

Leaves irregularly pinnate (sometimes with 1-veined pinnae present), not plicate; rachis 40.0(13.0–59.0) cm long; pinnae 4(2–12) per side of rachis; basal pinna 7.5(1.9–22.0) cm wide, forming an angle of 40(20–60)° with the rachis. *Inflorescences* rachillae 18(5–39).

Distribution and habitat:—From 1°55'–8°34'N and 57°52'–62°55'W in Guyana and adjacent Venezuela and Brazil at 337(35–900) m elevation in lowland rainforest in a variety of habitats, including flooded and non-flooded areas (Fig. 25).

A specimen from Guyana (*McDowell 4479*) has more pinnae than others and approaches subsp. *maxima* in its leaf morphology. Although subsp. *ambigua* has fewer pinnae per side of the rachis than subsp. *maxima*, it usually has a few, 1-veined pinnae present.

37c. *Geonoma maxima* subsp. *camptoneura* (Burret) Henderson, *comb. & stat. nov.*

Basionym: *Geonoma camptoneura* Burret (1931a: 201). Type: PERU. Loreto: Rio Huallaga, Yurimaguas, March 1930, L. Williams 7836 (holotype B, destroyed, isotype F!). [The type specimen appears to be a mixture, the leaf may belong to another species, possibly *G. deversa*].

Leaves undivided or irregularly pinnate (sometimes with 1-veined pinnae present), not plicate; rachis 51.9(38.0–70.0) cm long; pinnae 4(1–8) per side of rachis; basal pinna 8.5(2.0–20.0) cm wide, forming an angle of 31(15–40)° with the rachis. *Inflorescences* rachillae 23(14–38).

Distribution and habitat:—From 3°50'–13°45'S and 68°09'–78°22'W in the southwestern Amazon region of Peru and adjacent areas of Brazil and Bolivia at 334(135–800) m elevation in lowland rainforest (Fig. 25).

37d. *Geonoma maxima* subsp. *chelidonura* (Spruce) Henderson, *comb. & stat. nov.*

Basionym: *Geonoma chelidonura* Spruce (1871: 111). *Geonoma maxima* var. *chelidonura* (Spruce) Henderson (1995: 279). Type: BRAZIL. Amazonas: Rio Uaupés, November 1852, R. Spruce 73 (holotype K!).

Geonoma tuberculata Spruce (1871: 112). *Geonoma spruceana* subsp. *intermedia* var. *tuberculata* Trail (1876: 329). Type: BRAZIL. Amazonas: Rio Negro, no date, R. Spruce 18 (holotype K!).

Geonoma densiflora Spruce (1871: 112). Type: BRAZIL. Amazonas: São Gabriel, near Gama's sitio, March 1852, R. Spruce 30 (holotype K!).

Geonoma personata Spruce (1871: 112). Type: BRAZIL. Amazonas: Serra of São Gabriel, June 1852, R. Spruce 34 (holotype K!).

Geonoma densiflora var. *monticola* Spruce (1871: 118). Type: BRAZIL. Amazonas: São Gabriel, June 1852, R. Spruce 33 (holotype K!).

Geonoma spruceana Trail (1876: 328). Type: BRAZIL. Pará: Lago Juruty, 3 April 1874, J. Trail 1002/XXIV (holotype K!, isotype BM!).

Geonoma spruceana subsp. *spruceana* var. *heptasticha* Trail (1876: 329). Type: BRAZIL. Amazonas: Rio Negro at Assutuba, 6 July 1874, J. Trail 1007/XCIII (holotype K!, isotype BM!).

Geonoma spruceana subsp. *intermedia* var. *major* Trail (1876: 330). Type: BRAZIL. Amazonas: Rio Solimões, Coary, 16 October 1874, J. Trail 984/CXLIV (holotype K!; isotypes BM!, NY!).

Geonoma juruana Dammer (1907: 119). Type: BRAZIL. Acre: Rio Juruá, Juruá-mirim, August 1901, E. Ule 5744 (holotype B, destroyed, isotypes F!, MG!).

Geonoma longisecta Burret (1930a: 257). Type: PERU. Loreto: Iquitos, 4 May 1925, G. Tessmann 5087 (holotype B, destroyed, isotype, NY!).

Geonoma parvisecta Burret (1930b: 1018). Type: BRAZIL. Amazonas: Rio Negro, São Pedro do Uaupés, 23 September 1928, P. Luetzelburg 22278 (holotype B, destroyed, isotypes M!, NY!).

Leaves undivided or irregularly pinnate (sometimes with 1-veined pinnae present), not plicate; rachis 24.7(7.3–63.0) cm long; pinnae 3(1–10) per side of rachis; basal pinna 4.3(0.2–20.0) cm wide, forming an angle of 44(10–87)° with the rachis. *Inflorescences* rachillae 15(4–36).

Distribution and habitat:—From 2°03'N–11°45'S and 55°00'–75°50'W in the central–western Amazon region of Venezuela, Colombia, Brazil, Peru, and Bolivia at 160(48–525) m elevation in lowland rainforest (Fig. 25).

This is the most variable subspecies with several local morphotypes.

Leaves regularly pinnate with 3–5-veined pinnae (except for basal and apical ones), not plicate; rachis 77.9(49.5–120.0) cm long; pinnae 18(4–31) per side of rachis; basal pinna 0.7(0.2–2.5) cm wide, forming an angle of 57(34–80)° with the rachis. *Inflorescences* rachillae 31(9–50).

Distribution and habitat:—From 5°10'N–5°58'S and 46°30'–60°11'W in central and eastern Amazon region of Brazil, Suriname, French Guiana, with outliers in Guyana and Brazil at 288(50–700) m elevation in lowland rainforest (Fig. 25).

A specimen from French Guiana (*de Granville 16838*) differs from the others in its narrower pinnae. Another specimen from French Guiana (*de Granville 13389*) has only four pinnae per side of the rachis. Both these specimens approach subsp. *ambigua* in their leaf morphology. The geographically isolated specimens (*Henderson 649, 664, 1055, 1075, 1163, Moore 9534, Prance 2239*) from near Manaus in Brazil have longer rachis, more pinnae, and narrower apical pinnae with narrower angles. However, there are too few specimens to test these differences, and it is not clear if the gap between them and other specimens is an artifact caused by incomplete collecting.

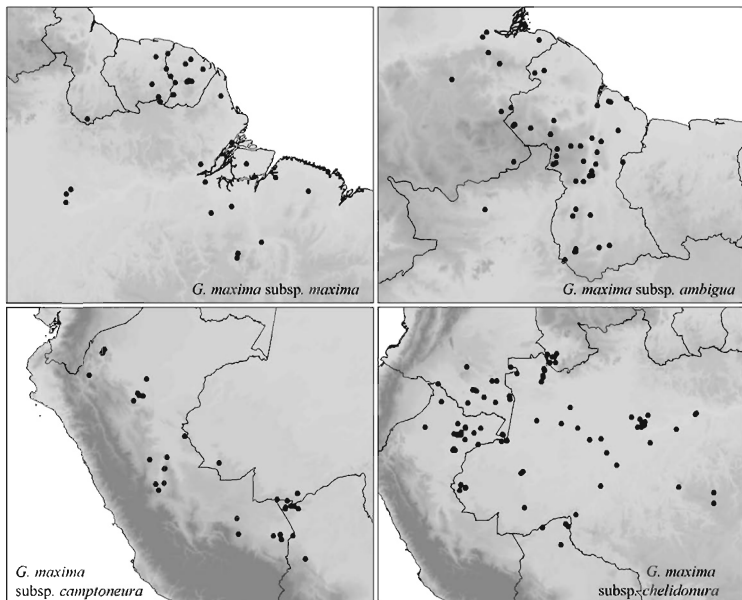


FIGURE 25. Distribution maps of *Geonoma maxima* subsp. *maxima*, *G. maxima* subsp. *ambigua*, *G. maxima* subsp. *camptoneura*, and *G. maxima* subsp. *chelidonura*.

37b. *Geonoma maxima* subsp. *ambigua* (Spruce) Henderson, comb. & stat. nov.

Basionym: *Geonoma ambigua* Spruce (1871: 111). *Geonoma maxima* var. *ambigua* (Spruce) Henderson (1995: 278). Type: GUYANA. Without locality, no date, *C. Appun 566* (holotype K!).

Geonoma schomburgkiana Spruce (1871: 111). Type: GUYANA. Without locality, 1837, *R. Schomburgk 705* (holotype K!, excluding leaf).