TECH AND VISION

Scientists have long warned us against anthropomorphizing the animal world—attributing human qualities to creatures such as this striped tree frog to make us feel more comfortable with nature. But Piotr Naskrecki, Conservation International's director of the Invertebrate Diversity Initiative and a research associate at Harvard's Museum of Comparative Zoology, is less cautious. He and many of his fellow biologists believe that members of other species really do have distinct personalities. And those personalities bloom in Naskrecki's extraordinary photographs of the crawly, not creepy denizens of the tropics.

This rare frog, a native of Costa Rica, certainly seems ready for her closeup. "We used to think of insects and other small animals as robots acting out some programmed behavior in their genetic code," says Naskrecki, whose subjects have often never been photographed before. "There's a lot of learning and individualism among these small creatures." Now collected in *The Smaller Majority* (Harvard University Press, $35), Naskrecki's photographs were reproduced with Pantone's Hexachrome system. This six-color printing technology permits the reproduction of colors outside the range possible with standard four-color (CMYK) processes. "The creatures appear just as they do in nature," says Naskrecki. For details, turn to Photofile, page 48.

PHOTOFILE

For tropical biologist **Piotr Naskrecki,** nature's small fry make better subjects than wildlife photography's familiar big game.

Why is this giant leaf-tailed gecko laughing? He just saved a bunch of money on his car insurance! Seriously, the gecko isn't really smiling, despite having more teeth than any other land animal. He's "gaping," a defensive tactic he thinks will scare off the man taking his picture, entomologist Piotr Naskrecki.

No such luck. Naskrecki, a research associate with Harvard's Museum of Comparative Zoology and Director of the Invertebrate Diversity Initiative of Conservation International, fell in love with photography after his wife gave him "an old manual Nikon" for Christmas one year. The medium quickly became an extension of his scientific work. "For me, photography is a way to replace the old practice of collecting specimens for study," he explains. "I decided I could use it to spread the conservation message, by showing how beautiful and important to our ecosystems these small animals are." Naskrecki has recently advanced that cause by publishing his images in a splendid new book, *The Smaller Majority* (Harvard University Press, $35).

The biologist-photographer prefers to show his subjects in the context of their natural environments, so in addition to macro lenses from 60mm to 180mm he uses shorter optics that let him move in close but still get lots of background. "I am particularly fond of wide-angle 16-35mm lenses, which equipped with a short extension ring provide a unique, open perspective rarely seen in macrophotography," Naskrecki writes in the book's extensive photographic notes. Since he often shoots under dark tropical canopies, he uses a tripod (or, for low-level work, a tripod head mounted on a small board) and sets slow shutter speeds, adding fill flash as needed.

Even though the kinds of creatures Naskrecki shoots are "jumpy," as he puts it, they lend themselves to long exposures. "They have to stop sometime, and when they do they often freeze," he says. "I spend a long time studying their behavior patterns so I can anticipate when they are going to stop. Then I might have two minutes or so to take the take the picture."

Why focus on nature's small fry when there is bigger game to be captured? "Very early on I discovered that it gives me immensely more satisfaction to lower my lens and look for animals hiding on the forest floor than to take pictures of an elephant or toucan," says Naskrecki. By way of explanation he invites the reader to envision a herd of elephants, each the size of a fingernail. "Imagine looking at them from above as they walk around your feet," he writes. "Pretty unremarkable gray specks, wouldn't you agree? Now imagine a praying mantis the size of an actual elephant—isn't it the most remarkable creature you have ever seen?"

—MARVIN GOOD AND JEFFREY ELBIES

Tech Notes: **Naskrecki photographed this giant leaf-tailed gecko (Uroplatus fimbriatus) on the biologically rich but threatened island of Madagascar. "You find them on tree trunks or rocks," he says. "They're super photogenic." Because the gecko knows it can't outrun predators, for self-defense it hoists itself high on its legs and tries to look fierce. That made it easier for Naskrecki to shoot the laughing lizard with his Nikon D1X and a 70-180mm f/4.5-5.6D AF Micro-Nikkor zoom mounted on a tripod. Exposure was one second at f/4.5, with shadows softened by an on-camera flash.**