

A close-up photograph of a pink flower, likely a lily, with numerous water droplets on its petals. The center of the flower shows a stamen with a dark, curved anther. The background is a solid green color.

Mónica Moraes R.
Bolivia

“ ...I made the best decision in my life, because biological research is an inspiring recreation of Nature ”

Interview by Eliana Sdenka Asunta Vásquez Berazaín*

Why was studying biology the best decision that you have ever made?

Making a definite choice about one's professional future after finishing high school is a very complicated matter, so when I had to choose the subject of my degree - which I was certain would be my career - I first applied for veterinary and animal science, then changed to pedagogy and the option of biology appeared. From the moment I applied, it has been the best decision I have ever made, because biological research is such an inspiring study of Nature. It allows one to constantly review and consolidate the areas of specialization in which one can make contributions, however small, to scientific knowledge.

How was your interest in botany and documenting the flora and vegetation of the Bolivian lowlands born?

The trips I made as a child and young girl definitely gave me a particular fascination for tropical landscapes, especially the trips to Riberalta - where my father was born (in the north east of Bolivia) - and deep into Amazonia. Our field trips to the Bolivian lowlands during my Biology degree at the Universidad Mayor de San Andrés in La Paz built up this interest, as did my work as an assistant at the National Natural History Museum. Later, at the National Bolivian Herbarium, I went on my first scientific expedition along the Río Madre de Dios, and then worked on projects organized by the Beni Biological

Station. My greatest challenge was definitely the information gaps that several regions of Bolivia suffered from, regarding their natural landscapes and groups of plants. As a result, whenever a comparison was made of the state of knowledge in American countries, Bolivia always registered at the lowest levels.

What was the subject of your study projects on Bolivian tropical flora?

Science has developed by adapting itself to the opportunities for implementation, the logistical conditions and of course the financing options. In my case, the options were very favorable for me to concentrate on tropical landscapes, to study their vegetation formations and typical plant species. My botanical collections motivated me to increase my knowledge of the floristic composition: the dominant species, state of conservation, and biogeographical implications, among others. Palms (Arecaceae) are a typical tropical plant group, and I have contributed for more than 25 years to experiments and projects on them. I began with taxonomy, then ecology, distribution, conservation and finally handling native species with considerable potential benefits for humans.

Is it difficult for scientists to share the achievements and progress they make in biology? Why?

Though there is "material to be shared with the scientific community," any effort

to disseminate it becomes simplified. The findings derived from research into natural phenomena pose new questions and new variables to measure or contrast. It is a chain of progress and research, and the teams involved strengthen and diversify the possibilities for scientific documentation. When one is part of these chains, sharing this progress is just another activity, an inherent part of science. Publishing the results is also a responsibility towards the scientific community and society - at least it is among the groups of specialists or students with whom we interact throughout any research process. Therefore, it is not hard to share scientific results.

Did you find it hard to join the scientific world?

As a matter of fact, science created such an attractive environment and sense of empathy that I could not resist it. There were several key moments in my professional training that reinforced my scientific specialization. These are mainly memories from college, my first experiences of field work and, in particular, the most significant milestones for a scientist: the mentors whom I met throughout my professional career. They were both professors and tutors, and helped me to create and develop research projects. Forming groups that cooperate is also an incentive to “share” the work, and activities are easier to bear when opportunities arise to make scientific progress.



Dr. Moraes joining the first Bolivian congress on ecology in Cochabamba, 2009.



Mónica Moraes sharing with her students at the Bolivian herbarium.



Mónica Moraes in palm nursery facilities when visiting the Montgomery Botanical Center in Miami.

What sacrifices have you had to make to achieve your scientific goals?

To be honest, I do not feel that I have had to sacrifice anything in my life to work as a biologist in Bolivia. On the contrary, I think I have learned to include all the different aspects of my personal and professional life.

In your opinion, and based on your professional experience and dedication, what are the golden rules for working in this field?

Perseverance, inspiration, commitment, collaboration and enthusiasm.

What were the best and worst moments of your professional and scientific experience? Which memory do you treasure especially?

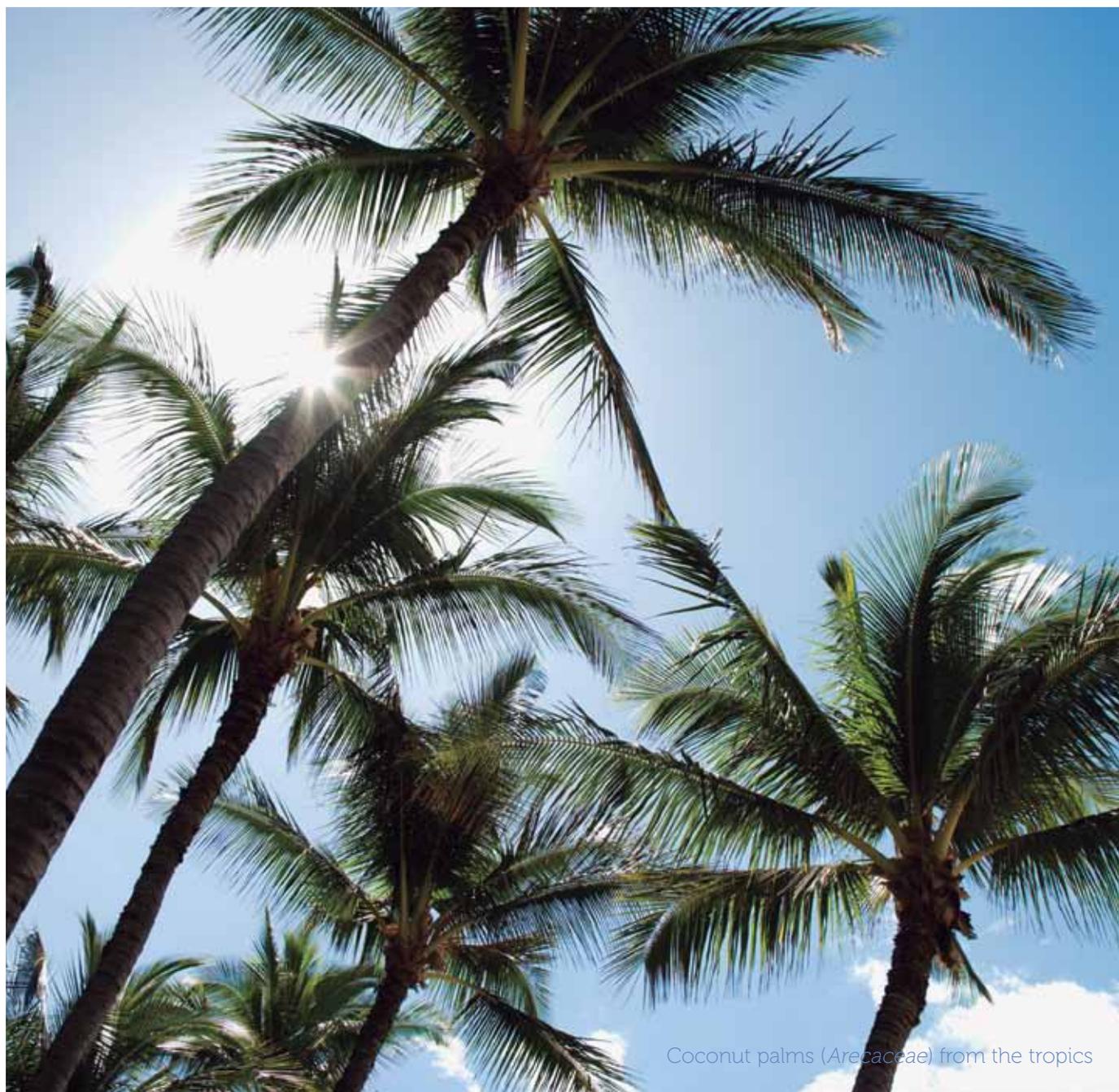
I do not mean to focus exclusively on the positive aspects (because unfavorable experiences give balance to our professional plans, and there were indeed obstacles and challenges to overcome), but I prefer to concentrate on two significant elements: 1 My most treasured moments were fostering the hard work and enthusiasm of several students, some in their final year, alongside the teams of biologists and other professionals. 2 Future professionals have been guided at college with great flexibility, scope and creativity, which have had a very positive impact. I am proud that they are going beyond my own achievements and have a bright future ahead of them.

Is it difficult to divide one's time between a family and scientific research?

There were moments when it was hard to share my dedication between my work and



A species of *Crinum* (Amarillydaceae) widely used as ornamental



Coconut palms (*Arecaeae*) from the tropics

my family. Perhaps the time that I spent with my son was to the detriment of my career. I hope that he understands how much love there has been in his life, especially in such a motivating atmosphere of progress.

Finally, do you recommend students in high school to study biology? What advice would you give them?

Of course I would recommend that young people study biology, particularly in a country with such a valuable, inspiring nature, a richness of landscapes and species, a close relationship between plants, animals and human communities, and the never-ending list of “pending issues” to make progress in documenting Bolivia’s biological diversity. Biology is a discipline that builds on this progress and allows for dynamic, creative scientific research, whether in the field or

the laboratory. In addition to its specificities as a scientific area, it lends itself well to the formation of interdisciplinary groups. These offer a more comprehensive answer to research topics, and also help resolve environmental and ecological conflicts and problems. ■

*Eliana Sdenka Asunta Vasquez Berazaín was born in Potosí on 31 December 1980. Her girlhood passion for literature and the arts led her to study Community Development at the Universidad Mayor de San Andrés. After graduation, she was able to combine her two passions: culture and journalism.