

Montgomery Botanical NEWS

Fall/Winter 2023 *Volume 31, Number 2*

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Montgomery Botanical Center
Established 1959

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To advance science, education & conservation of tropical plants, emphasizing palms and cycads, Montgomery Botanical Center grows living plants from around the world in population-based, documented, scientific collections in a 120-acre botanical garden exemplifying excellent landscape design.

Montgomery Botanical Center is a tax-exempt, nonprofit institution established by Eleanor "Nell" Montgomery Jennings in memory of her husband, Colonel Robert H. Montgomery, and his love of palms and cycads.

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From the Executive Director

Dear Friends,

A year of great progress! Amazing things are moving forward at Montgomery. On the facing page, Michael recounts his explorations for cycads in Australia, and on page 6, I discuss my search for palms in Morocco. In both cases, working closely with local experts was vital to our success. Those international field projects offer a hint of the wide scope Montgomery seeks – we broadened our botanical efforts worldwide, always following that principle of full partnership and cooperation. The full breadth of our reach was highlighted for me when I participated in CYCAD 2023 this summer (see page 7). Montgomery is blessed with great colleagues in every corner of the globe – also a long term principle that guides our success.

In our last issue, I touched upon the great importance of landscape design to achieve a peaceful understated beauty for the scientific plant collections in our garden. This subject deserves a fuller discussion, so I invited Joe Hibbard to share that vision (see pages 4-5). As our plants grow and mature, I see the wisdom of Joe's guidance shaping the views and framing each palm and cycad that we cherish.

All of these successes are only possible through your support – when you give to our PLANT EXPLORATION FUND, our LANDSCAPE DESIGN FUND, or through any other gift, you ensure that we keep advancing our important work in botany, horticulture, landscapes and conservation. When I admire any of our great outcomes, please know that I am thanking you for supporting, encouraging and championing our efforts – **thank you!**

Pictured: Dr. Griffith with a seedling of Lougheed Palm, *Sabal lougheediana*, growing in the recently-protected Sabalpalm Park on Bonaire. **On the Cover:** Dr. Griffith, Dr. Jeanson, and Dr. Dallahi collecting seeds and specimens on the mountain slopes above Idikl, Morocco (page 6).

Macrozamia Mission

In April 2023, I had the good fortune of participating in a multi-institutional field expedition focused on collecting seeds, herbarium specimens, data and DNA samples of *Macrozamia* species occurring in New South Wales, Australia.

The six-day expedition, coordinated by Dr. James Clugston, was a collaboration between three Australian Botanic Gardens (The Australian Botanic Garden Mount Annan, Royal Botanic Garden Sydney and Royal Botanic Gardens Victoria) and Montgomery Botanical Center. The intensive fieldwork included visits to populations of six *Macrozamia* species: *Macrozamia diplomera*, *M. glaucophylla*, *M. reducta*, *M. polymorpha*, *M. secunda* and *M. stenomera*.

This expedition was my first visit to Australia and I was absolutely stunned by the beauty and variability of the landscape and vegetation. Although *Eucalyptus* and its unique fragrance was a common denominator throughout the entire trip. The *Macrozamia* localities visited occurred in a range of unique habitats with varying topography and unique vegetation. For example, *M. glaucophylla* was found in relatively flat and dry open savannas, *M. diplomera* was found in open sclerophyllous woodland over undulating terrain and *M. stenomera* was found in steep montane forests.

The expedition was a resounding success as the team was able to visit all targeted species and collect important germplasm for ex situ conservation at four botanic gardens as well as herbarium specimens and DNA samples for research.

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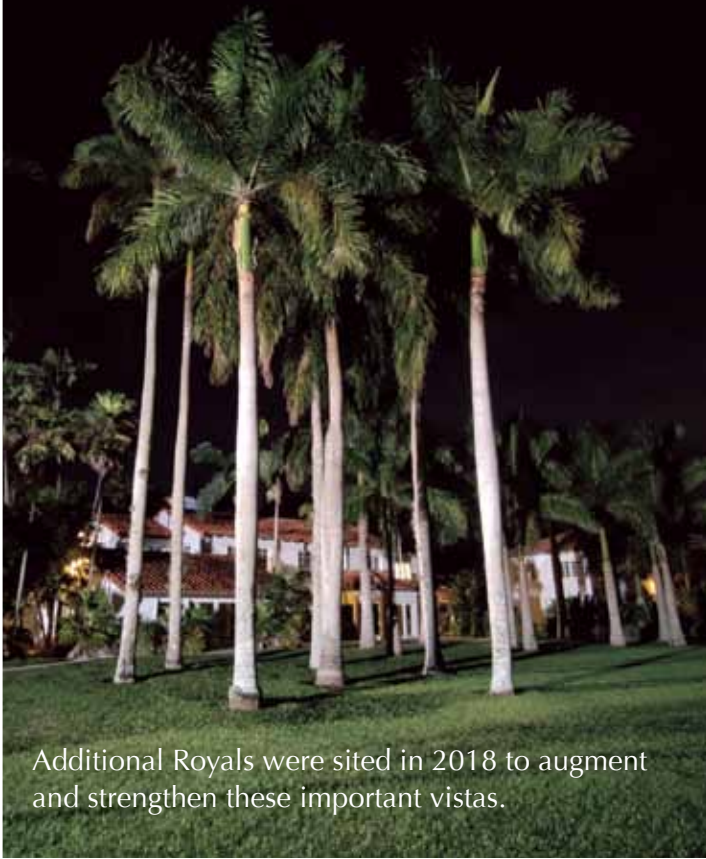
Michael Elgey, Scott Yates, James Clugston, Georgie Moyes, and Michael Calonje with *Macrozamia reducta*.



Macrozamia diplomera at Goulbrun River National Park, New South Wales, Australia. Tim Uebergang, Georgie, Scott and Michael collecting seeds & testing soil.

Three Decades

Roystonea palms planted by Colonel Robert Montgomery in the 1940s frame the view towards Nell's House, as well as the view from inside the building.



Additional Royals were sited in 2018 to augment and strengthen these important vistas.

When the current era of landscape design for the Montgomery property began in 1992, the property was not a clean slate. Its major buildings and several landscape features were already in place. The royal palm colonnade, parts of the road system, the vista to the lakes, and the lakes themselves were established by Col. Montgomery between 1932 and 1953. The Colonel's collection of palms and cycads – the Coconut Grove Palmetum – had taken shape in the lawns surrounding the main house. The property was also home to natural and historic features including the oolite escarpment, historic Old Cutler Road and intact pine rockland and hammock forests. All these features strongly influenced the current property design. Indeed, an underlying design principle over the past 30 years has been to work with and be inspired by the positive natural and designed features of the Colonel's property.

“Working with” the property has involved judgement and decisions about what is fitting and what is not; what contributes to the

Restrained Beauty and the Emphasis of Unity over Variety – At the outset of the present era of landscape design at Montgomery, it was observed that tropical plants offer an almost unlimited variety of plant sizes, shapes, habits, colors, and textures. The random placement of unlimited variety could result in a nervous, never-resting design. Therefore, Montgomery has adopted the guideline of always seeking to develop views in which unity of foliage, color and texture prevail, recognizing that variety will take care of itself. We don't need to purposefully design variety because it is inherent in our planting palette, but we do need to consciously strive for unity if we are to achieve a mood of peaceful understated beauty.

The Importance of Space and Void – The 1992 property master plan set forward the general pattern of open spaces, which provide a framework of planting areas and unplanted open areas. The organization of space is an essential, invisible structure that gives compositional meaning to the plantings.

Human Scale – In 1992, the open spaces at Montgomery possessed a palpable sense of human scale that was decidedly warm and domestic rather than public and civic. If one examines the Royal Palm Colonnade, its flowing serpentine form reflects just such a character. Imagine if the original Royal Palm Colonnade were a powerful straight line producing a grand effect

of Landscape Design

desired landscape experiences and what does not. Mark Twain said writing is easy; just cross out all the wrong words. Landscape design operates in a similar fashion. Just avoid and eliminate those things that do not contribute to the desired effect!

While Twain is oversimplifying for the sake of humor, there is an element of truth; the creative process involves observation, adaptation and even subtraction and restraint as much as it involves assertive inventiveness. In landscape design, the truth of this approach is inescapable. Whereas in writing, the author begins with a blank page, a condition we might call “no-words”, in landscape design the designer never faces a condition called “no-landscape.” Landscape design always begins with an existing landscape and the processes that shape it. Even an empty piece of land stripped down to bare earth has a history, an orientation, climatic exposures, soils, topography, hydrology, ecosystem functions and a neighboring visual environment that constitute an unavoidable starting point for design.

At Montgomery, the existing natural and cultural landscape has been a fundamental guiding element of design. Over the past thirty years, multiple examples exist where land use, road design, and annual planting decisions have been grounded in an understanding of the property’s attributes. Working with the landscape has meant adopting an attitude of stewardship and careful attention to conserving the property’s defining characteristics, while dramatically expanding its living collections from zero to 15,000 accessioned plants in 30 years.

Of course, it is possible to imagine that the 1992 plan could have ignored or downplayed the existing landscape in the name of creating something totally fresh and new. But the approach at Montgomery has been to use our collective understanding of the existing landscape and its history as a constant touchstone for design inspiration and practical problem solving.

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of classical symmetry from the gate to the house. The Montgomery landscape would have a different sense of order, and a different feel altogether. Over the past three decades, we have sought to adopt an organization of space that simultaneously allows for the enjoyment of the property’s expanse, and yet maintains an intimacy reflective of the earlier era of residential and personal occupancy.

Informal Naturalistic Order – For both aesthetic and practical reasons, a naturalistic landscape style has been adopted for most of the property. With only a few exceptions, plantings are arranged in informal groups of differing size plants, free of ordering geometry and

the requirement of a fixed pattern. This approach ideally suits the nature of Montgomery’s plantings which are subject to a myriad of forces that dictate constant change year to year and decade to decade. Curving roads that follow the natural terrain and lead the eye through an ever-changing panorama of views are highly compatible with the naturalistic aesthetic. The partial concealment and visual subordination of buildings and other man-made elements reinforces this theme.

The Atlas Mountains Palm

In January I joined colleagues in a search for the southernmost populations of *Chamaerops humilis* var. *argentea*, in the distant reaches of the Atlas Mountains in Morocco. In these areas, the palm has a fabled silver cast, covered in thick waxes to protect it from the constant sun. Recent studies show these southern populations are very distinct and isolated, quite different from the widespread Mediterranean fan palm, and perhaps comprise the center of origin for these iconic plants. As these desert palms were not yet at Montgomery, I sought to bring them into cultivation.

Our explorations saw a consistent pattern – grazing lands showed palms greatly reduced in stature, hiding their fruits in a dense thicket of leaves. The less livestock in an area, the taller and more open the fronds. In one sacred site – protected from grazing for some centuries – the palms reached their apotheosis; graceful, towering giants holding their open blue crowns and red fruits before a snow-covered range. We agreed not to publish images from this consecrated place.

Specimens from this work now document these remote groves. Seedlings at Montgomery are already being used in genomic studies by colleagues. As they mature, we plan to see if the great differences we saw afield persist in our garden.

M. Patrick Griffith, MBC Executive Director
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Here, Youssef signals his success locating mature fruits on this sunny slope above Tizi n Tarkatin.

I am very grateful to my colleagues Youssef Dallahi of Université Mohammed V, and Marc Jeanson of Jardin Majorelle for their expertise and enthusiasm. Permission was generously granted by Agence Nationale des Eaux et Forêts, and this work was supported by Montgomery's Plant Exploration Fund and Jardin Majorelle.

Below: Marc and Youssef preparing herbarium specimens near Agadir. These palms showed the effects of constant grazing: dense leaves, short petioles, short trunks, and scarce fruits.



Team News



Nina Castro-Alves



Mateo Solarzano



Victor Alvarado



Leslie Hall



Carolina Diaz



Kate Vail



Ashwaq Younis



Ali Kenworthy



Kelsey Palmer



Daniel Tucker



Selvyn Valenzuela

An amazing summer with incredible help! We are grateful for dedicated work from **Nina Castro Alves**, **Mateo Solarzano**, and **Kate Vail**, who interned with our Horticulture team to care for our cherished plants, landscapes, and seedlings, through this year's heatwave. **Ashwaq Younis** studied *Sabal* anatomy as our *Stuart Y. and Peter R. Jennings Intern*, and **Victor Alvarado** studied *Atala* butterflies as our *Robert K. Zuck and Peter R. Jennings Intern*; both came highly recommended by FIU. Three motivated and enthusiastic students from East Carolina University – **Ali Kenworthy**, **Kelsey Palmer**, and **Leslie Hall** – advanced our mapping and inventory process, supported by the Lyman Dickerson Scholarship. On our full-time team, three promotions moved us forward: **Carolina Diaz** is now our Curator of Trees, bringing her enthusiasm and energy to care for these vital collections, **Daniel Tucker** is our new Seedbank Coordinator, advancing our lab processes and infrastructure to the next level, and **Selvyn Valenzuela** is our new Collections Assistant, moving our record keeping ahead.

12th International Conference on Cycad Biology

24-28 July 2023

Clark Freeport Zone, Pampanga, Philippines



We were deeply honored to help sponsor this critical gathering in the Philippines in July. Four of the Montgomery team attended – we gave a total of five lectures, were coauthors on another four, and helped with ceremonies, introductions, and setting the stage for future conferences.

It was great to reconnect with global colleagues – 12 nations were represented – and to plan for future cycad projects. We also formally approved our **Cycad 2050 Strategy**, with the goal of *Zero Extinctions*.

Montgomery at Cycad 2023

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FROM THE
MONTGOMERY ARCHIVE

LANDSCAPE PLANNING, 1998

This plan from 25 years ago shows expansion of the Palm Walk southward from Nell's House. Our 1992 Master Plan by Joe Hibbard (see pages 4-5) organized the existing landsite into a framework of uses, including areas dedicated to showcasing palm collections. By 1998, Montgomery was ready to expand the palm plantings further away from Nell's House and give additional structure to the Palm Walk. At right, further available space for palms remained for future years. By 2005, the Palm Walk had extended completely to the south fenceline.



Montgomery has greatly benefitted from this Master Planning approach that is revisited annually. The 1992 plan provides overall guidance and vision, while subsequent, annual landscape plans fit each palm and cycad within that vision. This continuous process matches the dynamics of a living botanic garden; a garden can never be static! Each year, plants grow while other plants are lost, changing the landscape. Furthermore, each year new plant explorations (e.g. pages 3 and 6) bring diversity not yet specified in the original plan – each spring has a different palette! To illustrate: of the palms along the open area, the *Dictyosperma* and *Bismarckia* still stand, but the *Syagrus*, *Caryota* and *Livistona* have been replaced by *Phoenix*, *Sabal*, and *Acrocomia*.