

NEW SPECIES AND NEW RECORDS OF COLOMBIAN PALMS

Nuevas especies y nuevos registros de palmas colombianas

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ABSTRACT

Four new species of palms from Colombia, *Aiphanes graminifolia*, *Bactris rostrata*, *Geonoma santanderensis* and *Geonoma wilsoni*, are described and illustrated. Three species, *Attalea cohune*, *A. phalerata* and *A. plowmanii* are recorded for the first time in Colombia; the name *Attalea plowmanii* is a new combination based on *Scheelea plowmanii*. Another species, *Aiphanes simplex*, is recorded from the Eastern Cordillera of Colombia.

Key words. *Aiphanes*, *Attalea*, *Bactris*, Colombia, *Geonoma*, Palmae, Taxonomía.

RESUMEN

Se describen e ilustran cuatro nuevas especies de palmas de Colombia, *Aiphanes graminifolia*, *Bactris rostrata*, *Geonoma santanderensis* y *Geonoma wilsoni*. Otras tres especies, *Attalea cohune*, *A. phalerata* y *A. plowmanii*, se registran por primera vez en Colombia; el nombre *Attalea plowmanii* es una nueva combinación basada en *Scheelea plowmanii*. Otra especie, *Aiphanes simplex*, se registra en la Cordillera Oriental de Colombia.

Palabras clave. *Aiphanes*, *Attalea*, *Bactris*, Colombia, *Geonoma*, Palmae, Taxonomy.

INTRODUCTION

Palm exploration in Colombia during the last few years has resulted in the discovery of four undescribed species of palms and in the finding of three species of *Attalea* not previously recorded in Colombia. Additionally *Aiphanes simplex*, a species so far known only from the basin of the Cauca river and adjacent areas on the Western Cordillera, has been found on both slopes of the Eastern Cordillera.

Aiphanes graminifolia Galeano & R. Bernal, sp. nov. (Fig. 1).

Type. COLOMBIA. Santander: Municipio de Suaita, Inspección San José de Suaita, vereda

Canelones, ca. 6° 10' N, 73° 27', ca. 1800 m, 31 Jul 2001, G. Galeano, J. Betancur, N. Castaño, L. Clavijo & N. García 7007 (holotype, COL; isotypes, AAU, HUA, K, MO, NY, UIS).

Diagnosis. Ab omnibus speciebus generis foliis pinnis delicatis angustissimisque, atque fructibus parvis differt.

Description. Cespitose, with 2-15 sparsely arranged stems, up to 5 m long and 2 cm in diameter, erect or diversely flexuous, light brown, armed with dark brown to black spines up to 4 cm long. Leaves 4-6 polistichous; sheath + petiole at least 32-37 cm long, densely armed with short spinules and dark brown, up to 7 cm long spines; petiole 9.6-24 cm long, sparsely covered with yellowish-brown

spinules to 0.5 cm long, and few flattened, brown, to 3 cm long spines; rachis 81-89 cm long, green, spinulose like the petiole, provided abaxially near base with a few scattered, flattened, up to 3 cm long, dark-brown spines; pinnae 30-32 on each side, inserted in lax groups of 2-6 separated by up to 7 cm, arranged in slightly different planes, narrowly linear to linear-lanceolate, 23-36 times as long as wide, the apex bifid and strongly unequal, the distal margin projected into a finger-like, 0.3-4 cm long acumen, which is longer in the middle pinnae and becomes progressively shorter in apical pinnae, or the wider pinnae with the apex truncately praemorse with up to three tips, the apical and subapical pinnae truncately praemorse, all pinnae membranaceous, glabrous on both sides, except for a few short spinules near base on both sides, margins lined with yellowish to brown, less than 0.5 mm spinules; midrib adaxially with short spinules to 0.3 mm long, abaxially without spinules; basal pinnae 23-35 x 0.3-1 cm; middle pinnae 27-55 x 1-1.5 cm; apical pinnae 16.5-20 x 1.3-1.5 cm. Inflorescence interfoliar, arched, 1-2 at different developmental stages, branched to 1 order; prophyll 15-16.5 x 0.5-0.7 cm, glabrous or with brownish, appressed scales and with a few flattened brownish spinules less than 1 mm long; peduncular bract 45-50 cm long, glabrous and unarmed; peduncle 71-73 cm long, purplish-green when fresh, sparsely covered with appressed brownish scales, unarmed or with a few minute spinules toward the apex; rachis 8.5-22 cm long, brownish in fresh, sparsely covered like the rachillae with minute, curved, sometimes retrorse, brownish, less than 0.1 mm long spinules; rachillae 7-12; basal rachillae 11.5-12.4 cm long, with a basal flowerless portion 1.5-2 cm long, with triads for 1/3-1/2 of the remaining length, in this part ca. 2-3 mm diameter at anthesis, distally ca. 0.5 mm diameter, with staminate flowers solitary or in dyads; apical rachillae 7.5-9 cm long, with staminate flowers only; flower groups slightly sunken

into the rachillae; triads subtended by an ovate-triangular, acuminate, to 1-2 mm long bract; solitary staminate flowers or dyads subtended by a triangular, ca. 0.5 mm long bract. Staminate flowers 1.5-2 mm long; sepals imbricate, shortly connate at base, ovate acuminate, carinate, 1-1.5 mm long; petals ovate, acute at apex, nearly free, ca. 1-1.2 mm long; filaments 0.1-0.3 mm; anthers almost square, 0.4-0.5 mm wide; pistillode minute. Pistillate flowers 3.5-5 mm long; sepals imbricate, widely ovate, 2.5-3.5 mm long; petals 4-4.5 mm long, connate for 1/3 of their length, valvate and acute distally; staminodial cup ca. 3-3.5 mm high; pistil ovoid, 2-2.5 x 2 mm, glabrous and smooth. Fruits globose, green and purplish toward the apex when immature, ca. 5 mm diameter; endocarp turbinate-subglobose, with the germinative pores at the broadest portion, sparsely reticulate-foveolate toward the apex, where it is almost plane.

Distribution and habitat. *Aiphanes graminifolia* is known only from the type locality, a forested area on the western side of the Eastern Cordillera. The area has some calcareous basement and the forest corresponds to very wet premontane forest (bosque muy húmedo premontano), in Holdridge's life zone system (IGAC 1977), and has a closed canopy 30-35 m high, dominated by trees of the Lauraceae, Sapotaceae and Euphorbiaceae; the understory is dominated by Araceae and small shrubs of Melastomataceae and Rubiaceae. *Aiphanes graminifolia* seems to be a rare species, since it was found only in one small area of the forest. This region includes one of the few premontane forests still preserved in Colombia.

Vernacular name. Macanillo. No uses have been recorded.

Etymology. The name *graminifolia* alludes to the general aspect of the palm leaves, with long, soft, linear pinnae, which at first sight evoke a large grass.

Comments. *Aiphanes graminifolia* is unmistakable in its delicate habitat, its linear and extremely narrow pinnae (23-36 times as long as wide), with bifid and strongly inaequilateral apex, a combination of characters not found in any other species in the genus. The most similar species is *Aiphanes lindeniana* (H. Wendl.) H. Wendl., a widespread and variable species (Borschenius & Bernal 1996) which differs in its larger size, its usually distichous leaves, its cuneate to linear pinnae, the narrowest ones only 11 times as long as wide, with truncate and obliquely praemorse apex, its larger inflorescence, with more numerous (16-68 vs. 7-12) and longer (16-42 vs. 7.5-12.4 cm long) rachillae, and its larger fruits (14-16 vs. 5 mm in diameter). However, a close relationship between both species is not evident.

Bactris rostrata Galeano & R. Bernal, sp. nov. (Fig. 2).

Type. COLOMBIA. Chocó: 37 km NW of Las Animas, Panamerican Road, 5° 17' N, 77° 23' W, 100 m, 10 Jul 1986, *R. Bernal, G. Galeano & R. Sanders* (holotype, COL; isotypes, AAU, FTG, HUA, MO, NY).

Diagnosis. Ab omnibus speciebus generis fructibus magnis, fortiter rostratis, foliisque simplicibus valde distincta.

Description. Cespitose, with 11 stems up 6 m tall, 2.5-4 cm in diameter, brown; internodes 7-15 cm long, with black, up to 4 cm long, sparsely arranged spines. Leaves 8-14, simple; sheath 56-60 cm long, covered with thick, cottony, light brown to whitish, more or less deciduous indumentum, and with many short and flexible spinules and sparse, flattened, black to dark brown, up to 3 cm long spines, toward apex with spinules and spines only adaxially; petiole 11-25 cm long, canaliculate adaxially, rounded abaxially, green when fresh, with an indumentum like that of the sheath, basally with spinules and spines like those of

the sheath, unarmed toward apex; rachis 94-104 cm long, unarmed, with tomentum like that of the sheath; blade oblong-obovate, 127-158 x 66-72 cm, acute at the base, olive brown when dry, glabrous adaxially, minutely spinulose abaxially, 34-35 primary veins on each side, prominent adaxially. Inflorescence and infructescence interfoliar; peduncle 26-32 cm long, 6-8 mm diameter at the apex, recurved, reddish-brown, densely covered with thick indumentum of elongate, brown and yellowish trichomes and with sparse, ca. 1 mm long spinules; prophyll 22-27 x 2-2.5 cm, unarmed, densely covered with cottony, yellowish-white tomentum; peduncular bract 45-48 cm long, covered with an indumentum of white scales and with many delicate, brown and yellowish, up to 1.5 cm long spines; rachis 6-7.5 cm long, with a thick, more or less deciduous indumentum of minute, globose, yellowish trichomes which have moniliform and dark brown pedicels; rachillae 10-12, 9-14 cm long, ca. 3 mm diameter in fruit, with indumentum like that of the rachis; triads irregularly arranged among solitary and paired staminate flowers. Fruits ellipsoid to obovoid, strongly rostrate, 3.5-4.0 cm long, including a 0.7-0.9 cm long rostrum, 2.0-2.4 cm diameter, reddish-brown, yellowish-green toward base and apex, the surface scabrous due to the reduced spinules that appear as deciduous reddish-brown crustose scales, particularly abundant toward the apex; mesocarp juicy, fibrous, white, acid; endocarp subglobose to slightly obovoid, ca. 2 cm diameter, with thin, flexuous, appressed, free fibers with juice sacs; fruit perianth prominent, reaching almost 1/2 of the fruit length; calyx 0.8-1 cm long, deeply and irregularly lobed, glabrous and without spines, the margins dark; corolla 1.5-1.8 cm long, regular and shallowly lobed, toward the base with the remains of crustose and pedicellate scales, toward the apex with appressed, flattened, slender, black, 1-2 mm long spinules; inner surface of the corolla with pedicellate, dark scales; staminodial ring absent.

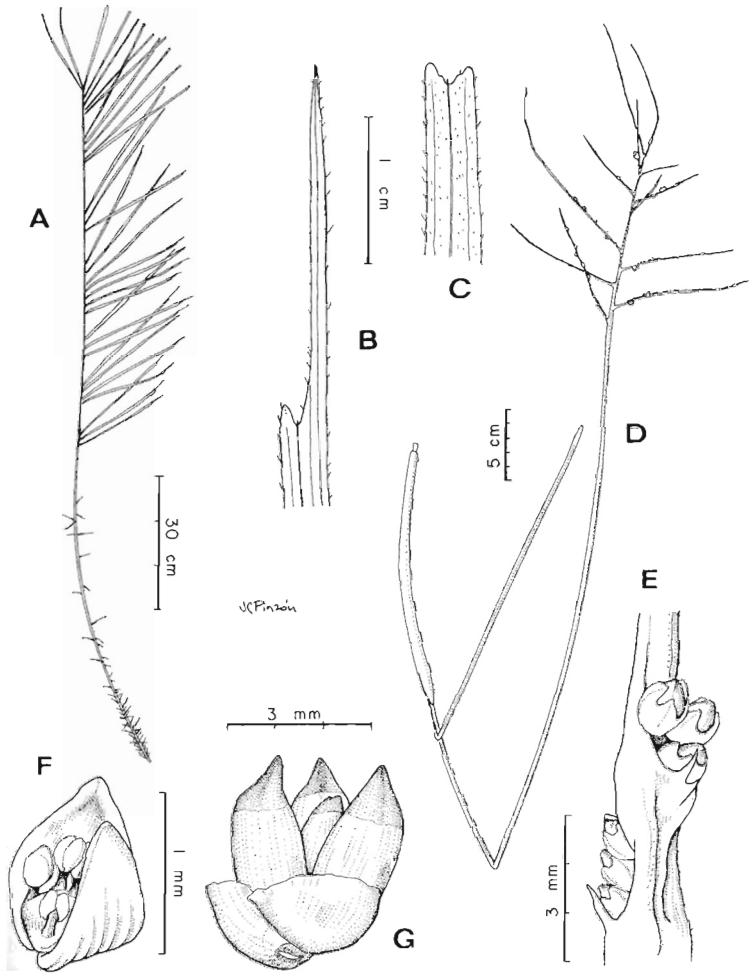


Figure 1. *Aiphanes graminifolia* Galeano & R. Bernal. A. Leaf. B. Apex of a middle pinnac. C. Apex of an apical pinnac. D. Inflorescence. E. Detail of rachilla. F. Staminate flower. G. Pistilate flower (From Galeano et al. 2007).