

Sandra Diaz, awardee in the Ecology and Conservation Biology category (13th edition)

I'd like to start by giving an enormous thanks to the BBVA Foundation and the award committee and to express my joy and gratitude at receiving this distinction.

I vividly remember the moment I heard about the award, and my delight at knowing it was shared with Sandra Lavorel and Mark Westoby, whom I have known and admired for 25 years and who I am bound to by friendship and many intellectual adventures.

Today, the Frontiers of Knowledge Awards are more important than ever, because rather than rewarding work on an immediate or specific product, they recognize the frontiers, in other words the horizon and what lies beyond it, and present the adventure of knowledge as movement, a quest and an ongoing enterprise.

And I really identify myself with that. I believe that our contributions to knowledge have been useful in diverse fields of application. But it would not be entirely honest of me to claim that the ultimate cause of our shared passion was merely the desire to be useful.

I admit that one of the main drivers has simply been a passion for knowledge per se. Passion for these wonderful plants that adopt incredible forms and do unimaginable things and yet appear to obey just a few general laws. That joy, that buzz of adrenaline I felt when I saw my first carnivorous pitcher plant, a succulent that looks like a quartz crystal, a 3000-year-old larch. The feeling of wanting to touch them and embrace them, with my arms and my mind.

Another thing that unites me with Sandra Lavorel and Mark Westoby and that I would like to highlight here is the conception of science as a collective endeavor. Today, scientific initiatives are no longer the solitary processes of a few prominent individuals. They involve collectives, sometimes hundreds of people, working towards a common goal. And I feel that through the three of us, this way of doing science is also being distinguished.

One adventure Sandra Lavorel, Mark Westoby and I shared was when we inquired if behind the exquisite, almost infinite variety of forms and functions of the world's plants there might be a few

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very general biological rules; rules that were common to all plants. And that was how we arrived at the first global overview, the first navigation chart of the general ways of being a plant on this planet: from sequoia to duckweed, from thorn apple to heather, from coconuts to orchids. What we call the global spectrum of plant form and function.

It seems simple when I describe it now, but when we first had the idea the data just didn't exist. We had to gather quantitative data on the leaves, stems and seeds of thousands and thousands of plants from all over the world. So we came up with something that is commonplace today but 15 years ago was unrealistic and slightly ridiculous. I should clarify that, as is often the case, the idea was born during a scientific meeting, but not exactly in the meeting room. It occurred to us to ask those who had labored for years in the field, measuring the traits of the leaves, seeds and stems of plants, to share them generously with a bunch of strangers.

At first they said it would never work ... but we tried anyway, which is why our initiative has the name TRY.

The trying paid off. It worked so well that, besides being able to describe the global spectrum of plant form and function, the TRY initiative now has 12 million data cells and has served more than 16,000 projects.

And here is where I would like to publicly thank Jens Kattge, Gerhard Boenisch, Christian Wirth and Colin Prentice, dear friends and co-parents of the TRY initiative.

Perhaps some of you are asking, beyond our curious passion for plant life, what is the point of understanding the functional diversity of plants.

Of course, there are many plant qualities that we cannot measure by means of their functional traits. For instance, measuring the traits of the leaves, stems and seeds of oak trees will tell us little about the value of oaks in Basque culture, oaks in general and some oaks in particular, so unique that they even have their own name. Trees like the Guernika oak or the Sarragoa oak, which were shown to me by my dear colleague and friend Unai Pascual, who was born and works very close nearby.

The leaves and acorns of these venerable oaks will likely have the same weight and nutrient content as those of any other oak. Ecological knowledge can help us understand how these plants react to different factors, and also how they affect the rest of the living world. But it does not go far enough.

To understand the integral value of plants for people, botanical ecology is necessary, but not enough. We also need other tools, and other knowledge.



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That is why we are now engaged in two complementary ventures: weaving together fundamental botanical ecology and interdisciplinary knowledge building on the multiple values that plants have for human beings.

I would like to end by thanking the many colleagues, too numerous to name, who I am proud to work with and with whom we are pursuing this ongoing collective adventure.