## Cottonmouth Birthing, Part 2

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Having repulsed the kingsnake, the larger, darker mother seems to be a source of comfort to one of the surviving babies.

At last, the large black female, which had been below all week, emerged from a different opening and began advancing on the kingsnake, furiously striking at him but continually falling short. She finally managed to land a bite after several attempts, and the kingsnake withdrew with a third baby in his mouth. In vain, the doomed neonate bit the side of his tormentor, but it was no use. Kingsnakes are known to have some resistance to the venom of our native pit vipers.

The mother cottonmouth continued striking at her enemy as it retreated but again seemed unable to connect. The kingsnake retreated with its meal to the roots of a nearby stump but, instead of eating, lay motionless for over a half hour. I began wondering if perhaps the combined venom of the mother snake and the neonate might have had some effect, but the snake eventually revived and consumed its meal. After that it gave up the attack and returned to the pine woods where I followed it for quite a ways until it concealed itself in some thick brush.



Long after it was all over, the smaller female, who had fled for her life, returned to the site, soaking wet. Being young and inexperienced and with only one good eye, she can hardly be blamed for losing her nerve in the face of so formidable a foe. She is not gaping defensively at me, but exposing the sensitive Jacobson's vomeronasal organ in the roof of her mouth directly to the air to enhance its sensory capabilities.

I have been told by other researchers that this is likely the first and only time that such an assault by a kingsnake on baby cottonmouths, and the attempts of a mother to defend them, has ever been documented in the wild. My satisfaction with that, however, is greatly tempered by having been forced to watch the destruction of three of the five neonates I had so enjoyed spending the better part of a week observing and photographing. Having studied cottonmouths and other snakes for a lifetime, I have come to admire and know these remarkable and severely misjudged predators extremely well, and in no way would I ever agree with the view that they are pests that should be exterminated. Part of the great value of snakes is that they are neither at the top nor the bottom of most food chains, but somewhere in the middle. Predation of baby cottonmouths by a kingsnake is natural and benefits the ecosystem.

Frederick Boyce is the staff herpetologist at the NC Aquarium at Pine Knoll Shores.

It is with no small amount of regret that I must announce that it will be necessary for me to step away from this column for a time while I attend to some other projects and pressing business that have become very demanding of my time. It has been a great honor to have been given this space each month in The Shoreline with which to share the secret lives of some of my favorite overlooked animals, and I have very much appreciated the help, patience and support of Janie Price and the entire staff of The Shoreline. I hope to return at some point in the future, and in the meantime, you can follow my page, "Cottonmouth Acres," on Facebook to see my photos and videos from the field.—All the best, Frederick Boyce

