

stipe, the apices not conical, the surfaces not splitting at maturity, without fibers emerging, not bumpy, not apiculate; locular epidermis without operculum, smooth, without pores.

Taxonomic notes:—*Geonoma aspidiifolia* is a member of the *G. stricta* clade and is closely related to two other species—*G. oligoclona* and *G. santanderensis*. It differs from these two in its fruits surfaces which are not bumpy. Wessels Boer (1968) misunderstood *G. aspidiifolia*, as shown by Henderson (1995). However, both Henderson (1995) and Henderson *et al.* (1995) included *G. fusca* as a synonym of *G. aspidiifolia*. As explained below, the two are here recognized at the subspecific level.

Subspecific variation:—One trait (stem branching) varies within this species. There is geographic discontinuity and two subgroups can be recognized—Guyana, and the central Amazon region in Brazil. Specimens from Guyana differ significantly from Brazilian specimens in eight variables (stem diameter, rachis length, basal pinna length, prophyll length, peduncular bract length, peduncle length, peduncle width, and fruit diameter) (*t*-test, $P < 0.05$). Based on these results, and geographic discontinuity, the two subgroups are recognized as subspecies (subsp. *aspidiifolia*, *fusca*).

Key to the subspecies of *G. aspidiifolia*

- 1 Peduncles 4.3(3.4–6.0) cm long; peduncular bracts 4.0(3.2–4.7) cm long; central Amazon region of Brazil subsp. *aspidiifolia*
- Peduncles 6.1(4.5–8.2) cm long; peduncular bracts 6.6(4.5–8.2) cm long; Guyana subsp. *fusca*

1a. *Geonoma aspidiifolia* subsp. *aspidiifolia*

Inflorescences peduncles 4.3(3.4–6.0) cm long; peduncular bracts 4.0(3.2–4.7) cm long.

Distribution and habitat:—From 2°00'–3°08'S and 59°43'–60°40'W in the central Amazon region of Brazil (Amazonas) at low elevations in non-flooded lowland rainforest (Fig. 9).

1b. *Geonoma aspidiifolia* subsp. *fusca* (Wessels Boer) Henderson, *comb. & stat. nov.*

Basionym: *Geonoma fusca* Wessels Boer (1972: 93). Type: GUYANA. Upper Mazaruni River basin, Mt. Ayanganna, 700–800 m, 5 August 1960, S. & C. Tillet 45047 (holotype NY!).

Inflorescences peduncles 6.1(4.5–8.2) cm long; peduncular bracts 6.6(4.5–8.2) cm long.

Distribution and habitat:—From 4°58'–5°26'N and 59°06'–60°02'W in the Pakaraima mountains of Guyana at 870(102–1350) m elevation in lowland to montane rainforest (Fig. 9).

There are three populations of this subspecies—an eastern, low elevation one at 282(102–442) m elevation, and two higher elevation ones, a northern one on Mount Ayanganna at 1160(1050–1350) m elevation and a southern one on Mount Wokumung at 872(686–1120) m elevation. There appear to be some differences between these three populations, particularly the larger leaves and inflorescences of the low elevation population, although there are too few specimens to test for differences. However, these separate populations may be an artifact of insufficient collecting.

2. *Geonoma baculifera* (Poiteau) Kunth (1841: 233). *Gynestum baculiferum* Poiteau (1822: 389). Type: FRENCH GUIANA. Without locality, no date, A. Poiteau *s. n.* (holotype, P!).

Geonoma acutiflora Martius (1823: 10). Lectotype (designated by Wessels Boer 1968): BRAZIL. Pará: without locality, no date, C. Martius *s. n.* (lectotype M!).

Geonoma macrospatha Spruce (1871: 105). *Geonoma baculifera* var. *macrospatha* (Spruce) Drude (1882: 490). Type: VENEZUELA. Amazonas: Río Casiquiare, December 1853, R. Spruce 42 (holotype K!, isotype P!).

Plants 2.3(0.5–6.0) m tall; stems 1.6(1.0–2.5) m tall, 1.6(1.3–2.3) cm in diameter, solitary or clustered, cane-like; internodes 4.1(1.4–9.3) cm long, yellowish and smooth. *Leaves* 9(6–11) per stem, undivided or

prophylls and peduncular bracts not ribbed with elongate, unbranched fibers, flattened, persistent; prophylls 5.3(4.8–5.7) cm long, not short and asymmetrically apiculate, the surfaces not ridged, without unequally wide ridges; peduncular bracts 4.5 cm long, well-developed, inserted 0.6 cm above the prophyll; peduncles 6.6(6.4–6.7) cm long, 1.5(1.4–1.6) mm in diameter; rachillae 4(3–4), 4.3(4.1–4.4) cm long, 1.3(1.1–1.5) mm in diameter, the surfaces without spiky, fibrous projections or ridges, drying brown with faint to pronounced, short, transverse ridges, filiform with extended narrowed sections between the flower pits; flower pits alternately arranged (sometimes distorted by twisting and contracting of rachillae), glabrous internally; proximal lips without a central notch before anthesis, not recurved after anthesis, not hood-shaped; proximal and distal lips drying the same color as the rachillae, joined to form a raised cupule, the margins not overlapping; distal lips well-developed; staminate and pistillate petals not emergent, not valvate throughout; staminate flowers deciduous after anthesis; stamens 6; thecae diverging at anthesis, inserted almost directly onto the filament apices, the connectives bifid but scarcely developed; anthers short and curled over at anthesis; non-fertilized pistillate flowers deciduous after anthesis; staminodial tubes crenulate or shallowly lobed at the apex, those of non-fertilized flowers not projecting and persistent after anthesis; *fruits* 6.0 mm long, 6.2 mm in diameter, the bases without a prominent, asymmetric stipe, the apices not conical, the surfaces not splitting at maturity, without fibers emerging, not bumpy and not apiculate; locular epidermis without operculum, smooth, without pores.

Distribution and habitat:—From 6°05'–6°07'N and 75°00'–75°02'W on the eastern slopes of the Central Cordillera in Colombia (Antioquia) at 1105(1010–1200) m elevation in montane rainforest (Fig. 9).

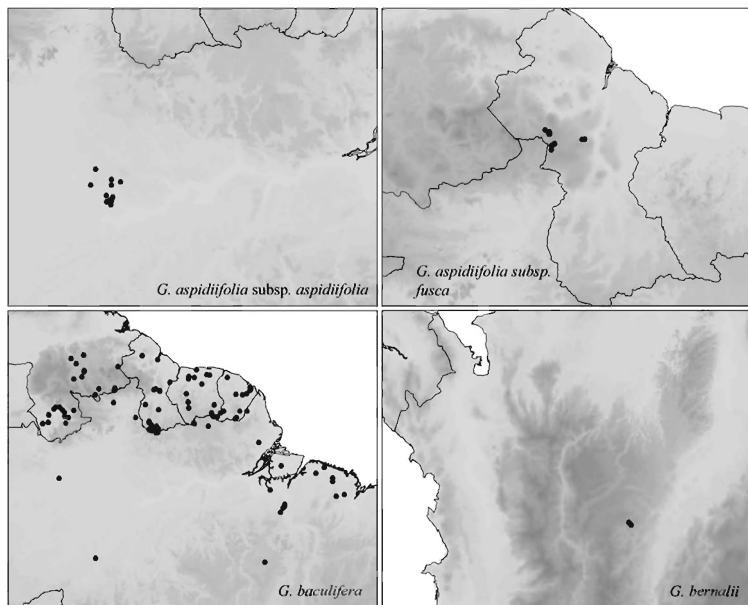


FIGURE 9. Distribution maps of *Geonoma aspidiifolia* subsp. *aspidiifolia*, *G. aspidiifolia* subsp. *fusca*, *G. baculifera*, and *G. bernalii*.