

“The mysterious case of the frogs’ legs.”
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The mysterious case of the frogs' legs

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Exhibitions

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Image: Brandon Ballengee

In 1995, a group of schoolchildren from Minnesota discovered that half of the frogs they found in a pond were deformed. Some had bent, truncated legs, some had extra legs, while others had none at all. Photos of the frogs caught the attention of journalists, who blamed chemical pollution.

Since then, American artist [Brandon Ballengée](#) has found similarly deformed frogs and toads all over the world when working with the biologist [Stanley Sessions](#) from Hartwick College in Oneonta, New York state. Ballengée documents their field trips photographically. He also brings back dead specimens, which he uses to create artistic images like this one of an extra-limbed [Pacific treefrog](#) from Aptos, California.

Ballengée says he's attracted to the frogs because he finds them uncanny, almost other-worldly. To heighten this effect, he stains the frogs with dyes that turn cartilage blue, bones red and flesh translucent. He then scans them using a high-resolution scanner to produce a detailed, ghostly image. "I wanted to find a way to exhibit what I was finding without being scary or exploitative."

So why are the frogs deformed? It turns out there is a natural explanation. [Parasites burrowing](#) into a developing tadpole's limb bud prompt the cells under attack to overcompensate when they divide, creating extra legs. There may also be a simple explanation for the missing legs: [dragonfly larvae nibbling](#) on the tender hind legs of the tadpoles. The limb tries to regenerate, but its success depends on the severity of the bite and the tadpole's stage of growth. So the high rate of deformity in that Minnesota pond could simply have been down to bad luck.

The Case of the Deviant Toad, commissioned by London-based science-art agency the Arts Catalyst, is on show at the Royal Institution in London through 31 March