

Environment

Natural Deformities: Beautiful Photos of Six-Legged Frogs

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A Pacific tree frog with extra limbs, cleared and stained by scientist and artist Brandon Ballengee. (Courtesy the artist and Ronald Feldman Fine Arts, New York)

You may think you're looking at X-rays, but Brandon Ballengee's amphibian pieces are actual specimens of frogs made to appear that way through a multi-step chemical process called clearing and staining.

They trigger a certain response, like you can't help but look at the deformities of these animals. And that's the emotion Ballengee, who is part scientist, part artist, is trying to evoke. "Clearing and staining," the biologist told weather.com, "is a really beautiful or engaging way to tell the story about the necessity of conservation. They're ghostly but at the same time abstract, and the colors are really beautiful."

The blue comes from a stain that attaches to the frogs' cartilage, the red from a solution that adheres to bone. A digestive enzyme makes the muscles transparent. The process doesn't cause the malformations but rather exposes deformities that often occur naturally but that are being seen in the wild more and more frequently — perhaps from climate change, changing wetlands or even agriculture, Ballengee surmises. His art shows the remains of animals that look like frogs and toads, only with just two legs or with six, or even more.

Ballengee makes just a single print from each specimen "to give presence to these tiny little animals that most of us would never even notice unless someone pointed them out," he said. He's collected them all over the world, usually as part of his fieldwork in places like Australia, Europe, Central America and North America. He's worked in Slovenia, Ireland, Italy and France, and he's about to head to the Netherlands.

The art developed out of his scientific work. "With the science, I'm following rigid methodology and I've got to stay analytical," said Ballengee, who has a Ph.D. and is working on a post-doc. "The art lets me explore the whole other mix of emotions and thoughts that are happening while you're actually doing this type of work." At heart, he's a conservationist, too, which is what makes the message he's trying to convey all the more important to him.

Deformities occur. They're a normal phenomenon. But here's his point: Once we start seeing them happen in greater percentages, we need to take notice. For that reason, Ballengee makes the amphibians in his prints about the same size as human babies. When he tried them larger, they were too scary; when they were smaller, people didn't pay attention. "Making them this scale, it hopefully induces a feeling of empathy," he said. "You really kind of sit and look and start to get concerned."

If nothing more, the amphibians and their unusual bodies will intrigue you.

For more of Ballengee's work, including clearing and staining of birds and fish, visit his [website](#).