First occurrence of *Schistostemon* (Urb.) Cuatrec. (Humiriaceae) in states of Roraima and Pará, Brazil

Ana Sofia Sousa de Holanda¹, Charles Eugene Zartman¹, Michael John Gilbert Hopkins¹, Jefferson José Valsko² and Amauri Herbert Krahli¹*  

1 Instituto Nacional de Pesquisas da Amazônia – INPA, Programa de Pós-Graduação em Botânica, Avenida André Araújo, 2936, Aleixo, Caixa Postal: 478 - CEP: 69060-001. Manaus, AM, Brazil  
2 Universidade Federal do Amazonas – UFAM, Programa de Pós-Graduação em Diversidade Biológica, Rua Gal. Rodrigo Otávio Jordão Ramos, 3000, Japiim II - CEP: 69077-000. Manaus, AM, Brazil  
* Corresponding author. E-mail: amaurikrahle@hotmail.com

Abstract: *Schistostemon* is recorded for the first time in the States of Roraima and Pará extending its distribution to a new northern limit within Brazilian territory.  

Key words: taxonomy, geographical distribution, new record, Amazon

Humiriaceae is economically an important family of flowering plants. The bark and wood of some species and varieties of *Humiria* produce “umiri” or “umiry-balsam”, with properties similar to those attributed to the Copaíva and Peruvian balsam (Cuatrecasas 1961). Humiriaceae is a tropical family with eight genera and about 50 species and many subspecies, varieties and forms, following the classification of Cuatrecasas (1961). It is an important constituent of the tropical American rainforests as well as open areas like campinas, cerrados, restingas and caatingas, extending from Costa Rica to Southern Brazil. The genus *Schistostemon* (Urb.) Cuatrec. has nine known species and one subspecies which are distributed from the Guianas through central and the northwestern portions of the Amazon basin. In Brazil four species and two subspecies are recorded (Amorim and Medeiros 2013). *S. macrophyllum* (Benth.) Cuatrec. and *S. oblongifolium* (Benth.) Cuatrec. occur in the state of Amazonas and are frequent along flooded river margins. *S. reticulatum* (Ducke) Cuatrec. and *S. retusum* (Ducke) Cuatrec. are presently known from Amazonas and Acre occurring on sandstone elevations or sandy soils in the upper Rio Negro and Vaupés basins (Cuatrecasas 1961; Cuatrecasas and Huber 1999; Gentry 1993).  

The genus is represented by small to medium-sized evergreen trees with simple alternate leaves. The inflorescences are either terminal or axil, and cymose or paniculate. The calyx and corolla have 5 sepals and petals. The androecium has 20 stamens: 5 opposite the sepals longer, distally trifurcate and triantherous (lateral anthers occasionally sterile); 5 opposite the petals, less long, entire and nonoantheriferous; and the other 10 intermediate, shorter nonoantheriferous. The gynoecium has 5 locules with 1 ovary per locule, and a nectariferous disk surrounding the ovary. The style is short, and the stigma five lobed. The fruit is a drupe with ashy exocarp and woody endocarp filled with resiniferous cavities. Here we report the novel occurrence of *Schistostemon* in the States of Roraima and Pará, describing its morphological features, and providing information on its geographical distribution and habitat.  


The species is easily recognized by its relatively large leaves, margins lightly crenulate with little pointed glands along margins beneath, its five trifurcate and triantheriferous stamens, the disk annular, and girding ovary with connate scales. The smooth skinned drupes are ovoid, rounded at base and attenuate at apex, measuring 1.5–2.3 cm high and 2–2.8 cm in diameter. This taxon is very similar to *Schistotemon dichotomum* (Urb.) Cuatrec., however it can be distinguished by the length of the pedicel of the inflorescence and the shape of the nectariferous disk, which has connate scales in *S. macrophyllum* and free scales in *S. dichotomum*.  


Holanda et al. | First occurrence of Schistostemon in Pará and Roraima

(Schistostemon macrophyllum) is endemic to Brazil. Both the genus and the species had been recorded for the States of Amazonas and Acre (Amorim and Medeiros 2013), and here we show that they also occur in Pará and Roraima (Figure 2). This species is quite frequent along flooded river margins of the middle Rio Negro. In Viruá National Park, it is also quite common along the Iruá, a black water river associated with large expanses of flooded forests known as igapó. In Pará State, the only known locality for the species is along the margin of the Tapajós, a clear water river, near Alter do Chão.

Species identification and geographic distribution were confirmed through consultation of the appropriate literature (Cuatrecasas 1961; Gentry 1993; Herrera et al. 2010), and regional herbaria EAFM, HB, HBRA, IAN, MG, PA e MIRR (acronyms according to Thiers 2012).

The first occurrence herein reported for the states of Roraima and Pará expands the limits of its geographical distribution, as well as knowledge of the diversity of a Neotropical genus that remains poorly known. This report is yet another example demonstrating the need for continued taxonomic and floristic studies in regions where there are large geographic gaps in the knowledge of Amazonian flora (Hopkins 2007) so that there is adequate planning for conservation and sustainable use of regional biota.


Figure 2. Geographical distribution of Schistostemon with emphasis on new records of S. macrophyllum.
ACKNOWLEDGMENTS

We thank the project PNADB-CAPES for financing the research, and the ICMBio for logistical support in Viruá National Park.

LITERATURE CITED


Authors’ contribution statement: ASSH collected the specimen and the data, ASSH, CEZ, MJGH, JJV and AHK wrote the text.

Received: September 2013
Accepted: November 2014
Editorial responsibility: Angelo G. Manzatto