N, 53°58'W, 125 m, 6 Jan 1989, *G. Cremers & al. 10135b* (CAY); Saül, Monts La Fumée, 03°37'N, 53°12'W, 200–400 m, 7 Oct 1982, *B. Boom & S. Mori 1894* (NY); Sparouine, Piste minière Coralie (RN2) – ASARCO 5, zone Crique Lalanne, Camp no. 2 P.K. 6, entre les points P-49 & P-50, 04°30'16"N, 52°17'00"W, 20 m, 18 May 2004, *J. J. de Granville & B. Bordenave 16207* (CAY). — **GUYANA:** Barima-Waini, Baramanni, Northwest district, 07°45'N, 59°5'W, 18–28 Sep 1923, *J. S. de la Cruz 4302* (UC); Morawhanna, Waini river, northwest district, 08°20'N, 59°40'W, Apr 1923, *J. S. de la Cruz 3844* (UC); Port Kaituma, ± 5 km SW of Sebai village, village on Sebai river, tributary of Kaituma R., 07°49'N, 59°57'W, 15–20 m, 16 Dec 1991, *B. Hoffman & al. 610* (CAY); Cuyuni-Mazaruni, Isseneru village, upper Mazaruni river basin, NE side, [06°22'56"N, 60°22'39"W], 800 m, 28 Jul 1960, *S. S. Tillett & al. 44945* (NY); Kamuda village, Pakaraima mts, Imbaimadai Karowrieng river above Maipuri falls, 05°41'15.2"N, 60°12'54.6"W, 576 m, 25 Jan 2004, *K. M. Redden & al. 1527* (NY, US); Karrau, Penal Settlement, [06°24'21"N, 58°40'10"W], Dec 1919, *A. C. Hitchcock 17124* (NY, US); Tulameng mountain, eastern slope, 05°33'28.3"N, 60°57'53.8"W, 976–990 m, 18 Jul 2010, *K. M. Redden & al. 7014* (CAY, US); Paruima, 9 km W, 0.2–0.5 km E of Ararata scrub area, 05°49'N, 61°08'W, 780 m, 5 Jul 1997, *H. D. Clarke & al. 5383* (US); Demerara-Mahaica, Hyde Park, Heliconia farm of B. Ramsaroop. 1.5 km from Soesdyk on Linden Highway, then 1 km S, 06°32'N, 58°13'W, 10–15 m, 18 Oct 1992, *C. L. Kellof & al. 860* (CAY, NY); Essequibo Isl-W Demerara, Santa Mission, Arawak Amerindian land, Timberhead Resort, 3 km up Pokerero R from Santa Mission, N of compound, 06°35'N, 58°21'W, 5–15 m, 28 Jan 1992, *B. Hoffman & L. Patterson 887* (CAY, US); Pomeroon-Supenaam, Issoroso, Pomeroon R. watershed; Issororo river, 10–12 km W of confl. with Pomeroon river, near Mango Landign, 07°14'N, 58°58'W, 5–15 m, 17 Sep 1992, *B. Hoffman & L. Roberts 2678* (CAY, US); Potaro-Siparuni, Post, Iwokrama Rain Forest Reserve, karupukari, 3 mi SW on Karupukari/Annai road, 04°37'N, 58°43'W, 70 m, 17 Mar 1997, *S. Mori & al.*

24395 (NY, US); Wiapri, Pakaraima mts, Mt Wokomung, Suruwabaru Creek, 2–3 km upstream from its juncture with Yuarka R., 05°03'N, 59°53'W, 675–750 m, 10 Feb 1993, *T. W. Henkel & al. 1244* (CAY, US); upper Demerara-Berbice, Pubu, 05°20'N, 58°40'W, 150–200 m, 5 Jun 1986, *J. J. Pipoly 7552* (US); upper Takutu-upper Essequibo, Makarapan mountain, along Makarapan Creek, 03°59'N, 58°57'W, 250 m, 18 Sep 1988, *P. J. M. Maas & al. 7527* (CAY); Shea, Bushmouth Shea to Quitari R., 02°54'N, 59°7'W, 200 m, 29 Aug 1995, *M. J. Jansen-Jacobs & al. 4924* (CAY, UC). — **PARAGUAY:** Caaguazú, Caaguazú, in vicinias Caaguazú, [25°27'38"S, 56°03'34"W], 1905, *E. Hassler 9049* (MO, NY, UC); Paraguari, Sapucaí, Prope Sapucaí, [25°41'11"S, 56°57'40"W], 23 Sep 1919, *E. Hassler 12969* (P); upper Pananá, in regione fluminis Alto Paraná, [25°11'33"S, 54°32'39"W], 1909–1910, *K. Fiebrig 63* (US). — **PERU:** Amazonas, Aramango, 05°14'40"S, 78°21'24"W, 430m, 8 Mar 1998, *H. van der Werff & al. 14538* (MO, NY, UC); Bagua, Distrito Imaza, comunidad Aguaruna Putuim, anexo de Yamaykat, 240 degrees SW de Putuim (285 degrees SW de Yamaykat), [05°12'01"S, 78°21'52"W], 700–750 m, 20 Jan 1996, *C. Díaz & al. 7722A* (MO, UC); Chávez Valdivia, primary forest near yuwi inci creek, 6 h walk from Pongo Mori, Rio Comain, trail to Kusu (Rio Numpatakai), [04°27'S, 78°13'00"W], 518–610ft m, 11 Mar 1973, *B. Berlin 949* (MO, UC); Condorcanqui, Bajo Cachiaco, Tayuntsa, Quebrada Japaim, río Nieva, [04°20'22"S, 77°43'07"W], 15 Aug 1997, *J. Albán & al. 10016* (UC); Santa María de Nieva, Above Pongo de Manseriche, streamlet near mouth of Rio Santiago, [04°37'27"S, 77°52'54"W], 210 m, 1 Dec 1931, *Y. Mexia 6193a* (MO, UC, US); Loreto, Aguaytia, primary forest on steep slopes along Rio Aguaytia, [09°02'06"S, 75°30'22"W], 3 Oct 1972, *T. B. Croat 20967* (MO, UC); Llançhama, San Juan Bautista, vicinity of Lago Llançhama near Río Nanay, [03°50'41"S, 73°24'46"W], 2 Aug 1972, *T. B. Croat 18710* (MO, UC); Maynas, Rio Zumun, affluent du rio Yahuas-Yacu, affluent du rio Ampí-Yacu affluent de l'Amazone à Pebas – commune de Colonia, territoire des indiens Bora, [03°26'02"S, 72°40'29"W], 5 Jun 1978, *S. Barrier 1003* (UC); Requena, 10 km E from jenaro Herrera, 04°55'S, 73°35'W, 150–200 m, 19 Sep 1998, *H. Tuomisto & al. 13025* (UC); Madre de Dios, Manu, Cerro de Pantiacolla, Rio Palotoa 10–15 km NNW of Shintuya, transect to ridgetop, 12°35'S, 71°18'W, 650–700 m, 11 Dec 1985, *R. B. Foster & al. 10704* (F, UC); Tambopata, Puerto Maldonado, trail to Aguajal, 37.5 km west of Puerto Maldonado, highway Cusco-Puerto Maldonado, 12°42'48"S, 69°28'11"W, 200–246 m, 20 May 2010, *J. L. Clark & al. 11562* (UC); Pasco, Oxapampa, Dist. Puerto Bermudez, bosque de protección San Matias San Carlos, 10°11'40"S, 74°56'30"W, 260 m, 10 Sep 2006, *E. Blasido & E. B. Gonzáles 128* (MO, UC); San Martín, San Antonio, Progreso, village in first valley of Cerro Escalera, from Tarapoto after tunnel, along Tarapoto-Yurimaguas road, 06°24'S, 76°18'W, 700 m, 8 Aug 2002, *M. J. M. Christenhusz & al. 2048* (UC); Tarapoto, in monte Guayrapurune, prope Tarapoto, Peruviae orientalis, [06°27'19"S, 76°12'27"W], 1856, *R. Spruce 4689* (P); Ucayali, Padre Abad, Carretera al Rio Yurac, 7 km al este del Caserio La Libertad, aproximadamente 12 km de la ciudad de Aguaytia, 09°04'S, 75°36'W, 350 m, 9 Oct 2004, *J. S. Vigo & J. G. Graham 16323* (F, UC). — **SURINAME:** Nickerie, Middenstandspolder, area of Kabalebo Dam project, moist forest on steep slope at 3340 m in line from road km 34 westward, [05°45'56"N, 56°47'08"W], 30–130 m, 7 Nov 1981, *J. C. Linderman & A. C. de Roon 785* (UC, US); Sipaliwini, Kabalebo, Mts Bakhuis, concession BMS, zone 1, sud. site no. 005, 04°34'N, 56°47'W, 280 m, 28 Sep 2005, *B. Bordenave & al. 8033* (CAY); Tapanahony, Lely mts, airstrip, 4.16°N, 54.44°W, 600–650 m, 30 Nov 2004, *M. J. Jansen-Jacobs & al. 6892* (UC). — **VENEZUELA:** Amazonas, Atabapo, 15 km aprox. al S-E de San Fernando de Atabapo, bosques muy húmedos de tierra firme em el Sector “El Pozo” em zona experimental de la CVG – proyecto Caucho, 03°55'N, 67°40'W, 110 m, 10 to 16 Jan 1988, *B. Stergios & al. 11518-b* (UC); Atures, Laguna El Sillón y Caño Mariguaca, 78 km NE Puerto Ayacucho, 05°49'N, 66°50'W, 400 m, Oct 1989, *A. Fernandes & al. 6425* (UC); Mavaca, Misión Rio Mavaca, 01°58'N, 65°6'W, 200–230 m, 3 Feb 1991, *B. Stergios & M. Yáñez 15112* (UC); Rio Negro, Neblina Base Camp on Río Barío (=Río Mawarinuma), left bank, SE of Base Camp, along Bongo Trail, 00°49'50"N, 66°09'40"W, 140 m, 18 Feb 1985, *J. Beitel 85213* (UC); Apure, Pedro Camejo, along Río Meta at Fundo El Agarrobo, 22 airline km WNW of Buena Vista, caño 2–3 km N of Isla Algarrobo, 06°11'N, 68°47'W, 75 m, 17 Feb 1978, *G. Davidse & A. González 14294* (MO, UC); Bolívar, Gran Sabana, 5 km south of San Ignacio de Yuruani, 04°59'N, 61°10'W, 850 m, 11 May 1988, *R. L. Liesner 24479* (MO, UC); Las Cañas Bravas, Rio Suapure, [06°32'21"N, 66°39'15"W], 400–520 m, 19 Jan 1956, *J. J. Wurdack & J. V. Monachino 41294* (RB, US); Raúl Leoni, 50 km al SW de Guaiquinima y 72 km al W de Karún, 05°18'N, 63°59'W, 230 m, Nov 1988, *A. Fernandez & C. G. Aymard 4905* (MO, UC); Sucre, alrededores de Santa María de Erebató, 04°59'N, 64°49'W, 340 m, Feb 1989, *A. Fernandez & E. Sanoja 5083* (MO, UC); Cedeño, Morichal El Caballo, c. 225 km at S de Calcara del Orinoco by road, 06°17'N, 67°15'W, 100 m, 4 Nov 1985, *B. K. Holst & H. van der Werff 2573* (MO, UC); Delta Amacuro, Antonio Díaz, Estribaciones de la Sierra de Imataca, 5 km al Sur de Manoa, 08°27'N, 61°20'W, 0 m, Feb 1987, *A. Fernandez 3770* (UC). Táchira: La Fundación, 10 km E of La Fundación (13–

23 km by road), around Represa Dorada, [07°47'12"N, 71°46'17"W], 600–1000 m, 10 a 13 Mar 1981, *R. L. Liesner & A. González 10383* (MO, UC).

9. *Cyclodium pubescens* Bohn & Labiak

BRAZIL: Amazonas, Coari, Rio Urucu, base da Petrobrás, c. de 20 min. de motor de popa, margem direita do rio, [04°10'10"S, 63°29'58"W], 31 May 1991, *C. A. A. Freitas & C. D. A. Mota 437* (INPA, SJRP); Manaus, Reserva Florestal Adolpho Ducke, em baixio próximo ao Igarapé Bolívia, 02°58'S, 59°54'W, 12 Sep 2004, *G. Zuquim & al. 355* (INPA); Novo Japurá, confluencia dos rios Traira e Apaporis, próximo a cachoeira Urumutum, [01°40'54"S, 67°58'11"W], 19 Nov 1982, *C. A. Cid & J. Lima 3722* (INPA, NY, US); Mato Grosso, Itaúba, Resgate de FLORA da UHE Colíder, estrada de acesso para o Lote F de supressão, Floresta do Planalto dos Parecís, 11°07'02"S, 55°26'08"W, 310 m, 18 Aug 2016, *M. E. Engels & L. M. S. Aquino 4763* (MBM, TANG); Resgate de FLORA da UHE Colíder, Lote G de supressão, Floresta do Planalto dos Parecís, 11°04'16"S, 55°17'27"W, 278 m, 22 Jan 2015, *A. Z. Bronholi & al. Equipe 11-224* (MBM, UPCB); Rondônia, Porto Velho, Parque Natural Municipal de Porto Velho, 08°41'66"S, 51°45'80"W, 1 Jun 2017, *K. S. Gonçalves & al. 130* (RON). — **PERU:** Loreto, Maynas, Distrito Iquitos, Carretera de Zungaro Cocha, trocha hasta um purma, cerca a la quebrada de Shushuna, [03°48'49"S, 73°21'00"W], 160 m, 19 Oct 1982, *M. Rimachi Y. 6354* (MO, US); Puerto Almendras, [03°49'45"S, 73°23'03"W], 130 m, 26 Jul 1988, *H. van der Werff & al. 9789* (MO, UC).

10. *Cyclodium rheophilum* A. R. Sm.

FRENCH GUIANA: Arrondissement of Cayenne, Mont Saint-Marcel, crique située au sud du massif, au dessus des cascades, 02°22'30"N, 53°00'20"W, 260 m, 27 Jul 2002, *J. J. de Granville & al. 15523* (CAY, NY, US).

11. *Cyclodium seemannii* (Hook.) A. R. Sm.

COLOMBIA: Chocó, on left bank of river Baudo, about 1.5 km upstream of estuary, practically opposite easternmost houses of Puerto Pizarro, about 500 m south-east of river bank in depression-area of Estero del Medio, [04°57'53"N, 77°20'25"W], 0 m, 16 Feb 1967, *J. H. Torres-Romero & al. 21904* (F, UC, US); Nariño, Barbacoas, Resguardo Indígena de Saundé, Peña Blanca, orillas de la quebrada Saundé, 01°30'N, 78°20'W, 350 m, 19 Jan 1996, *B. R. P. Ramírez & al. 9611* (UC); Corregimiento El Diviso a 27 km del Diviso, quebrada la Angosta, margen izquierdo de la carretera vía Diviso-Tumaco, [01°24'47"N, 78°14'39"W], 680 m, Mar 1995, *J. L. Fernández & al. 12473* (COL). — **ECUADOR:** Carchi-Esmeraldas, Near Lita, [00°49'27"N, 78°26'49"W], 600 m, 19 May 1987, *H. van der Werff & al. 9492* (MO, UC); Esmeraldas, Lita-San Lorenzo road,

18 km W of Río Lita Bridge (on old road below Lita), 6.6 km W of bridge over Río Chuchubí, site near Alto Tambo, 00°52'11"N, 78°27'16"W, 425 m, 10 Jul 1998, *T. B. Croat & al. 82622* (MO, UC); road Lita – San Lorenzo (under construction), km. 34.4, 00°52'N, 78°31'W, 650 m, 28 Sep 1991, *B. Øllgaard 99163* (MO, P); San José, km 321 along railroad from Ibarra to San Lorenzo, 01°N, 78°W, 350 m, 3 May 1982, *B. Boom 1308* (NY, US); San Lorenzo, "Proyecto NO", at end of new road, km 14, [01°17'04"N, 78°50'21"W], 18 Aug 1967, *B. Sparre 18187* (NY); Parroquia de Concepcion, Playa Rica, [00°58'25"N, 79°38'20"W], 105 m, 16 Dec 1936, *Y. Mexia 8452* (F, US).

12. *Cyclodium trianae* (Mett.) A. R. Sm.

COLOMBIA: Antioquia, Anorí, between Providencia and Alhibe, 07°04'31"N, 75°08'48"W, 400–800 m, 20–25 Feb 1976, *D. D. Soejarto & al. 4457* (HUA); Vereda Madre Seca, quebrada Espíritu Santo, 07°15'12.6"N, 75°02'35.8"W, 700 m, 20 Feb 2004, *W. D. Rodríguez & al. 4517* (NY); Vereda Puntiadero o la Concha abajo, quebradas El Salto y El Claro, sector la Concha abajo, 07°17'01.2"N, 75°05'17.1"W, 720 m, 16 Jan 2004, *W. D. Rodríguez & al. 4456* (HUA); Vereda San Antonio, finca "El Cielo", alrededor de la casa, 07°16'00.5"N, 75°03'51.9"W, 690 m, 8 Nov 2003, *W. D. Rodríguez & al. 4210* (COL, HUA, NY); Cáceres, 7 km noroeste de Cáceres, sobre troncal de la Paz, [07°34'36"N, 75°20'53"W], 110–130 m, 5 Nov 1987, *A. Arbeláez & al. 198* (HUA, NY); El Doce, 215 km de Medellín, [07°26'50"N, 75°18'24"W], 300 m, 23 Apr 1977, *R. Callejas 154* (HUA); San Luis, autopista Medellín-Bogotá, 8.1 km este del puentes sobre el Río Caldera, [06°01'34"N, 74°58'25"W], 980–1020 m, 13 Mar 1983, *L. A. de Escobar 3322* (HUA); Bolívar, Santa Rosa, Guamoco, Sector Las Brujas, 07°38'29"N, 74°28'57"W, 884 m, 30 Apr 2010, *J. Colorado & al. 357* (HUA); Cauca, Santa Rosa, Inspección de Santa Marta, Vereda Diamante Alto, 01°14'N, 76°36'W, 1050–1150 m, 22 Jun 2002, *B. R. P. Ramírez & al. 16001* (COL); La Piedra, Serranía de los Churumbelos, Bota Caucana, 01°13'59.32"N, 76°31'58.24"W, 1100 m, 4 Aug 1998, *C. Gonzáles 497* (COL); Río Nabueno, Serranía de los Churumbelos, Bota Caucana, [01°42'26"N, 76°36'51"W], 400 m, 27 Jul 1998, *C. Gonzáles 421* (COL); en la orilla opuesta Pto. Limón-Río Caquetá, Loma de José María y Negro Agapito, [01°02'11"N, 76°32'30"W], 300–350 m, 27 Nov 1967, *L. E. Mora 4409* (COL); en la orilla opuesta Pto. Limón-Río Caquetá, Loma de José María y Negro Agapito, [01°02'11"N, 76°32'30"W], 300–350 m, 27 Nov 1967, *L. E. Mora 4420* (COL); Guainia, Barranco Minas, Serranía Caparro, Base del cerro, [03°29'13"N, 69°48'31"W], 402 m, 2 May 2014, *M. J. Diaz & G. Beltran 0056* (COL); Putumayo, Orito, Resguardo indígena Cañaveral Miraflores, finca Alto Bonito La

Esperanza, 00°44'32.9"N, 76°48'29.8"W, 452 m, 20 Nov 2013, *W. D. Rodríguez & al. 8030* (NY). — **ECUADOR:** Napo, Canton Tena, Jatun Sacha Biological Station, 8 km east of Misahualli, 01°04'S, 77°36'W, 400 m, 9–19 Dec 1990, *A. Fay & L. Fay 2796* (UC); km 109.2 along road transversing Yasuní National Park, 00°59'S, 76°12'W, 200–300 m, 19 Mar 1998, *H. Tuomisto & K. Ruokolainen 11910* (UC); Napo-Pastaza, Near Canelos, [01°35'58"S, 77°44'07"W], 300–400 m, 9 Feb 1935, *Y. Mexia 6894* (UC, US); Pastaza, Rio Bobonaza, 02°07'S, 76°55'W, 300 m, 17 Jul 1980, *B. Øllgaard & al. 34528* (UC). — **PANAMA:** Panama, Cerro Jefe, [09°14'03"N, 79°21'08"W], 900 m, 24 Jan 1996, *C. Galdames & al. 2432* (COL, US); Chepo, Carretera El Llano Carti, 09°16'44"N, 78°57'34"W, 400 m, 14 Jul 2012, *A. Salino & al. 15487* (BHCB); San Blas, Campamento Nusagandi, sendero Uma Ugar em la carretera, el Llano-Cartí a 19 km de la Bía Interamericana, [09°25'51"N, 78°58'38"W], 350–400 m, 27 Aug 1987, *H. Herrera & D. Irvine 339* (UC); El Llano-Cartí road, 19.1 km from Interamerican Highway, 09°19'N, 78°55'W, 350 m, 29 Oct 1984, *G. de Nevers 4119* (UC). — **PERU:** Amazonas, Imaza, Comunidad Aguaruna de Putuim, arriba (oeste) Pueblo de Putuim, 04°55'S, 78°19'W, 680 m, 12 Jun 1996, *E. Rodríguez R. & al. 978* (NY, UC); Condorcanqui, Distrito El Cenepa, Comunidad de Tutino, 04°33'05"N, 78°12'54"W, 500 m, 20 Jul 1997, *R. Rojas & al. 102* (NY); Loreto, Maynas, Explorama/ACEER reserve, 0.5–1.6 km E of mouth of Quebrada Sucusari at lower Napo, 03°15'N, 72°54'W, 100–200 m, 21 Jan 1995, *H. Tuomisto & al. 7294* (NY); Balsapuerto (lower Rio Huallaga basin), [05°49'48"S, 76°33'51"W], 350–550 m, 29 Aug 1929, *E. P. Killip & A. C. Smith 28540* (US); Pasco,

Oxapampa, Palcazu valley, Iscozacín, 10°12'S, 75°15'W, 400 m, 25 Jan 1984, *R. B. Foster & al. 9498* (NY).

13. *Cyclodium varians* (Fée) A. R. Sm.

GUYANA: Demerara, Essequibo, [06°43'22"N, 58°29'51"W], 1895, *Jenman s.n.* (NY02859617); [NY02859617]; Malali, [06°08'17"N, 58°14'17"W], 1895, *Jenman s.n.* (NY02859616); Mazaruni river, [06°23'50"N, 58°40'45"W], 1899, *Jenman s.n.* (NY02859618); locality unknown, [06°45'14"N, 58°26'16"W], 1895, *Jenman s.n.* (NY02859623); locality unknown, [06°45'14"N, 58°26'16"W], 1895, *Jenman s.n.* (NY02859624); Potaro-Siparuni, upper Potaro river, 5.5 km NE of Mt Wokomung, 05°9'57.2"N, 59°46'40.8"W, 620 m, 19 Jun 2003, *H. D. Clarke & al. 10037* (NY); upper Potaro river, Malek falls, below new Ayanganna airstrip, 05°16'56"N, 59°49'25.7"W, 625 m, 17 Jun 2003, *H. D. Clarke & al. 9964* (US); Kamakusi mountain, upper Mazaruni river, [05°52'N, 59°50'W, 23–29 Nov 1922, *J. S. de la Cruz 2880* (F, NY, UC). — **TRINIDAD:** British West Indies, border of forest stream, Aripo savanna, [10°36'41"N, 61°11'32"W], 14 Apr 1921, *N. L. Britton & E. G. Britton 1941* (US); locality unknown, [10°21'48"N, 61°14'13"W], 9 Feb 1910, *H. Christ 1903* (P01435860)). — **VENEZUELA:** Bolívar, Piar, Rio Apamán, at rapids of Yuray-merú, tributary of Río Acanan, SW base of Amaruay-tepui, E of Auyan-tepui, W of Apaman-tepui, small tributary of river, densely forested with trees 20–30 m high, 05°55'N, 62°15'W, 500 m, 21 Apr 1986, *B. K. Holst & R. L. Liesner 2643* (UC).

Appendix 2. List of accepted names and exsiccatae.

List of accepted names

1. *Cyclodium akawaiaorum* A. R. Sm.
2. *Cyclodium alansmithii* Bohn & Labiak
3. *Cyclodium calophyllum* (C. V. Morton) A. R. Sm
4. *Cyclodium chochoense* (A. R. Sm.) Bohn & Labiak
5. *Cyclodium guianense* (Klotzsch) van der Werff ex L. D. Gómez
6. *Cyclodium heterodon* (Schrad.) T. Moore
7. *Cyclodium inerme* (Fée) A. R. Sm.
8. *Cyclodium meniscioides* (Willd.) C. Presl
9. *Cyclodium pubescens* Bohn & Labiak
10. *Cyclodium rheophilum* A. R. Sm.
11. *Cyclodium seemannii* (Hook.) A. R. Sm.
12. *Cyclodium trianae* (Mett.) A. R. Sm.
13. *Cyclodium varians* (Fée) A. R. Sm.

Exsiccatae with collectors' names and collecting numbers

Numbers between parentheses () refer to the corresponding species in the List of accepted names presented above. Barcodes or accession numbers are given in square brackets [] for exsiccatae without collecting numbers.


- | | |
|---|--------------------------------|
| Acevedo-Rodríguez P.: 6807 (4) | Amorim A. M.: 6690 (8) |
| Albánc J.: 10016 (8) | Andrade I. R.: 151 (6) |
| Almeida T. E.: 708, 2665, 2749, 4743 (8); 2012 (6); 2561 (12); 4176 (7) | Appun: 12374 (8) |
| Alverson W. S.: 143 (4) | Aquije G. M. de F. V.: 377 (8) |
| Amaral I. L.: 922 (8) | Araújo I.: 342 (8) |
| | Arbeláez A.: 198 (12); 248 (4) |

- Arroyo L.: 377 (8); 716, 717 (5)
 Arruda A. J.: 603 (7)
 Atehortúa L.: 216 (4)
 Aymard C. G.: 954, 6116 (7); 4862 (3); 7180, 8487 (5)
 Baker M. A.: 6381 (8)
 Barbosa C.: 2736 (5)
 Barrier S.: 897, 1003, 885 (8)
 Barros I. C. L.: s.n. [UFP-22302] (8)
 Beck H. T.: 81 (7)
 Beck S. G.: 10214 (8)
 Beitel J.: 85197 (5); 85213 (8)
 Benavides A. M.: 640 (8)
 Berlin B.: 949 (8)
 Bigio N. C.: 1201 (8)
 Billiet F.: 1624, 1677, 1678 (7)
 Bischler H.: 2461 (3)
 Blanchet: s.n. [P01444019] (6)
 Blasido E.: 128 (8)
 Boom B.: 1308 (11); 1574, 1990 (5); 1894 (8); 7296 (7);
 7412, 8931, 8942 (1)
 Bordenave B.: 5217 (7); 7248, 7927, 8033 (8)
 Boudrie M.: 2772 (7); 2795, 2836, 3212, 3892, 4098
 (8); 3213, 3428 (5); 3320, 3648, 4076(7)
 Brade A. C.: 14341, 18130 (6); 15360 (8)
 Britton N. L.: 1941 (13)
 Bronholi A. Z.: Equipe 11-224 (9); Equipe 8-81 (5)
 Cabral G. S.: 30 (8)
 Callejas R.: 154 (12); 4002 (4)
 Canestraro B. K.: 537, 640 (8); 636 (6)
 Carauta J. P. P.: 3049 (8)
 Carneiro I. A.: 64 (8)
 Carvalho F. A.: 204, 205, 1093, 1110 (5); 224 (7); 261,
 513 (8)
 César B.: 6973 (4)
 Chanderbali A.: 77 (7)
 Christ H.: 1903 (13)
 Christenhusz M. J. M.: 2048 (8); 2625 (7)
 Churchill S.: 16039 (8)
 Cid C. A.: 3722 (9)
 Clark J. L.: 11562 (8)
 Clarke H. D.: 4116, 5383 (8); 375, 5946, 5490 (7);
 7514, 8093 (5); 9150, 10414 (1); 9199(2); 9964,
 10037 (13)
 Clemente L. P.: 122 (8)
 Colorado J.: 357 (12)
 Colvin J.: s.n. [UC1259239] (7)
 Conant D. S.: 914 (8)
 Cordeiro J.: 2647, 2717 (8)
 Costa J. M.: 250 (6); 271 (8); 383 (7)
 Cremers G.: 5389, 5697, 5766, 7828, 7928, 7724, 8067,
 8698, 8869, 9317, 9714, 10135a, 10300, 12096,
 12801, 13163, 13721, 13797, 14055, 15364 (7);
 5567, 6084, 6559, 8607, 8896, 9188, 10135b, 10851,
 11785, 11983, 12313, 13555, 13573, 13657, 15020
 (8); 6126, 6389, 6608, 7370, 8913, 9193, 9196,
 10063, 10271, 10299, 10336, 10831, 13114, 13143,
 14040, 10180B, 15105A (5)
 Croat T. B.: 18579, 18710, 20967 (8); 59384 (5); 82622
 (11)
 Croizat L.: 782 (5)
 Cruz A.: 4044 (4)
 Cuatrecasas J.: 10563 (8); 17731 (4)
 da Costa M. S.: 19, 20, 21 (8) 33 (5)
 da Silva M. R.: 1441 (8)
 Daly D. C.: 1834 (7)
 Davidse G.: 14294 (8); 26945 (7); 27167 (5)
 de Escobar L. A.: 3322 (12); 4000, 4025, 4061 (4)
 de Granville J. J.: 239, 777, 886, 1753, 2580, 2626,
 3530, 5243, 5302, 8913, 9068, 10180, 1069, 12708,
 13324, 14109, 14974, 15470, 16798 (7); 1761, 2894,
 3078; 4730, 5481, 5987, 6348, 11117, 11292,
 11494, 12379, 15488, 16207, 11292A (8); c.123,
 1860, 2123, 2752, 3093, 4149, 5301, 11024, 12328,
 13656, 14152, 14381, 14818, 15467, 16867 (5);
 2586, 15523 (10)
 de la Cruz J. S.: 2880 (13); 3844, 4302 (8)
 de Nevers G.: 4119 (12)
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