



▲ The copperbelly water snake is named after its characteristically tangerine-orange underside

Snake rescue

Saving rare species from extinction

Ryan Wagner

At the intersection of Ohio, Michigan and Indiana, the corn monoculture melts away to reveal green rolling hills and deep gorges. The lush forest is pockmarked by steep-banked ponds, carved out by retreating glaciers 10,000 years ago. Standing waist-deep in a forest pool, Megan Seymour scans the shrubby banks with binoculars.

A slight change in colour and texture spotted in the tangled buttonbush swamp reveals her quarry: a thick, glossy, copperbelly water snake (*Nerodia erythrogaster neglecta*). Seymour hoists up her waders and ties back her hair as she prepares to grab the snake before it can disappear into the murky water, taking with it one of the last chances to save the species.

Though non-venomous, a bite from a 1.2-metre (4ft) water snake can be painful. Seymour, a biologist with the US Fish and Wildlife Service, has lost count of the number of snake bites (all

► Megan Seymour and Nathan Herbert are on a mission to bring the depleted Great Black Swamp back to life by catching, breeding and reintroducing rare water snakes

from non-venomous species) she has had, but is quick to add: “They aren’t slimy, they aren’t mean, and they aren’t trying to get you.”

The copperbelly water snake – named for its tangerine-orange underside – inhabited what was one of the largest wetland areas in North America. Roughly the size of Connecticut and stretching from Fort Wayne in Indiana across much of north-west Ohio, the Great Black Swamp was home to elk, wolves, mountain lions and black bears.

In the mid-19th century, farmers began to clear the trees and drain the swamp to access the fertile soil hidden beneath the water. In just five decades, the swamp was dry.



Today, the copperbelly water snake lays claim to just 20 sq miles of remnant swamp forest. Experts estimate fewer than 100 individuals, possibly as few as 40, remain. “I think they will be gone within 20 years,” says Nathan Herbert, a land steward with the Nature Conservancy, an international nonprofit organisation.

He believes saving the copperbelly is essential to the region’s ecology as it is “an umbrella species”. Other declining species also rely on the swamp forest, including the rare bobolink blackbird and the checkerspot butterfly.

▼ Experts estimate there could be as few as 40 copperbelly water snakes remaining in their natal wetlands

PHOTOGRAPHS: RYAN WAGNER

When Seymour began searching for copperbelly snakes in spring 2021, no one had seen one alive in the wild in almost three years. She spent more than 180 hours combing through the wetlands but found none. “That was very concerning and pushed us down the road to captive propagation being the best option,” says Seymour.

Captive breeding acts as an insurance policy against extinction. Encouraging endangered species to reproduce in captivity can increase population size, maintain genetic diversity and safeguard rare species while habitat is restored for their eventual return to the wild. The Andean condor, red wolf and bald eagle were saved from extinction via captive breeding.

The US Fish and Wildlife Service is partnering with Toledo zoo, south of Detroit, to breed copperbelly water snakes.

The zoo has successfully reared other declining native species, including the hellbender salamander and the Blanding’s turtle. No one, however, had tried to captive breed copperbelly water snakes, which give birth to live young, rather than laying eggs.

Last year, with the help of private

landowners, Seymour found and caught six copperbelly water snakes – three males and three females. “Finding six snakes was insanity,” says Seymour. “After we got the first one, I was just shaking.”

In a small back room, hidden away from the zoo’s visitors, a dozen opaque plastic enclosures line the wall. Each holds a water dish, a hide and two baby copperbelly water snakes waiting for a meal of chopped fish. Just four months after she was caught, one of the females gave birth to 24 babies, the first copperbelly water snakes to be born in captivity.

Dr Matthew Cross, a conservation biologist at Toledo zoo, sees captive breeding and reintroduction as a chance to right ecological wrongs. As with medical doctors’ Hippocratic oath, conservation biologists hold an ethical commitment to prevent extinction. “Conservation biology is a crisis discipline,” says Cross.

Seymour, Cross and the Toledo zoo team have committed the next decade and a half to saving the copperbelly. If captive breeding is successful, there could be “thousands of baby snakes over the next 15 years”, says Seymour.

Ballet director accused of smearing dog faeces on critic’s face

Kate Connolly
Berlin

The director of a leading German ballet company was suspended from his post and is being investigated by police after allegedly smearing a critic’s face with dog excrement at the premiere of his show. The critic had described one of his productions as “boring” and “disjointed”.

Marco Goecke, the head of Hanover State Opera’s ballet company, was also barred from the opera house, a spokesperson confirmed yesterday

afternoon, after he confronted Wiebke Hüster, the ballet critic of Frankfurter Allgemeine Zeitung (FAZ), in the interval of his latest show on Sunday night.

He attacked her verbally before taking a bag of dog faeces out from his pocket and rubbing the contents in her face, the FAZ and the critic said.

The newspaper said in a statement that Goecke had expressed his fury over Hüster’s review, published in the FAZ on Saturday, of his production In the Dutch Mountain with the Netherlands Dans Theater in The Hague.

Hüster had written: “One

alternates between a state of feeling insane and being killed by boredom.”

Goecke, 50, who trained at the royal conservatory in The Hague, has been director of the Hanover’s ballet company since 2019. His pet dachshund, Gustav, is famous in his own right, always accompanying him – he once dined in Paris with Princess Caroline of Monaco, who is known to be a fan of the breed.

German media reported that Gustav had produced the faeces just minutes before.

Goecke threatened to ban the critic during the interval on Sunday

from entering the opera house, and accused her of being responsible for theatregoers cancelling their membership subscriptions.

Hüster later recounted the incident, saying that Goecke had “suddenly pulled the bag from his pocket. With the open side of the bag, he rubbed the dog excrement in my face. When I felt what he had done, I screamed.”

The opera house’s artistic director, Laura Berman, apologised to Hüster. The decision to suspend Goecke was announced yesterday afternoon, hours after the statement was issued.