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They captivate with their beauty and seeming fragility, yet orchids belong to one of the heartiest, most adaptable plant families on Earth.

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For plants that are relatively rare, orchids are spectacularly diverse, with 25,000 wild species to their credit—twice as many as birds and four times as many as mammals.

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Masters of deception, fully a third of all orchids promise their pollinators far more than they deliver.

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Coryanthes panamensis. The impressive flower of the bucket orchid offers its pollinator, a male euglossine bee, ingredients to make the perfume it needs to attract a female bee. Gamboa, Central Panama



MICHAEL POLLAN

SEX AMONG THE ORCHIDS

"It has always pleased me to exalt plants in the scale of organized beings."

CHarles Darwin

e animals don't give plants nearly enough credit. When we want to dismiss a fellow human as ineffectual or superfluous, we call him a "potted plant." "A vegetable" is how we refer to a person who has been reduced to a condition of utter helplessness, having lost most of the essential tools for getting along in life. Yet plants get along in life just fine, thank you, and had done so for millions of years before we came along. True, they lack such abilities as locomotion, the command of tools and fire, the miracles of consciousness and language. To animals like ourselves, these are the tools for living we deem the most important, or "advanced," which is not at all surprising since they have been the shining destinations of our evolutionary journey. But the next time you're tempted to celebrate human consciousness as the pinnacle of evolution, stop for a moment to consider exactly where you got that idea. Human consciousness. Not exactly an objective source.

Tools are tools, or, as Darwin called them, adaptations—and in evolution there is always more than one way to get a job done. So while we were nailing down locomotion, consciousness, and language, plants were hard at work developing a whole other bag of tricks to advance their interests. All of those tricks take account of the key existential fact of plant life: rootedness. How do you spread your genes around when you're stuck in place? How do you defend yourself? You get really, really good at things like biochemistry, at engineering, design and color, and, in the case of the flowering plants, at the art of manipulating the allegedly higher creatures, up to and including animals like us.





LEFT: Paphiopedilum sp. (slipper orchid)

ABOVE: Bulbophyllum longiflorum

Both Poring Hot Springs, Sabah, Borneo

DECEPTIVE BEAUTIES

The World of Wild Orchids CHRISTIAN ZIEGLER

With an Introduction by MICHAEL POLLAN and a Foreword by NATALIE ANGIER

Confucius called them the "king of fragrant plants," and John Ruskin condemned them as "prurient apparitions." Across the centuries, orchids have captivated us with their elaborate exoticism, their powerful perfumes, and their sublime seductiveness.

But the disquieting beauty of orchids is an unplanned marvel of evolution, and the story of orchids is as captivating as any novel. As acclaimed writer Michael Pollan and *National Geographic* photographer Christian Ziegler spin tales of orchid conquest in *Deceptive Beauties: The World of Wild Orchids*, we learn how these flowers can survive and thrive in the harshest of environments, from tropical cloud forests to the Arctic, from semi-deserts to rocky mountainsides; how their shapes, colors, and scents are, as Darwin put it, "beautiful contrivances" meant to dupe pollinating male insects in the strangest ways. What other flowers, after all, can mimic the pheromones and even appearance of female insects, so much so that some male bees prefer sex with the orchids over sex with their own kind?

And insects aren't the only ones to fall for the orchids' charms. Since the "orchidelirium" of the Victorian era, humans have braved the wilds to search them out and devoted copious amounts of time and money propagating and hybridizing, nurturing and simply gazing at them. This astonishing book features over 150 unprecedented color photographs taken by Christian Ziegler himself as he trekked through wilderness on five continents to capture the diversity and magnificence of orchids in their natural habitats. His intimate and astonishing images allow us to appreciate up close nature's most intoxicating and deceptive beauties.

"The moment that the orchid stumbled upon one of the keys to human desire and used it to unlock our hearts, it conquered a whole new world—our world—and enlisted a vast new crew of credulous animals more than happy to do its bidding. Let's face it: we're all orchid dupes now."—Michael Pollan, from the Introduction

Christian Ziegler is a biologist-turned-photographer specializing in tropical natural history. He is a frequent contributor to *National Geographic Magazine*, *GEO*, and *Smithsonian*, among others. He is an associate for communication with the Smithsonian Tropical Research Institute and a founding fellow of the International League of Conservation photographers.

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