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## A new subspecies of *Saccoloma elegans*. Studies in the Flora of the Guianas, no 39

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### Abstract

Cremers G., Kramer K. U. (1989). A new subspecies of *Saccoloma elegans*. Bot. Helv. 99: 45–48.

The fern *Saccoloma elegans* Kaulf. (Dennstaedtiaceae), widespread in tropical America, consists of two subspecies, ssp. *elegans* of S.E. Brazil and ssp. *chartaceum*, newly described, from Central America, the Greater Antilles, and N.W. South America.

The genus *Saccoloma* Kaulf. (Dennstaedtiaceae), including *Ithycaulon* Copel. and *Orthiopteris* Copel. (following, e.g., R. Tryon 1962, 1964, and Kramer 1978) comprises about ten species. It is pantropic in distribution but absent from continental Africa. When attempting to revise the genus, G. B. Nair, then working with the junior author, noted that the neotropical *S. elegans* Kaulf., as currently understood, consisted of two morphologically and geographically distinct entities. As his work was neither completed nor published, the newly discovered taxon remained undescribed. Within the framework of the recently begun "Flora of the Guianas", edited by Görts-van Rijn, Utrecht, it has become necessary to describe the new taxon formally. At the time, Nair regarded it as specifically distinct, but we prefer to treat it at subspecific rank, the two entities constituting what was *S. elegans* s. lat. being morphologically very close and geographically vicarious.

***Saccoloma elegans* Kaulf.**, Berl. Jahrb. Pharm. 21: 51, 1820.

*Davallia saccoloma* Sprengel, Syst. Veget. 4: 119, 1827 (non *D. elegans* Swartz 1801, nec Hedwig 1803), homotypic synonym.

### Subsp. *elegans*

Type: not cited with the protologue; but in the same author's Enumeratio Filicum (1824, p. 224, pl. 1) Sello s.n. from Brazil is cited as the only collection, which must therefore be regarded as the type (Isotypes B! P!).

Rachis stramineous; most often 15–20(–29) pinnae to a side, these less than 3 cm wide, herbaceous; veins often forked, ca. (8–)11–17(–23) forked veins per 3 cm length of pinna.

Distribution: E-SE Brazil.

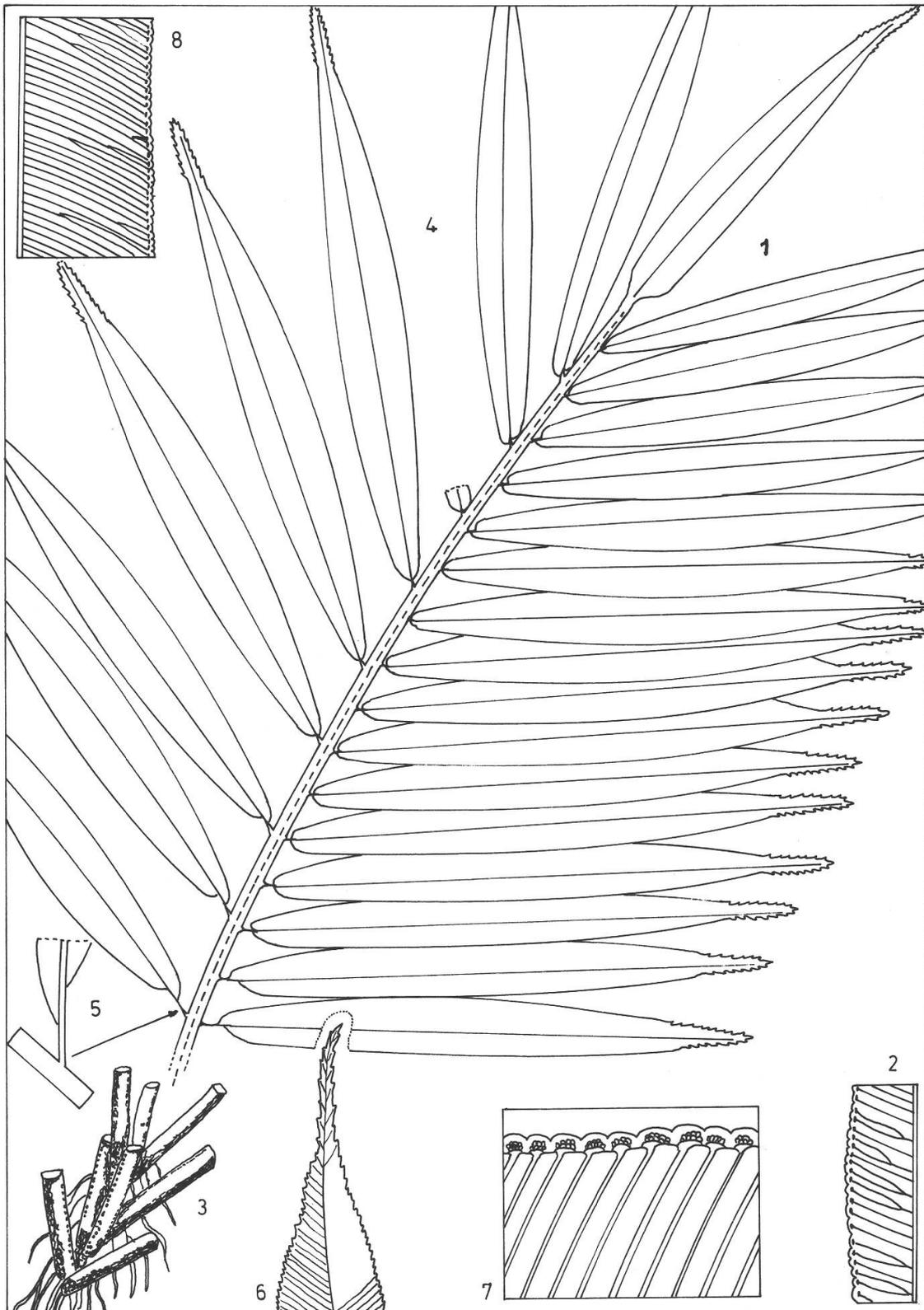


Fig. 1. – *Saccoloma elegans* Kaulf.: 1–2 subsp. *elegans*, 1, (right half of figure) lamina ( $\times 0.4$ ); 2, part of a pinna with venation ( $\times 1$ ). – 3–8 subsp. *chartaceum* Nair ex Cremers and Kramer: 3, rhizome with petiole bases ( $\times 0.5$ ); 4, (left half of figure) lamina ( $\times 0.4$ ); 5, pinna base ( $\times 1.5$ ); 6, apex of a pinna ( $\times 1$ ); 7, margin of a pinna with sori ( $\times 3.5$ ); 8, part of a pinna with venation ( $\times 1.3$ ) (drawn from Smith 2855, NY).

Other specimens examined: BRAZIL: Bahia: Blanchet 3976 (P); Rio Belmonte, Anon. 38 (BR); Ilheus, Luschnath 3936, comm. Blanchet 1857 (BR). – Minas Gerais: Pomba, Oliveira L. 1982 (P); road to São Miguel, Distr. Ilhem, Mexia 4964 (GH, NY, P, UC, US), 4639 (B, NY, P, U, US, Z); Gongo Soco, Bunbury s.n. 1863 (BR). – Rio de Janeiro: Faz. de Santa Ana, Glaziou 2376 (BR, P); Serra dos Orgãos, Gardner 159 (BM, P); *ibid.*, Pascoe s.n. (P); Glaziou 1746 (BR). – Santa Catarina: Arambuja-Brusque, Reitz 3454 (U). – Without loc., Miers s.n. 1878 (P); Riedel s.n. (P); Warre s.n. (P); Weddell 1006 (P); Langsdorff s.n. 1821 (BR).

**Subsp. *chartaceum* G. B. Nair ex Cremers et Kramer, subsp. nova**

Type: Guyana, Kanuku Mts, 3°08' N, 59°23' W, 200–400 m, Jansen-Jacobs et al. 338 (holotype U; isotypes B, BBS, BRG, CAY, NY, P, TRIN, US, Z).

Rhachis plus minusve profunde purpureo-castanea; pinnae pro latere 8–15(–17), ultra 3 cm latae; textura chartacea; venae saepius simplices, solum 1 ad 6 furcatae pro 3 cm longitudinis pinnae.

This subspecies diverges from subsp. *elegans* by the rachis being more or less deeply purplish-brown tinged; by the presence of only 8–15(–17) pairs of pinnae which are less than 3 cm wide; by the more or less distinctly chartaceous texture, and by the veins being mostly simple, (0–)1–6(–15) forked ones occurring over a length of pinna of 3 cm. We found no appreciable differences in the spores of the two subspecies; in both they are about 40 µm in diameter.

Distribution: Guatemala, Belize, Costa Rica, Panama, Cuba, Jamaica, Hispaniola, northern and western South America.

Paratypes: BELIZE: Big Creek, Schipp 90 (Z); – GUATEMALA: Alta Verapaz: von Türckheim 66 (BR, P); Quiche: Skutch 1807 (P). – COSTA RICA: Puntarenas: SE of Rincón de Osa, Evans 2812 (U). – PANAMA: Canal Zone: Maxon 4890 (P); Chagres, Isthmus of Panama, Fendler 411 (K); Panama: Juan Díaz, Killip 2331 (P); Finca Neptunea, NE of Lago Cerro Azul, road to Cerro Jefe, Nee 11531 (U); Darién: Cerro Sapo, Hammel, Franco, de Gaiza and Trainer 14879 (Z); without loc., Hooker 1870 (P). – CUBA: Without loc., Wright 1806 (P). – JAMAICA: Without loc., Ebbeke s.n. (P). – HISPANIOLA. REP. DOMINICANA: Barahona: Fuertes 995 (P, Z); Samaná Penins., Pitón de Azucar, Abbott 348 (P). – VENEZUELA: Mérida: Tovar, Fendler 376 (K); Amazonas: Ugueto, Croizat 798 (U). – GUYANA: Shodikar Cr., Essequibo R., Smith 2855 (GH, NY, US), Humirida Mts., Appun 1267 (GH); Sheenabowa, Potaro R., Jenman 1378 (BRG); Black Cr., Timoti R., Beckett s.n. 1906 (K); Potaro R., 1895, Jenman s.n. (BRG); Pakaraima Mts., Kopinang falls. Maguire et al. 46064A (NY, U, US); without loc., Appun s.n. (as Glaziou 12378) (P). – FRENCH GUIANA: Cayenne, Cascades R., Leprieur 260 (F, GH, P, US); Cayenne, Leprieur s.n. 1844 (B, P); Leprieur s.n. 1849 (P); without loc., Leprieur 267 (B); Desvaux s.n. (P); Richard s.n. (P). – COLOMBIA: Cundinamarca: Andes de Bogotá, 1857, Triana s.n. (P); Meta: Llano de San Martín, 1851/57, Triana s.n. (P); Triana 178 (K); Sierra de la Macarena, Caño Entada, Philipson and Idrobo 1750 (BM). – ECUADOR: Pichincha: Tocachi R., Sodiro s.n. (P); Verleysen 201 (P); Esmeraldas: Parr. de Concepcion, Playa Rica, Mexia 8429 (K, U). – PERU: Dept. unknown: Las Ganas, “Cordilleras peruv.,” Lechler s.n. 1854 (P). – BOLIVIA: La Paz: Larecaja, Copacabana, Krukoff 11134 (K, U); Mapiri: San Carlos, Buchtien 49 (Z), 1073 (P); Mapiri, San Antonio, Buchtien 1069 (P). – BRAZIL: Roraima: Botamatadi, Maita, Prance et al. 13611 (K, NY, U, US); Uaica airstrip, Rio Uracicoeira, Prance et al. 10821 (INPA, K, MG, U).

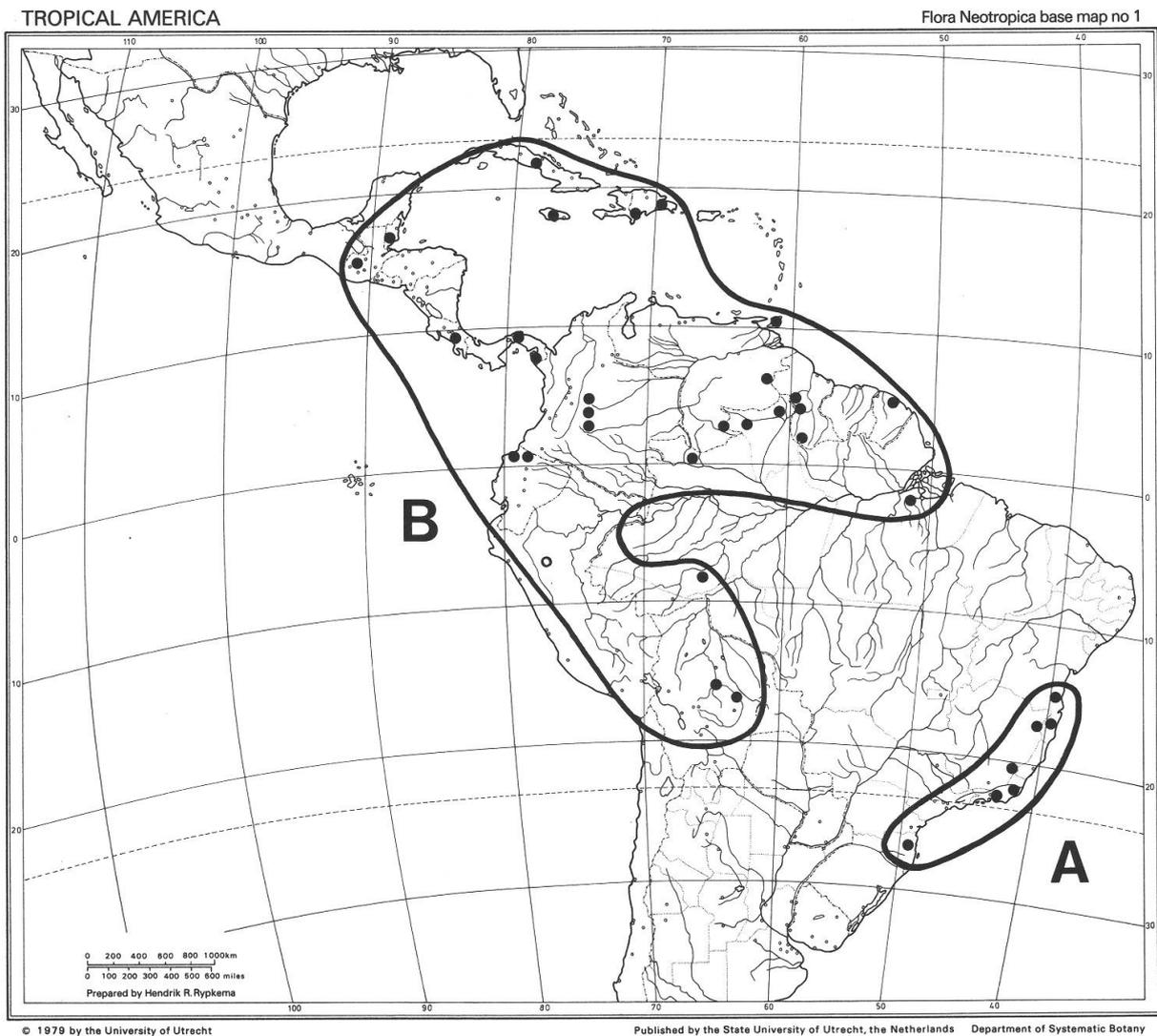


Fig. 2. Distribution of *Saccoloma elegans* Kaulf.: A, subsp. *elegans*; B, subsp. *chartaceum* Nair ex Cremers and Kramer.

Amazonas: São Gabriel da Cachoeira, Rio Negro, Spruce 2402 (P); Rio Purus, Rio Ituxí, Rio Curuquete, Prance et al. 14649 (INPA, K, MO, NY, U, US). Pará: Hwy. BR 22, Km 55, Prance and Silva 58897 (U); Hwy. BR 22, Km 96, Cachoeira, Prance and Pennington 1784 (U); Tanaii, Rio Acará near Belém, Spruce s.n. 1849 (P).

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