

LIFE FORMS

English translation by
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FOREWORD

I had the extraordinary good fortune to meet Mariana Yampolsky in 1982, and thereafter to establish a firm friendship with her. We were introduced by mutual friends, including Arjen van der Sluis, her partner, a dear friend of mine and a dedicated agronomist, whom I had met through work. I had just read *La casa que canta*, one of the most fascinating books I have ever come across, a true hymn to architecture without architects, to design and construction by indigenous peoples; an ode to mud, to wood, to stone, to the sheer whiteness of lime, to roofs made of foliage and leaf-pads; an elegy to the diversity of cultures and natures.

Once or twice I was able to accompany Mariana to the field where I witnessed her tremendous passion for all living things, her boundless enthusiasm and the sheer intensity of her own existence. We always dreamed of doing a project together, but the dream never seemed to come true. The difficulties of obtaining adequate funding thwarted our plans time and time again.

In 2001 —after almost five years of being away from Mexico City— I met up with her again, and she said, looking straight at me with those piercing blue eyes that twinkled even when she was serious and could look deep into your soul:

—This time, you're not getting out of it... We are going to do something together, with my plant photos.

And we started to think things over and look at her photos, wondering how to bring science and photographic art together and how to link images with words. We eventually agreed that plant forms would form the core of the book, the element in charge of leading the dialogue.

The origin of living forms —morphogenesis— is a difficult, slippery terrain in which scientists and artists gaze at each other in awe. We scientists calculate many things, but explain few. We can estimate the amount of water that evaporates into the atmosphere, but appreciate in awe the ephemeral beauty of a cloud as much as any artist. We can calculate the rate at which a tree grows, but are at a loss when it comes to explaining what makes an oak so different from a poplar, a difference that, incidentally, any capable artist can easily portray. We can send spaceships into outer space, but we have no fewer reasons than Newton to be astonished at the way an apple falls. We can calculate processes and predict fluxes, but have difficulty interpreting the geometry of the real world, the shape of things.

Artists, in contrast, calculate little but make an enormous effort to interpret the world. Goethe, the great German writer and philosopher, felt a true passion for the form of plants. In his view, there should be an underlying archetype; a *bauplan* com-

mon to all plants, something that would lend unity to the immense diversity of living forms in the plant world. Just as variations in the basic plan of ancestral mammals have led to wonderful adaptations ranging from bats to elephants, from leopards to whales, so Goethe surmised that it was simple variations on the basic morphological plan of plants that determined the arrangement of leaves, the appearance of flowers, and the difference between an orchid, a rose, a cactus, or a gigantic swamp-cypress.

The interpretation of the living forms of plants—Mariana and I agreed—would be the conceptual field where those participating of the project would meet, using different approaches and different ways of interpreting the same reality, with Mariana's photos as the leitmotiv. But this interpretation would not restrict itself to the field of pure form, but would also include plant forms as interpreted through human cultures: From the Churrigueresque frontispieces of the Baroque period to Diego Rivera's *alcatraces*—calla lilies—, the shape of plants has inspired every aspect of human culture—agriculture, art, gardening, cuisine, architecture, and the design of all kinds of objects.

Mariana died shortly afterwards, on May 3rd, 2002. Right up to her untimely death, she was still full of projects, of ideas, of life. With the support of the Fundación Cultural Mariana Yampolsky we decided to carry on with the project in her memory.

Mariana would be unable to take new photographs for the book, but we could use images from her collection. The leitmotiv of the text would be her vision—the astonishing, sharp, often humorous photos of the forms of Mexican plants as seen through her lens, always curious, always traveling, from a perspective that she alone could feel, see, imagine.

Mariana's wonderful images would be set off by the texts of two brilliant, young Mexican thinkers: Elena Álvarez Buylla and Mónica Lavín. Thus, one of the most outstanding international researchers in molecular biology gave us an essay on the biological control of plant form. In contrast with Mariana's artistic vision, Elena offers us an analytic, scientific view of the origins and causes of the enormous beauty of the plant world, skillfully building a bridge between the reductionist view of molecular control and the exquisite synthesis of its ontological result: the textures, the whorls, the patterns of the external form of plants.

Mónica, a story writer, a captivating narrator, an outstanding wordsmith, provides her interpretation of the astonishing world of plant use by humans: natural forms that—through the power of human hands—are transformed into new shapes. Plant forms, artistic forms derived from them, and even literary forms, forms of the intellect; Mónica achieves a synthesis between the beauty of the natural world and the even more surprising beauty of the human world.

Mónica and Elena's texts are enhanced by a preface by Coral Bracho, a superb Mexican poet, and by the processing and printing of the photographs by Alicia Ahumada, one of Mariana's closest friends. Four Mexican women combine their work with Mariana's to interpret nature from different approaches, from viewpoints that are con-

trasting yet astonishingly complementary. Like the diverse life forms of plants and the means of survival of the cultures that use them, this book presents five different ways of looking at a single, marvelous reality.

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