

**FLORISTICS IN THE 21ST CENTURY: BALANCING USER-NEEDS  
AND PHYLOGENETIC INFORMATION**

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**ABSTRACT**

The status of floristic work on pteridophytes around the world is reviewed. Relatively modern floras exist for most temperate and Mediterranean areas, including Europe, the former Soviet Union, North America north of Mexico, Chile, South Africa, and Australia, but are absent, partial, or outdated for many, if not most, tropical and subtropical countries/regions. Exceptions in the New World include Mexico, Mesoamerica, and certain of the Antilles. For many areas we have only annotated checklists (e.g., Tropical East Africa, Malaysia, Mount Kinabalu) or partially written floras (Ecuador, Malesia). Modern treatments for island floras are also few, exceptions being for New Zealand (Brownsey & Smith-Dodsworth, 2001), Hawaii (Palmer, 2003), and the Mariana Islands (Raulerson & Rinehart, 1992). Floristic “hotspots”, e.g., Colombia, Brazil, Madagascar, New Guinea, and the Himalayas, often have inadequate or incomplete modern accounts. Treatments of the ferns are planned or in progress for many countries, including Venezuela, Bolivia, East Africa, and China, but these often proceed at a painstakingly slow pace. Local florulas, such as for Barro Colorado Island in Panama, complement larger regional floras while serving different, but overlapping, purposes; Flora Guaramacal (Venezuela), Central French Guiana (Saül), and the Hong Kong flora are notable examples. Ideally, modern pteridofloras should incorporate recent phylogenetic conclusions at various ranks (especially family, genus), multi-access keys, comments on relationships and taxonomic problems, and references to phylogenetic literature, coupled with access to online data-bases (interactive keys, gazetteers, publication data, distribution maps, images and photographs, specimen citations, trees of relationship, and links to pertinent websites). Two families usually considered “fern allies”, Psilotaceae and Equisetaceae, are now thought to be intimately related to basal ferns, and this evidence needs inclusion into floristic literature. Many traditional genera (e.g., *Asplenium*, *Pellaea*, *Polypodium*, *Pteris*) need substantial recircumscription to meet criteria of monophyly or even paraphyly in floras. The dwindling number of people with broad expertise in floristics, fern systematics, and identification seriously constrains the creation of modern floras, and is expected to be an increasing problem in the future.