



Elfriede de Pöll
Guatemala

“My father taught me from an early age which plants it was forbidden to cut, which were toxic and which areas were protected. This is how I learned about them and I loved them”

Interview by Lucy Calderón*



Elfriede de Pöll

Remarkable vitality

Dynamic, cheerful and enterprising, with enviable stamina, Doctor in Botany Elfriede de Pöll is still active in teaching and research on the ethno botanic wealth of Guatemala at the age of ninety.

De Pöll's eyes light up when she talks about her projects or the trips with her students to

discover new plants and the various uses to which they are put in communities. Her work in this line of research has contributed to the preservation of the country's cultural, social and ecological heritage.

The projects she has undertaken on cardamom, nettle and ornamental plants have

had an impact at the economic and nutritional level by improving the production of locally consumed and export crops.

In the area of ecology and conservation, she has classified the biological diversity of various basins and ecosystems and provided input for making political decisions on the issue.

The immediate, long-term implications of de Pöll's research earned her a recently-established agreement with the new Center for Studies on Biotechnology at the University of the Valley of Guatemala (UVG) to develop further applications of her work.

Vast Trajectory

Dr. de Pöll is a tenured researcher at the Academy of Physical, Natural and Medical Sciences of Guatemala, where she was the first woman to be admitted. She continues to collaborate with the academy through the Science at School Program, in an attempt to make classroom science teaching fun.

The knowledge produced by de Pöll has been disseminated through conferences, scientific articles, books and teaching at various universities in the country and abroad.

She also remains in close contact with European botanic gardens and is a member of the following networks: The Latin American Botany Network; the National Environmental Teaching and Research Network and the

Network of Herbariums of Mesoamerica and the Caribbean.

Her services to the community include the identification of plants for the public, academic and private sectors, consultancy for botanic gardens, educational tasks and consultancy for the government.

Her knowledge of medicinal plants and their uses have made her a "folk healer" among her colleagues, students and friends.

What led to your love for plants?

It was thanks to my father who used to take my brothers and sisters and me to the countryside in the summer holidays when we were small. During our walks, he taught us which plants it was forbidden to pick, which ones were toxic, which areas were protected. So I learnt all about plants and I loved it.

There, when I was at junior high school, I had the idea of researching plants to cure cancer. At that time, people knew nothing about this and I wanted to find something new.

In 1945, once the war was over and Austria regained her independence, I went to the university and obtained a doctorate in plant physiology and a masters in natural sciences in Vienna and a doctorate in Botany in Guatemala in 1960 when I enrolled in the San Carlos University of Guatemala.

How did you develop the discipline required to achieve your goals, as you did?

I learned about discipline as a child, at home, with my parents, but through affection rather than impositions. My parents advised me and never forced me to do anything. They taught me that I should be the one to decide what to do.

What are the qualities of a good botanist?

Being interested in plants and treating them as living beings, because although they do not walk or shout, they have similar reactions to us. They must be treated well.

Do you talk to plants?

I realize that some people believe that you have to talk to plants to make them feel good, but I don't do so myself. All I know is that when you treat plants properly they respond. Giving them the water, light and fertilizer they need is important. You have to study their reactions and understand them.

What species do you like best?

I don't have any favorites although my favorite plants are the most difficult ones to identify, plants that pose challenges such as mistletoe, for example.

You have been a university professor for decades. What keeps you motivated?

As a scientist, I work, but I have to pass that knowledge on to others. I do not work or study just for myself, it is important for others to learn.

What is the key to motivating students to be interested in this topic?

You have to comment on the details of the plant, not just have students memorize them. In addition to the common and scientific names of plants, they must also know that a species has uses: as food, a medicinal plant, an ornament and so on. You have to tell them why that plant is important, they must feel that their studies have a point.

What do you think about using plants to fight disease?

"Ninety per cent of medicines have been found when studying plants and their extracts; there are doctors who have great faith in plants and recommend their use. I do too, but under certain conditions," says Pöll.

"You have to realize that medicinal plants have an active substance and other compounds that boost the former. The plant's age determines the amount of active substances it has and



Rhyncholaelia digbyana is a native of Mexico, Belize, Guatemala, Honduras and Costa Rica, where it grows as an epiphyte, often in conditions of long periods of drought.



In Guatemala, it is popularly known as "Candelaria"



Orchid species of Guatemala

although they have a slower effect, they are also more effective. Conversely, chemicals get rid of symptoms quickly but do not cure them and also have side effects," notes the specialist.

Do you take communities' traditional knowledge and use of plants into account?

Yes, I listen to them and understand them, but you have to ignore superstition.

During your long career, what has given you the greatest satisfaction?

Studying and sharing my knowledge, and receiving students whom I sometimes do

not recognize because they have changed so much. But when they come to visit me, they always mention something they learned in my classes. That is very satisfying.

Can a woman, a mother and a professional achieve everything she sets her mind to without neglecting her family?

She can do everything provided she is organized.

How do you keep yourself so active and in such good physical and emotional shape?

For the past 15 years, I have done everything



Elfriede de Pöll in her greenhouse

at home. I get up early and do a lot of walking. Although my husband and one of my two daughters died several years ago, it is still difficult... there are days when I do not feel very good emotionally but I get up and refuse to give in.

Proof of the vitality and passion that characterize Dr. Pöll is the fact that she improved

the UVG botanic garden. She began that task with her collaborator in the middle of 2011 and the garden now has a wide variety of plant species that have been classified, documented and labeled. She even taught her collaborators to obtain coffee from some plants in the garden and they are all delighted to have drunk the first cups of their own organic coffee.



Academic profile

- Dr. in Botany Elfriede de Pöll graduated from the University of Vienna in 1947.
- She obtained an M.Sc. in Natural Sciences from the University of Vienna in 1965.
- She obtained a doctorate in botany from the University of San Carlos in Guatemala in 1960.
- She speaks German, Dutch, English and Spanish and translates from the Latin and Greek.
- Since 2003, she has taught Botany 1 and 2 at the UVG.
- Since 1988, she has been the director of the Herbarium of the UVG Institute of Research.
- From 1980 to 1988, she was the director and honorary researcher of the Herbarium at the Center for Conservation Studies at the Faculty of Chemical Sciences and Pharmacy at the University of San Carlos in Guatemala, USAC.
- She has given various workshops and conferences both locally and internationally to both scientists specializing in issues in her field and to elementary and junior high school teachers. She has also collaborated with the Ministry of Education in

Lycaste Skinneri, better known as “White Nun,” is the national flower of Guatemala. Currently extinct in its natural habitat, it continues to be grown in nurseries and by collectors.



Wild flower species native to Central America

Guatemala, through the Academy of Sciences and the University of the Valley of Guatemala.

Publications

- Recent publications include: Los muérdagos de Guatemala (Loranthaceae, Viscaceae y Eremolepidaceae): Diversidad, Distribución e importancia económica. In Ec. Cano, Biodiversidad de Guatemala, Vol. I, UVG, 2006.

- Doce plantas tóxicas de Guatemala. Revista de la Universidad del Valle de Guatemala, No. 15, 2006.
- Etnobotánica Garífuna, Livingston, Izabal. Pöll, E. C. Mejía, M. Szejner. 2005

Distinctions and awards

- She received a tribute from the Permanent Civic Program of the Industrial Bank in 2007.
- She was given the Presidential Medal of the Environment, awarded by the Ministry of the Environment and Natural Resources of Guatemala, 2006.
- She received an award for excellence in teaching from the Board of Directors of the University of the Valley of Guatemala, UVG, 2001.
- She was honored for her dedication and contribution to the training of biologists in Guatemala, UVG, 1998.
- She obtained the Austrian Cross of Sciences and Arts, First Class, from the government of Austria, 1997. ■

*Lucy Calderón Pineda is a journalist who obtained a degree in Communication Sciences from the University of San Carlos in Guatemala in 1999. In June 2011, she was elected member of the World Federation of Scientific Journalists and in 2008, she was the only Latin American scientific journalist chosen to sail the Arctic Ocean on the Canadian Coast Guard Icebreaker Amundsen and report on the Circumpolar Flaw Lead System Study carried out in the polar region.