Bull. Mus. natn. Hist. nat., Paris, 4e sér., 7, 1985,
section B, *Adansonia*, n° 3 : 255-258.

Studies on the Flora of the Guianas 15. A new species of *Cecropia* (*Cecropiaceae*) from French Guiana

C. C. Berg

Summary : The new species *Cecropia granvilleana* C. C. Berg is described and a key to the *Cecropia* species of the Guianas is presented.

Résumé : Une nouvelle espèce, *Cecropia granvilleana* C. C. Berg, est décrite et une clé des espèces de *Cecropia* des Guyanes est présentée.

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During a recent expedition jointly organized by ORSTOM-Cayenne and the University of Utrecht, a new species of *Cecropia* was discovered on the slope of one of the granite outcrops in the Montagne de Trinité, French Guiana.

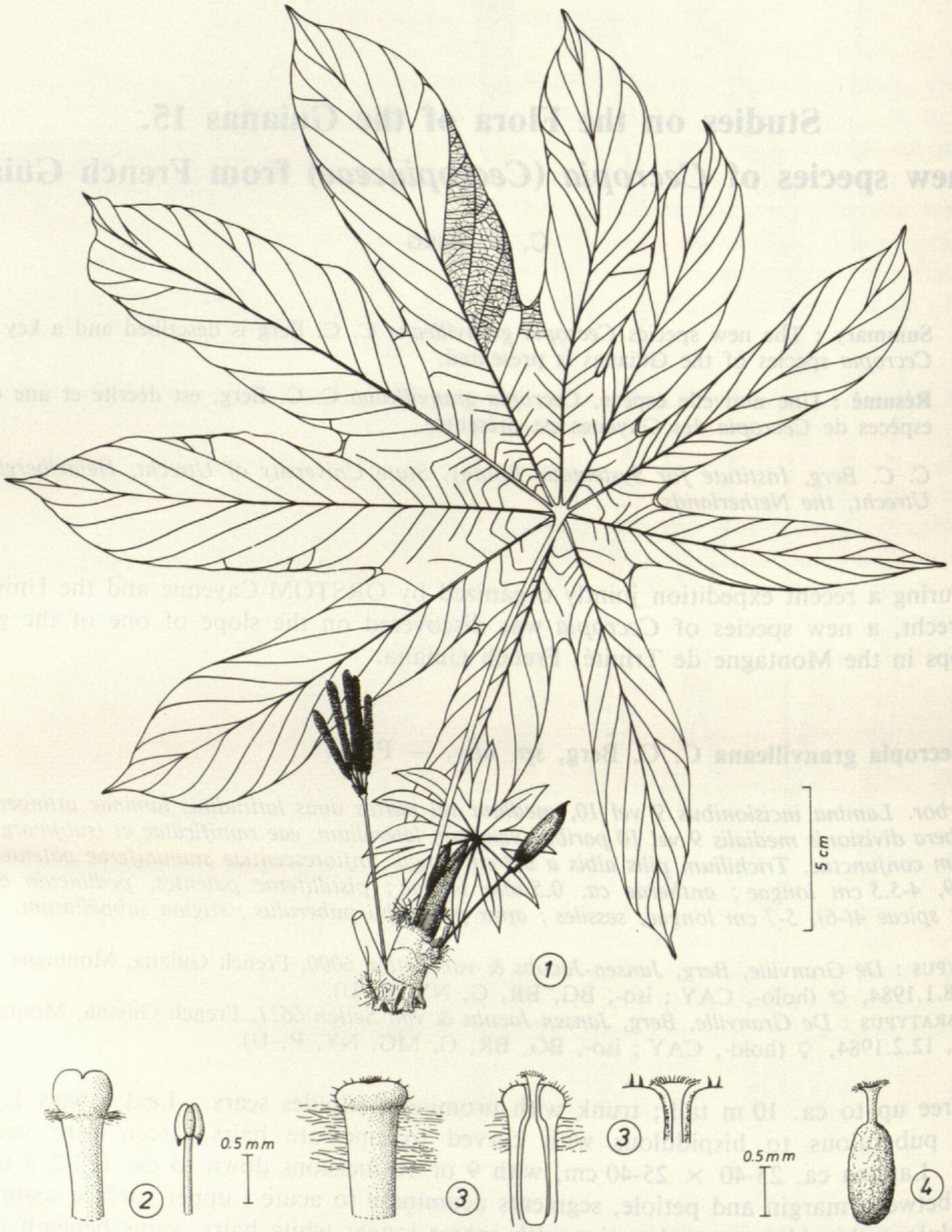
Cecropia granvilleana C. C. Berg, *sp. nov.* — Pl. 1.

Arbor. Lamina incisionibus 9 vel 10, medium vel partes duas latitudinis laminae attingentibus ; pars libera divisionis medialis 9 vel 10 paribus venarum lateralium, eae ramificatae et (sub)marginaliter arcuatim conjunctae. Trichilium pilis albis a 0.8 cm longis. Inflorescentiae staminiferae patentes ; spicae 6-9, 4-5.5 cm longae ; antherae ca. 0.5 mm longae ; pistilliferae patentes, pedunculo 6-10 cm longo ; spicae 4(-6), 5-7 cm longae, sessiles ; apex perianthii puberulus ; stigma subpeltatum.

Typus : *De Granville, Berg, Jansen-Jacobs & van Setten 6000*, French Guiana, Montagne de Trinité, 18.1.1984, ♂ (holo-, CAY ; iso-, BG, BR, G, NY, P, U).

Paratypus : *De Granville, Berg, Jansen-Jacobs & van Setten 6611*, French Guiana, Montagne de Trinité, 12.2.1984, ♀ (holo-, CAY ; iso-, BG, BR, G, MG, NY, P, U).

Tree up to ca. 10 m tall ; trunk with prominent stipules scars. Leafy twigs 1.5-2 cm thick, puberulous to hispidulous with curved to uncinate hairs, green with yellowish spots. Lamina ca. 25-40 × 25-40 cm, with 9 or 10 incisions down to ca. 1/2-2/3 the distance between margin and petiole, segments acuminate to acute ; upper surface scabrous to scabridulous, hispidulous, main veins with sparse longer white hairs, veins beneath densely and minutely puberulous, partly with uncinate hairs, smaller veins beneath puberulous to hirtellous, areoles and part of the smaller veins covered with white arachnoid indument ; main veins beneath reddish ; free part of the midsegment with 9 or 10 pairs of lateral veins, these branched and marginally to submarginally loop-connected ; petiole 15-35 cm long,



Pl. 1. — **Cecropia granvilleana** : **1**, leafy twig with staminate inflorescences ; **2**, staminate flower : perianth and stamen (*De Granville et al. 6000*) ; **3**, pistillate flower : perianth, pistil, stigma and aperture of the perianth ; **4**, fruit (*De Granville et al. 6611*).

minutely puberulous ; trichilium with (up to 0.8 cm) long white hairs; stipules 3-4 cm long, outside sparsely puberulous to pubescent, dark red and shining, inside subglabrous.

Staminate inflorescences solitary ; peduncle patent 8-9 cm long, subglabrous, green ; spathe (when fresh) 5-6 cm long, sparsely and minutely puberulous and with white arachnoid indument, pale pink to yellow ; spikes patent, 6-9, (when fresh) 4-5.5 cm long, 0.3-0.4 cm thick, stipes 0.7-0.8 cm long, very sparsely pubescent, green, towards the base red ; perianth ca. 1.3 mm long, with white arachnoid indument below the apex ; anthers 0.4-0.5 mm long, after abcission remaining attached to the perianth by the appendages of the thecae.

Pistillate inflorescences solitary ; peduncle patent, 6-10 cm long, green, sparsely and minutely puberulous ; spathe (when fresh) ca. 5 cm long, puberulous and with rather dense white arachnoid indument, yellow with pink longitudinal stripes ; spikes 4(-6), (when fresh) 5-7 cm long, 0.5-0.8 cm thick, green, sessile ; perianth ca. 1.5 mm long, apex sparsely puberulous, below the apex arachnoid indument ; stigma subpeltate.

C. granvilleana was collected on the lower part of a steep (ca. 45°), East-facing slope of bare rock, for the greater part covered by *Ludovia lancifolia* Brongn. (*Cyclanthaceae*) and *Philodendron vs. fragrantissimum* (Hook.) Kunth (*Araceae*). The new *Cecropia* species was one of the few tree species scattered among these herbs ; it is apparently confined to this habitat. The presumed narrow ecological amplitude suggests limited (and/or disjunct) distribution. *C. granvilleana* is one of the few *Cecropia* species adapted to a rather extreme habitat. It shares a lithophytic habit with the Central Brazilian *C. saxicola* Snethlage.

The new species shows morphological similarities to both *C. peltata* L. and *C. latiloba* Miquel. It differs from both in the presence of long white hairs in the trichilia and from *C. latiloba*, i.a., in the smaller number of spikes in the staminate inflorescence, the presence of white arachnoid indument on the perianth of the staminate flower, and the presence of hairs on the upper part of the perianth of the pistillate flower. *C. granvilleana* diverges from *C. peltata*, i.a., in the absence of a white arachnoid indument on the upper part of the perianth of the pistillate flower and the subglabrous inner surface of the stipules.

Key to the Cecropia species of the Guianas

1. Trichilia absent. ..... *C. sciadophylla* Mart.
1. Trichilia present. 2
2. Stipules (normally) 15-35 cm long ; leafy twigs (normally) 4-10 cm thick ; uncinate and curved hairs lacking ..... *C. kavanayensis* Cuatr.
2. Stipules at most 15 cm long, if up to 20 cm long, then uncinate and/or curved hairs present at least on the leafy twigs and/or the main veins on the lamina beneath ; leafy twigs up to 5 cm thick. 3
3. Lamina with 12-15 incisions ; free part of the midsegment with ca. 40-45 pairs of lateral veins. ..... *C. silvae* C. C. Berg
3. Lamina with 8-11 incisions ; free part of the midsegment with 10-20 pairs of lateral veins. 4

4. Trichilia with 0.5-0.8 cm long white hairs..... *C. granvilleana* C. C. Berg
4. Trichilia without such hairs..... 5
5. Lateral veins loop-connected in the leaf margin..... 6
5. Lateral veins loop-connected just inside the leaf margin..... 8
6. Stipules subpersistent ; peduncle of the pistillate inflorescence 20-25 cm long ; staminate inflorescences with 4-6(-11) spikes, 0.8-1.8 cm in diameter ; anthers at least 1 mm long..... *C. palmata* Willd.
6. Stipules caducous ; peduncle of the pistillate inflorescence at most 16 cm long ; staminate inflorescences with (usually) at least 12 spikes, 0.2-0.4 cm in diameter ; anthers ca. 0.5 mm long..... 7
7. Lamina with incisions usually reaching to midway between margin and petiole ; stipules usually not arachnoid-hairy ; upper part of the perianth of the pistillate flower not arachnoid-hairy ; stigma penicillate ; staminate inflorescences with (15-)30-40 spikes, ca. 0.2 cm in diameter ; in periodically inundated places.... *C. latiloba* Miq.
7. Lamina with incisions usually deeper than midway between margin and petiole ; stipules usually arachnoid-hairy ; upper part of the perianth of the pistillate flower arachnoid-hairy ; stigma peltate ; staminate inflorescences with (4-)12-25(-30) spikes, ca. 0.3 cm in diameter ; in non-inundated places..... *C. peltata* L. [1]
8. Petiole (and usually also the upper surface of the lamina) densely white arachnoid-hairy ; upper part of the perianth muriculate..... *C. obtusa* Tréc.
8. Petiole (and usually also the upper surface of the lamina) not white arachnoid-hairy, or, if so, then the upper part of the perianth of the pistillate flower white arachnoid-hairy and the upper part of the perianth of the staminate flower smooth and glabrous..... 9
9. Lamina on the main veins beneath predominantly hirtellous ; upper part of the perianth of the pistillate flower with arachnoid indument to near the aperture ; peduncle and spathe of the staminate inflorescence normally up to 10 cm long..... *C. peltata* L. [1]
9. Lamina on the main veins beneath predominantly minutely puberulous ; upper part of the perianth of the pistillate flower without arachnoid-indument ; peduncle and spathe of the staminate inflorescence normally over 10 cm long..... *C. angulata* Bailey

ACKNOWLEDGEMENTS : The author is much indebted to Dr. K. U. KRAMER (Zürich) for the correction of the English text and the contribution of the Latin diagnose. The drawing was prepared by Mr. H. RYPKEMA.

1. Including *C. surinamensis* Miq.

Bull. Mus. natn. Hist. nat., Paris, 4e sér., 7, 1985,
section B, *Adansonia*, n° 3 : 259-329.

Contribution à la connaissance de la végétation et de la flore de Wallis et Futuna

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Résumé : Malgré l'ancienneté de sa découverte (1616 pour Futuna et Alofi, 1767 pour Wallis), on ne possédait jusqu'à présent aucune donnée sur la végétation de ce Territoire. Il possède une végétation autochtone essentiellement forestière mais de faciès varié (mangrove, forêt littorale, fourré littoral et forêt dense), selon la nature des substrats, de la topographie et l'altitude, ainsi que des groupements marécageux. Elle a été détruite ou dégradée par les défrichements et les feux sur de grandes surfaces pour être remplacée par la succession habituelle de cultures, jachères, brousses, fourrés et forêts secondarisées. Sur certains types de sols la répétition des feux aboutit à une végétation landiforme particulière : le « toafa ». Les différents types de végétation ont été cartographiés. Grâce aux prospections effectuées durant les trente dernières années, la flore est assez bien connue et comprend à l'heure actuelle 475 espèces de plantes vasculaires dont 59 Ptéridophytes et 416 Phanérogames. Ces derniers possèdent 292 espèces indigènes réparties en 189 genres et 72 familles (voir liste en annexe), parmi lesquelles les Triuridacées, Thyméléacées, Ménispermacées, Olacacées, Balanophoracées, Scrophulariacées, signalées ici pour la première fois. L'ensemble Futuna-Alofi est floristiquement plus riche et plus original que Wallis. Pour l'ensemble du Territoire, l'endémisme reste faible : sept espèces et zéro genre. L'analyse floristique montre que la flore comprend beaucoup d'éléments pantropicaux, paléotropicaux ou panpacifiques. Elle est néanmoins d'origine indo-malaise et malésiano-papoue. Ses affinités sont étroites avec à l'Ouest les îles Fidji, le Vanuatu et les îles Salomons et vers l'Est les îles Samoa. Sa position dans la « province fidjienne » est confirmée.

Summary : Although this Territory was discovered at an early date (1616 for Futuna and Alofi, 1767 for Wallis) no data have been available on its vegetation. Forest of various types determined by geological, topographic and altitudinal factors (mangrove, beach forest, beach thickets, dense rainforest) forms the essential of the native vegetation ; swamp communities also occur. Over large areas this vegetation, destroyed by clearing and by fire, is replaced by the familiar succession of crops, fallow, shrubberies and secondary thickets and forest. On some soil types repeated burning leads to an unusual type of heathy vegetation, the " toafa ". The different vegetation types are mapped. The flora, fairly well known thanks to collecting over the last thirty years, contains 475 known vascular species : 59 Ptéridophytes and 416 Phanerogams. The latter include (see list in the Appendix) 292 native species, representing 189 genera and 72 families, Balanophoraceae, Menispermaceae, Olacaceae, Scrophulariaceae, Thymelaeaceae and Triuridaceae being recorded here for the first time. The Futuna-Alofi group has a richer and more original flora than Wallis. Endemism is low (7 species, no genus) for the whole Territory. The flora, though containing many pantropic, palaeotropic and panpacific species, is of Indo-Malesian and Malesiano-Papuan origin. It is closely related to those of Fiji, the New Hebrides (Vanuatu) and the Solomons to the west and of Samoa to the east. Its position in the " Fijian Province " is confirmed.

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