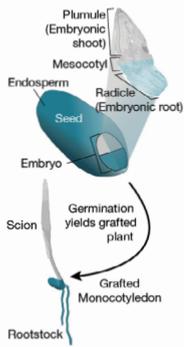


# PALM NEWS



Gregory Reeves and coauthors described a protocol for doing something horticulturists long thought was impossible: **grafting of monocotyledonous plants** (*Nature* 602: 280–286. 2022. <https://doi.org/10.1038/s41586-021-04247-y>). Monocots, because their vascular tissue is in discreet bundles scattered throughout the stem, rather than in a ring produced by a vascular cambium as it is in conifers and broadleaf plants, were long thought to be ineligible for propagation through grafting. Reeves' research group performed grafts on isolated, immature embryos and grew the grafted plants in tissue culture. They obtained successful grafts with grasses, bromeliads, bananas, aroids and palms, notably date palms. The discovery represents not so much a horticultural technique but a proof-of-concept that all seed-bearing plant lineages have the competency to graft.

A revision of the genus *Lanonia* based on morphological data recognizes 19 species, six of which are newly described. The work, by Andrew Henderson and Nguyen Quoc Dung, was published in *Phytotaxa* (532: 209–245. 2022.). These elegant, *Licuala*-like palms have tremendous horticulture potential, but few are known in cultivation. Almost all the species are endemic to Vietnam.

Jun Ying Lim, Huashen Huang and many coauthors have recently published a paper discussing the history of palms (The Cenozoic history of palms: Global diversification, biogeography and the decline of megathermal forests. *Global Ecology and Biogeography*. <https://doi.org/10.1111/geb.13436>). They focused their analysis on four palm clades (Calaminae, Eugeissoneae, Mauritiinae and Nypoideae) and their fossil pollen record. For each focal palm lineage, they compiled fossil pollen occurrence records to reconstruct their diversity and biogeographical distribution throughout the Cenozoic, i.e., the past 66 million years.

Climatic niche models were used to project the distribution of suitable areas for each lineage in the past, using palaeoclimatic data for the Cenozoic. For most palm lineages examined, pollen taxonomic diversity declined throughout the Cenozoic. Geographical ranges for each palm lineage contracted globally and experienced regional-scale extinctions (e.g., Afrotropics), particularly after the Miocene. However, climatic niche models (which are based on extant species of these palm lineages) often predict the presence of climatically suitable habitat in areas where these lineages became extinct. Although climatic trends are an important backdrop for the biogeography and diversity of palms at global scales, their continental- or regional-scale biogeographical trajectories might be more dependent on other factors.



FIGURE 11. Type of *L. henkeensis* (Henderson et al. 3705).

11. *Lanonia henkeensis* Henderson & Nguyễn Quốc Dũng sp. nov. Type—VIETNAM, Khanh Hoa province, Ninh Hoa district, Tien Du commune, Hon Hoa mountain, 12.450N 109.233E, 334 m, 6 July 2010, A. Henderson & Bui Van Thanh 3672 (holotype HSI, isotype NYI). Fig. 12.

Stems 1.0 m long, 3.0 cm diameter, clustered. Leaves 8; ligules 5.0 cm long, soon disintegrating into fibers; sheaths and proximalmost part of petioles with scattered, brown scales; petioles 50.0 cm long, 0.7 cm wide at the apex; petiole sheaths usually poorly developed, brown or black, more or less regularly arranged on proximalmost part of petiole; hastulae flat, rounded, not infolded; leaf blades 58.0 cm wide; costae 8.0 cm long, narrow, with a pulvinus at the apex abaxially, with the numerous segments free to the base except the middle pair joined at their bases; segments 15 per