

Some specimens (*large fruit morphotype*) in the western part of the range in Peru and Colombia, especially from around Iquitos in Peru, have larger fruits (mean fruit length 14.0 mm, mean fruit diameter 11.0 mm) than those of other specimens (mean fruit length 11.0 mm, mean fruit diameter 8.2 mm).

Specimens (*parvisecta morphotype*) from scattered areas in Colombia, Venezuela, Peru, and Brazil, especially in the upper Rio Negro region, often in black water river areas on sandy soils (campina, catinga), are smaller than others and often have undivided leaves. The types of *Geonoma chelidonura* and *G. parvisecta* are of this morphotype.

Most specimens (e.g., *Henderson 1517, Trail 989, 991, 998, 1002, 1005, 1007*) (*intermediate morphotype*) from the eastern part of the range in Brazil, occurring in flooded areas near the main Amazon river (várzea), have 1-veined pinnae interspersed between the wider basal and apical pinnae, and in some cases resemble the sympatric subsp. *compta*.

A few specimens from widely scattered localities (*Balick 942, Gruezmacher 45, Kuhlmann 1237, Le Fiell 4, Moore 8428, Pipoly 15638, Prance 7596, Rimachi 10965, 11275, Rudas 3101*) (*densiflora morphotype*) in Peru, Colombia, Venezuela, and Brazil (including an unmapped specimen, *Kuhlmann 1237*, from "Tocantins", Pará) have thinner textured, sigmoid pinnae, few, thicker rachillae, and persistent pistillate flowers. The types of *G. densiflora*, *G. densiflora* var. *monticola*, and *G. personata* have these kinds of leaves and inflorescences. The specimens often occur sympatrically with subsp. *chelidonura* and subsp. *compta* and may be of hybrid origin.

37e. *Geonoma maxima* subsp. *compta* (Trail) Henderson, *comb. & stat. nov.*

Basionym: *Geonoma spruceana* subsp. *intermedia* var. *compta* Trail (1876: 329). Type: BRAZIL. Amazonas: Barcellos, 30 June 1874, *J. Trail 997/LXXXIV* (holotype K!).

Geonoma spruceana subsp. *intermedia* var. *intermedia* Trail (1876: 329). Type: BRAZIL. Amazonas: Lago Cerrado, Rio Jurúá, 30 October 1874, *J. Trail 989/CXLVII* (holotype K!).

Leaves regularly pinnate with 1-veined pinnae, not plicate; rachis 44.5(11.0–87.0) cm long; pinnae 18(6–29) per side of rachis; basal pinna 0.3(0.1–0.5) cm wide, forming an angle of 58(38–77)° with the rachis. *Inflorescences* rachillae 19(4–40).

Distribution and habitat:—From 1°11'N–11°10'S and 56°00'–77°40'W in the central and western Amazon region in Colombia, Brazil, Peru, and Bolivia at 193(122–400) m elevation in lowland rainforest (Fig. 26).

Some specimens from the Colombian Amazon (e.g., *Galeano 1973, García-Barriga 15005, Zarucchi 1712*) have wider pinnae than the others, more like those of subsp. *hexasticha*. One specimen from Amazonas in Peru (*Díaz 713J*) appears intermediate between subsp. *compta* and subsp. *camptoneura*.

37f. *Geonoma maxima* subsp. *dispersa* Henderson, *subsp. nov.* (Appendix IV, Plates 46–48)

A subspeciebus aliis prophyllis brevioribus differt.

Type: COLOMBIA. Córdoba: Mun. Tierralta, entre los ríos Esmeraldas y Sinú, 2 km arriba de la confluencia, 200 m, 26 July 1986, *R. Bernal, G. Galeano & D. Restrepo 1148* (holotype, COL!).

Leaves irregularly pinnate (sometimes with 1-veined pinnae present), not plicate; rachis 53.0(34.0–80.0) cm long; pinnae 8(7–10) per side of rachis; basal pinna 4.7(2.0–7.5) cm wide, forming an angle of 49(41–60)° with the rachis. *Inflorescences* rachillae 21(12–36).

Distribution and habitat:—From 5°49'–7°45'N and 71°47'–77°30'W in the northern Chocó and Magdalena valley of Colombia and eastern Andean slopes in Venezuela at 245(15–700) m elevation in lowland rainforest (Fig. 26).

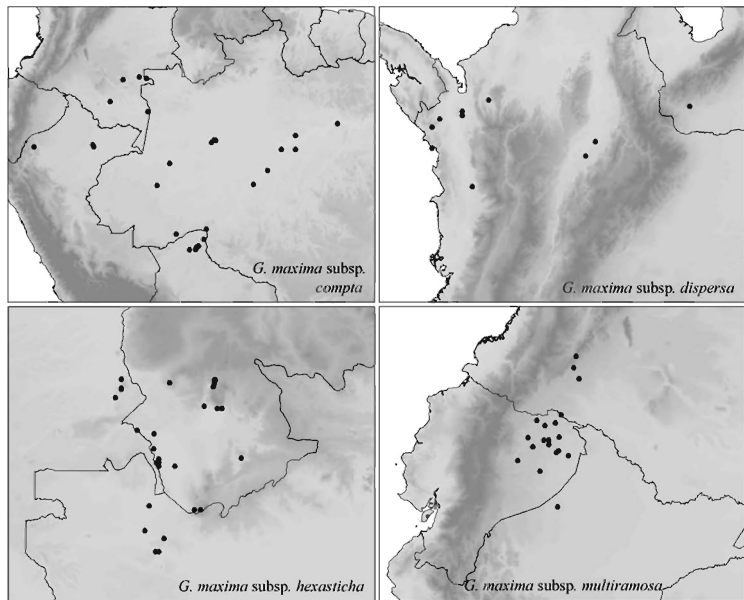


FIGURE 26. Distribution maps of *Geonoma maxima* subsp. *compta*, *G. maxima* subsp. *dispersa*, *G. maxima* subsp. *hexasticha*, and *G. maxima* subsp. *multiramosa*.

37g. *Geonoma maxima* subsp. *hexasticha* (Spruce) Henderson, comb. & stat. nov.

Basionym: *Geonoma hexasticha* Spruce (1871: 110). Type: BRAZIL. Amazonas: near Gama's sitio, São Gabriel, March 1852, *R. Spruce 29* (holotype K!, isotypes NY!, P!).

Geonoma negrensis Spruce (1871: 113). Type: VENEZUELA. Amazonas: Río Negro, San Carlos, September 1853, *R. Spruce 70* (holotype K!).

Leaves regularly pinnate with 3–5-veined pinnae (except for basal and apical ones), not plicate; rachis 66.9(42.0–100.0) cm long; pinnae 20(15–25) per side of rachis; basal pinna 0.6(0.3–1.5) cm wide, forming an angle of 64(40–87)° with the rachis. *Inflorescences* rachillae 13(6–25).

Distribution and habitat:—From 3°49'N–0°70'S and 65°07'–68°00'W in southern Venezuela and adjacent Colombia (Guainía) and Brazil (Amazonas) at 214(65–1000) m elevation in lowland rainforest usually near streams or rivers on flooded or non-flooded soils (Fig. 26).

37h. *Geonoma maxima* subsp. *multiramosa* Henderson, subsp. nov. (Appendix IV, Plates 49 & 50)

A subspeciebus aliis rachillis magis numerosis differt.

Type: ECUADOR. Napo: Añangu, south bank of Río Napo, 95 km downstream from Coca, 0°32'S, 76°23'W, 300 m, 28 July 1985, *H. Balslev, A. Barfod, A. Henderson, F. Skov & A. Argüello 60731* (holotype NY!, isotype AAU!).