



A new species of *Ocotea* (*Lauraceae*) from French Guyana

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Key words

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Abstract A new species of *Ocotea* (*Lauraceae*) confined to inselbergs in French Guyana is described and illustrated.

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INTRODUCTION

The genus *Ocotea* is without doubt the largest genus of *Lauraceae* in the Neotropics. Rohwer (1993) estimated the number of neotropical species at c. 300, with an additional 50 species in Africa and Madagascar. Since 1993 at least 50 neotropical species of *Ocotea* have been described by various authors and the pace of description of new species does not seem to slow down. It is likely that the total number of neotropical *Ocotea* species will be between 350 and 400 (pers. obs.). Given this large number of species, it is not surprising that there is a great deal of variation between the species. Rohwer (1986) published an overview of the neotropical species and recognized many (c. 80) species groups or isolated species. Five larger species groups have been recognized among the neotropical species based on a DNA analysis (Chanderbali et al. 2001) and morphology (Van der Werff 2002) and one may expect that some of these groups will be recognized as distinct genera in the future. Traditionally, *Ocotea* has been defined by a combination of the following characters: flowers with 6 equal tepals, 9 4-locular stamens with the locelli arranged in two superposed rows, staminodia, when present, without a sagittate apex and a fruit seated in a shallow to deep cupule. Both species with unisexual and hermaphrodite flowers have been placed in *Ocotea*.

Like nearly all other *Lauraceae*, the great majority of *Ocotea* species grow in wet forest, from sea level to the paramo boundary at approximately 3000 m altitude. The species number decreases sharply in areas with a pronounced dry season.

A synopsis including a key to the 101 species in the Flora Meso-Americana region was published by Van der Werff (2002). However, the South American species remain poorly understood. Recent exploration in the Atlantic rainforest, the campo rupestre vegetation in Bahia, Brasil and in the Andean region (Ecuador, Peru and Bolivia) continues to yield new species (pers. obs.).

During a visit to the herbarium in Cayenne, French Guyana, two collections were found representing an unknown species occurring on inselbergs. A description of this species follows below.

Ocotea montis-insulae van der Werff, *sp. nov.* — Fig. 1

Ocoteae cernuae similis, sed foliis domiatis praeditis, tepalis patentibus recedit. — Typus: G. Cremers & F. Crozier 15215 (holotype CAY; isotype MO), French Guyana, Mont Chauve, alt. 150 m, 52°44'W, 03°49'N, 26 April 1997.

Small tree, to 10 m. Twigs terete, ridged when young, sparsely appressed pubescent but soon becoming glabrous, c. 2 mm diam, terminal buds appressed pubescent. Leaves alternate, 4–7 by 2–3 cm, elliptic to broadly elliptic, chartaceous, the base broadly attenuate to cuneate, the apex shortly acuminate, acuminate to 7 mm long, the margins flat, glabrous on both surfaces except for a fringe of hairs bordering the domatia, domatia present in the axils of some of the lateral veins as small depressions bordered by hairs, domatia better developed in the fruiting specimen, lateral veins 4–5 on each side, arching towards the leaf tip near the margin and slightly loop-connected, immersed on both surfaces and inconspicuous in the flowering specimens, slightly impressed on the upper surface and correspondingly raised on the lower surface in the fruiting specimen, petioles 3–6 mm, flat on the upper surface. Inflorescences 2–4 cm, moderately pubescent with appressed or ascending hairs, paniculate-cymose, the lateral cymes with a single order of branching, in the axils of bracts or leaves near the tips of the twigs. Flowers unisexual, yellow-green, staminate flowers 3–4 mm diam at anthesis, tepals 6, equal, elliptic, glabrous, 1–1.5 mm, spreading at anthesis, becoming reflexed in old flowers, stamens 9, 4-locular, the outer six c. 0.5 mm, about as wide as long, glabrous, filament lacking, the anthers attached at the base of the tepals, the inner three 0.8 mm long, the filament 0.3 mm, sparsely pubescent, glands present at the base of the inner stamens, easily seen, staminodia not seen, pistillode stipitiform, glabrous, 0.8 mm, without a stigma, receptacle deep, densely pubescent inside. Infructescence 3 cm, glabrous, immature fruit 1.2 by 0.8 cm, cupule cupshaped, 7 by 4 mm, the pedicel swollen.

Paratype. Larpin 678 (CAY), French Guyana. Montagnes des Nouragues, Bassin de l'Approuague, Arataye. Forêt basse sur inselberg, Arbuste. 52°42'W, 4°3'N.

Notes — *Ocotea montis-insulae* is a non-descript species without any striking features. The lack of filaments of the outer six stamens, the pubescent inner surface of the receptacle and the stipitiform pistillode without a stigma point to a relationship of the new species with the *Ocotea cernua* group as circumscribed by Rohwer (1986). This group includes two species with glabrous leaves that are widespread in northern South America,

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Fig. 1 Holotype of *Ocotea montis-insulae* van der Werff (CAY).

O. cernua (Nees) Mez and *O. pauciflora* (Nees) Mez. The presence of domatia and the spreading tepals set *O. montis-insulae* apart from these two species. *Ocotea pauciflora* differs also in having few-flowered, glabrous inflorescences, while *O. cernua* has larger (to 12 cm long), glabrous inflorescences. Both *O. cernua* and *O. pauciflora* have been collected in French Guyana and occur in non-flooded lowland forest. In contrast, the two collections of *O. montis-insulae* are from low forest or scrub on two different inselbergs.

According to the label of the holotype, isotypes have been sent to B, G, K, NY, P, U, ULM and US. These isotypes were not seen for this study; they were distributed as *Endlicheria* sp. and are probably filed under that name.

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REFERENCES

- Chanderbali AS, Van der Werff H, Renner S. 2001. Phylogeny and historical biogeography of Lauraceae: Evidence from chloroplast and nuclear genomes. *Annals of the Missouri Botanical Garden* 88, 1: 104–134.
- Rohwer JG. 1986. *Prodromus einer Monographie der Gattung Ocotea Aubl. (Lauraceae) sensu lato*. Mitteilungen aus dem Institut für allgemeine Botanik in Hamburg 20: 1–278.
- Rohwer JG. 1993. Lauraceae. In: Kubitzki K, Rohwer JG, Bittrich V (eds), *The families and genera of vascular plants II*: 366–391. Springer Verlag, Berlin.
- Van der Werff H. 2002. A synopsis of *Ocotea* (Lauraceae) in Central America and Southern Mexico. *Annals of the Missouri Botanical Garden* 89: 429–451.