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Creatures of Fire

BY DAVID ALLEN JOY

An evening chill was setting in as a breeze swept down Chastine Creek in north-eastern Jackson County in western North Carolina, but I wasn't ready to leave. Goosebumps and a few shivers were not enough to drive me from the sound of running water. I sat down beneath a paper birch, pressed my back against the peeling bark, and rested sunburned arms across my knees. Tree frogs called from just beyond the bank, but as soon as I shifted their chirping cut to silence.

I heard the mammalian wings of a little brown myotis slapping through leaves overhead. It wouldn't be long before the serenity of the daytime forest transformed into the madness of predation when Appalachia goes dark. The bat cut tight flips around tree limbs as it snatched baetis mayflies too absorbed with a last ditch effort to breed to dodge the bite. I stared into the trees, my head leaned against the birch, and tried to focus on the bat catching flies, but it maneuvered quickly before my eyes could adjust.

Something rustled beneath the dried leaves along the bank to my right, and the sound immediately drew my attention back to the ground.

The animal slipped from beneath a crinkled poplar leaf and moved onto the back of a moss-covered stone.

I could see it taking tiny steps from its sanctuary beneath streamside stones across the ball of rock, the creature's feet making no impression on the green fur of moist moss. The salamander began its search for dinner.

I lurched slowly to my hands and knees and crept in for a closer look. My movement, as stealthy as I may have thought, was enough to again silence the frogs and send the salamander scattering down the rock and across the tops of dried leaves. Still, I managed to inch close enough to see the frightened amphibian lying flat against the forest floor.

A blackbelly salamander lay motionless beneath the stem of a maple leaf. Its bulbous eyes were set like peppercorns atop its angled head, and black pupils haloed in brown watched me as I tried to remain motionless. A mottled pattern the color of wet clay barred its

back and faded down along its slate gray belly. Specks of white freckled its throat, and two lines of white dots ran parallel the length of its body and across slits used to breathe.

The blackbelly salamander is the largest of all dusky salamanders, occasionally reaching lengths more than seven inches. The salamander I watched was at least six inches in length, fully grown and knowing Chastine Creek in a way I could never understand. This salamander had been laid beneath a stone in this stream one spring, had hatched in late summer, and spent four years in the larval stage before reaching its adult frame. This was not its first summer, and I wondered how long it had taken to get this big.

It was a lungless species, using glands along its body rather than internal organs to absorb oxygen from the air. For this reason, it could never venture far from the stream. It needed constant moisture to wet its body and breathe. I dared not touch it, but knelt, fascinated by its ability to survive years of harsh winters in a stream that often dipped below freezing.

I held my breath and tried to tighten into stone like a gargoyle crouching over the bank, but it was too much. In an instant, the blackbelly slithered beneath the fallen flora, its slick body sliding back onto wetted sand and in between cobble edging the streambed. It was gone.

The name salamander comes from the Greek *salamandra* meaning, "a lizard-like creature that is supposed to live in, or to be able to endure, fire." Philosophers and poets from Aristotle to Shakespeare alluded to the mythic qualities of this reptile in their writings. It was thought to be born in fire, live in flames, and hold the power to extinguish the blaze.

Some legends said that salamanders were created when glass blowers stoked their fires for seven days straight. Yet a more logical conclusion stems from the places where they rest. Salamanders often find refuge inside the crevices of fallen timber. When early humans tossed logs onto campfires, salamanders awoke from sleep, the smoke and fire bringing them out of their burrows, and seemingly they emerged from flames.

The myth spawned connections with sin, damnation, and the fires of hell. In 1681, John Flavel wrote in *The Method of Grace* that, "Sin like a Salamander can live to eternity in the fire of God's wrath." Similarly, Charles Kingsley described the path of the condemned in his 1864 lectures, *The Roman and the Teuton*: "He will henceforth follow the example of a salamander, which always lives in fire."

The connection with the wretched was enough to condemn the animal for a past of which it knew nothing. The streams where

they prospered were not Dante's river of Acheron. Eggs were laid in streambeds, ponds, and on land, and the salamanders emerged, making the moist earth and streams home. Our human ignorance, no longer based solely on superstition and faith, but rather from a lack of land ethic, has driven many near extinction. Still, salamanders find sanctuary in parts of Appalachia.

I thought that summer heat had brought on hallucinations the first time I saw the monster. I'd been fly fishing the Tuckasee River a mile above the Highway 107 bridge in Cullowhee, North Carolina, when the dragon curled around the felt toe of my wading boot and down under the fissured rock where I stood.

My parents—born and raised flatlanders—laughed as I described it over the phone. It was a lizard with a head the size of a Copenhagen can, slack skin waving off its body like loose fitting leather and the tail of a sea snake. My description sounded as ridiculous as the illustrations of Conrad Gessner from the 1500s, depicting monstrous beasts with the bodies of clergy, fins of fish, and scales of a serpent attacking ships. Nonetheless, I saw it and the thing was near two-feet long.

My folks thought it was an Appalachian tale I was passing along to the Piedmont. But an old timer on the bank, a man in his 60s with dirtied Carhartt britches, white Elvis sideburns, and a rusty looking trucker cap, told me I'd seen a snot otter. He laughed when I looked confused, and I wasn't quite sure which one of us was crazy.

I didn't have a choice but to take his word for it, but the words snot otter sounded grossly foreign to me. Flashes of runny-nosed children and mucus-covered muskrats blended in my mind as he repeated the name. Those words were meaningless jabberwocky. He couldn't be right. What I had seen was no mammal. It looked like some kind of giant lizard, but fifth-grade biology told me it had to be a salamander.

The only reference point I had were the words the old man had given. I expected no results from the search, but soon found a homepage for the largest salamander in North America.

Names like snot otter, mud devil, devil dog, and mollyhugger were all colloquial nicknames for the same thing: *Cryptobranchus alleganiensis*, the hellbender.

Research verified everything I'd seen. Hellbenders were the third largest salamanders in the world, growing to more than two feet, only surpassed by two Asian species that could grow to six feet. Often living over 30 years, their flattened bodies absorb oxygen into their lungs through capillaries along gill-like frills, and they stay submerged their entire lives.

In that sense, salamanders and I are both creatures of the fire. Our abilities to struggle through hardship and regenerate stronger, bind us in the brotherhood of life. We are all kindred spirits, and since I am my brother's keeper, I cannot let them die.

Though they used to range throughout most of eastern United States, their habitats have diminished—largely because of pollution and dams—to a few lonely stretches of clean mountain water along the Appalachian range. Seeing one is a sign that the health of the ecosystem is still in good shape.

The names given to hellbenders brought back the etymological allusions to fire and brimstone. Some sources suggest the creature was believed to be from hell and that it slithered beneath stones toward the realm to which it was bent to return. This ill association, coupled with a belief that they eat all of the fish in the river, has led many a fisherman to bludgeon hellbenders seen in streams. In reality, they are lethargic, gentle giants more concerned with snacking on crawfish than gobbling stringers of trout.

After I glimpsed the first one, I searched for them often, looking beneath stones in clear water for the undulating ribbons of their skin, the distinctive flat head and beady eyes that initially intrigued me. I swam in summer streams and wore goggles to see through the current into crevices where they might hide, but they eluded me. Only redhorses and chubs darted away from my wallowing body, never the creatures I sought. So, I gave up.

Then at times when I least expected they appeared like ghosts. Days spent in the water, wading to rising trout, have brought many half-second glances of the dragons. I see them swerving through the current like strips of wavering plastic, their thick bodies saggy with skin. I watch them curl beneath rocks into deep water looking to make an easy meal out of hell-

grammites. I stare as their legs seem to hop along pebbly bottoms using the current to speed their travel, but I don't give chase. I don't even move. I wish them godspeed, because, after all, knowing they're there lets me know that we haven't destroyed it all.



Driving into southern Jackson County one morning curling along the meandering West Fork of the Tuckasegee River, a sprinkling rain marked my windshield. The trees were still naked, fresh buds lining up along the branches, and the lack of flora allowed a clear view of the contours and topography of the valley.

The car in front of me was speeding through Glenville, and I rode close, already 30 minutes

late to work. As I steered through the commercial district, my tires hissing across wet pavement, I saw something squirm from the tracks of the car in front of me. I swerved to straddle the animal, managed to miss it, and immediately began to brake the Chevy.

I thought it was a snake. So I turned around at the mouth of Bee Tree Road right after 107 split a cove on Lake Glenville. I steered onto the side of the road, stood at the pavement's edge, and waited while every passing car threatened the animal I yearned to protect.

When the last car passed, I walked to the far lane, and knelt over the crippled animal lying still on the road. To my surprise—and, honestly, satisfaction—it was no snake. Instead, a thick-bodied salamander lay in an S in the center of the lane.

The salamander was at least nine inches, a spotted salamander seldom seen above ground. I'd seen them in books, and even as a kid had a giant rubber model of one that I'd gotten from Discovery Place, a science center in Charlotte, N.C., but until now I'd never seen one wild, but I didn't have time to stare.

Before long the next wave of late-to-work drivers would come barreling through Glenville, and the salamander and I would be sitting ducks. I snatched a couple of wet leaves from the side of the road, wrapped them around the salamander's back, and carried it to the edge of the woods.

Once there, I placed it atop a thick mat of moss and was amazed by its beauty. The salamander's blackish-gray body was highlighted with citrine-colored spots on the head and neck. The orbs of color changed to shades of aureolin yellow along its back. Drowsy-looking

The Hellbender (pictured, and inset above) is one of the world's largest salamanders, and its primeval, almost frightening look has earned it a number of creative nicknames. JEFF HUMPHRIES PHOTOS



David Allen Joy
RA HILL PHOTO

eyes and a mouth that seemed upturned in a salamander smile accented its face. Its chubby frame rippled along its gut like the folds of fat around an infant's knees.

Spotted salamanders are a mole species of amphibian, which live most of their lives underground. For this reason, they are seldom seen by anyone besides gardeners digging in shaded, moist plots to plant perennials. The spotted salamanders only emerge on rainy spring nights to venture toward their annual breeding pond. In a single night, hundreds or thousands may make the journey. Returning to its same pond every year, this salamander was undoubtedly headed to breed.

The car ahead had run over its wedge-shaped tail, and drops of blood gathered along the sides of its tail and covered the yellow spots. Though it had the ability, it did not choose to drop its tail, a defense mechanism reserved to confuse pred-

ators. This species can actually regenerate not only its tail, but also any part of its body, including parts of its brain and head. It hadn't felt the need to release the milky poison contained in the glands of its neck either. I was glad to know that I wasn't seen in that light. Anthropomorphizing it may be, but we were comrades.

The salamander turned slowly along the moss and moved onward toward an unknown place where it had traveled yearly since the day it was born. I was confident in its ability to survive. With phenomenal regeneration abilities, and an innate sense to disappear from the terrestrial world, the salamander would continue its journey. After all, if it could be born beneath embers, survive fire, and live amongst flames, a run in with a car didn't stand a chance.

As the salamander vanished beneath fallen leaves, I was reminded of the opening pages of Dennis Covington's **Salvation on Sand**

Mountain. In those pages, Covington responds to a Hodding Carter essay from *Time* magazine in which Carter writes: "The South as South, a living, ever regenerating mythic land of distinctive personality, is no more."

Covington, a good ol' Alabama boy, responded by writing: "The South hasn't disappeared. If anything, it's become more Southern in a last-ditch effort to save itself. And the South that survives will last longer than the one that preceded it... Why? It's been through the fire."

In that sense, salamanders and I are both creatures of the fire. Our abilities to struggle through hardship and regenerate stronger, bind us in the brotherhood of life. We are all kindred spirits, and since I am my brother's keeper, I cannot let them die. Only when the separation between humans and the natural world is bridged will we understand our place. The salamanders are waiting.

SML

Saving the salamander

The presence and abundance of salamanders in an ecosystem is a testament to the health of the entire region. In this sense, Southern Appalachia remains one of the most pristine environments in the United States. Nearly 10 percent of global salamander diversity occurs in this region.

The moist soils, abundant streams, and cool climate of Appalachia are heaven for amphibian life. Because of this, there are more species of salamanders found in Southern Appalachia than in any other temperate region in the world. These numbers include a host of endemic species, such as the pygmy salamander, that are only found here.

Currently there are 47 species recognized in the region, including six species that were formerly unknown to science. Biologists from around the world crowd the area during the most active months searching for new species. Genetic testing among these finds will likely yield even more discoveries.

Salamanders are those canaries in the coal mine of the Appalachian animal kingdom. They serve as indicator species for scientists and provide valuable warnings of the health and sustainability of the environment. Because of their fragile existence, their numbers—or lack thereof—pinpoint the emergence of disease, pollution, or climate change. For now, the signs are good, but the presence of humans could one day be their end. With each new dam, each tree cut, each parcel leveled, their world shrinks, and we lose the opportunity to behold these river dragons.