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Pl@ntWood: A computer-assisted identification tool for 110 species of Amazon trees based on wood anatomy

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Abstract

World interest in conservation of tropical forests has increased due to elevated rates of deforestation and climate change issues. Tropical forests are threatened by extensive agriculture and timber trade among other factors; thus, sustainable management and conservation of tropical tree species require reliable and user accessible identification tools. Although wood anatomical features provide a considerable amount of information, only a handful of experts are able to use it for plant species identification. Here, we propose an interactive tool, based on vector graphics, illustrating 96 states of 22 wood anatomical characters from 110 Amazonian tree species belonging to 34 families. Pl@ntWood is a graphical identification tool based on the IDAO (Identification des plantes Assistée par Ordinateur) system, a multimedia approach to plant identification. This system allows non-specialists to identify plants in a user-friendly interface while stimulating self-training in wood anatomy of tropical species.