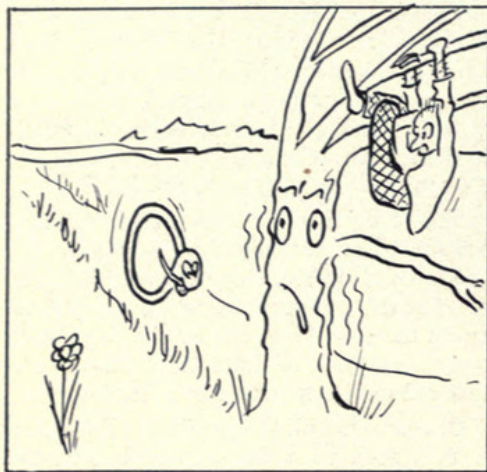


A FIELD FOR PSYCHOLOGY— SNAKE STORIES

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THE EDITOR of a sports magazine once told me that he would not publish a refutation of the mother-snake-swallowing-her-young-for-protection story because soon afterward he would be forced to employ a stenographer to answer innumerable letters of protest. This is good evidence that false beliefs about snakes die hard in spite of science education.

Among many such beliefs are a few perennials that deserve to be called the "Big Four" of snake mythology. In addition to the one already mentioned, I include the hoop-snake myth and the milk-snake and glass-snake stories. The milk snake is said to consume quantities of milk and even to



Cartoon by Margaret G. Bradbury

THE MYTHICAL HOOP SNAKE

Herpetologists scream there's no such thing, but millions still believe there is, and many will swear they have seen it.

milk cows directly, and the glass snake is supposed to join the pieces of its shattered body together again and crawl to safety. Then there are elaborations. The hoop snake, for example, is reported to bear a sting in the end of its tail and even to be able to stick this sharp instrument into a tree and cause the leaves to wither in a matter of minutes.

Comparison of these stories brings to light some interesting facts. First, they are very old, a datum that in itself suggests survival from a pre-scientific age. Second, they all involve action; that is, they describe things that snakes do. Since action cannot be preserved, it is relatively hard to prove or disprove. Third, with one exception, there is little difficulty in understanding how each belief arose. The milk snake lives about barns where both milk and rodents abound but has designs only on the latter, though it is remotely possible that a milk snake might actually drink milk from the cat's saucer. The glass snake, which happens to be a legless lizard super-

ficially resembling a snake, has a long, fragile tail and thus may actually survive being broken in two pieces of equal length. The dismembered tail never becomes joined to the body again. In time a new tail grows, but it fails to attain the excessive length of the original. The story of the swallowing of the young by the mother snake might have arisen in many ways, among them casual dissection of a viviparous female about to give birth to living young or observation of a snake feeding on the young of another species with a similar pattern.

NARROW 'ESCAPES' TOLD

The method of locomotion of the hoop snake seems to rest firmly on the human imagination, although the stinging ability of this highly mobile creature is often used to connect it with a certain southern species that has a sharp tip to the tail and the habit of pressing this tip against a restraining hand. The connection is very tenuous since the snake with the sharp tail is not the fast-moving, active kind demanded by the story. Survivors of hoop-snake "attacks" agree that only a great burst of speed enabled them to escape a horrible death.

The reptile man is constantly confronted by "eye-witnesses" of these remarkable feats. His problem is to present evidence that truly convinces rather than makes the issue one of personal veracity or merely strengthens the narrator's conviction that scientists are pertinacious individuals who never admit to laymen they could be wrong.

If the herpetologist begins by telling all the reasons why it is "impossible" for a snake to, let us say, suck a cow but the narrator simply answers that it must be possible because he saw it happen, what is the unfortunate herpetologist to do? My experience convinces me that the best approach is first to point out how common the belief is. This cannot be denied, since almost everyone raised in the country has "seen" it take place. Moreover, all such persons have "seen" hoop snakes roll, glass snakes break up, and mother snakes swallow their young and give them up again. The narrator will freely admit all this and also that these must be very common events that happen thousands of times every year all over the country. If this be true the actions in question would lend themselves to ready demonstration, and it is inconceivable that such ordinary behavior would not be observed by reptile specialists or zoo keepers. How could men who spend their lives studying reptiles in the wild state as well as in laboratories or observing them in zoos fail to observe actions that every farmer witnesses over and over again? The shoe is now on the other foot, for the narrator has some explaining to do.

Perhaps his best rebuttal is that so many observers, even if they are laymen, could not be wrong. The answer is simple. What about the general belief that the "spreading

adder" or "blowing viper" (called hog-nosed snake by herpetologists) is venomous? This belief, in contrast to the "Big Four" stories, can easily be disproved, for the herpetologist will allow himself to be bitten by a hog-nosed snake. He will probably have to force the snake to bite, since this species seldom does more than put up an appearance of doing so. Here is ample proof of the inaccuracy of lay observation of animal behavior, for a harmless creature that rarely even bites is considered a most dangerous snake.

After having thus turned the tables, the reptile man can judiciously point out some of the reasons why it is impossible for snakes to perform certain feats. Details of these reasons would take us too far afield into snake anatomy, physiology, and behavior patterns. They can be found in such recent publications as *The Truth About Snake Stories* by Chief Curator of Zoology Karl P. Schmidt and my *Snakes Alive*.

Should the narrator remain unconvinced, the herpetologist should now bring up the time element. In nearly every case it will be found that the particular event in question took place far away and long ago. This is true because the human mind cannot readily build up false recollections in a short time; only after years of hearing others tell of seeing certain things happen can a self-convincing mental image be made. An unusually long and detailed account that I recently received gave no clue as to the time of occurrence until near the end, when the statement that "I was too young to be a drinking man" inadvertently let the cat out of the bag and made the story fit the usual pattern.

'OLD—IT MUST BE TRUE'

The best snake letter ever received at Chicago Natural History Museum was written by an elderly man evidently convinced that age increases the validity of an observation. He began by telling of persons who had seen snakes perform one of these feats only a few years ago but went on and on to conclude with a second-hand account of an event about as hoary as the writer himself. He obviously felt that nothing more need be said.

At this point a psychologist should take over. A mere herpetologist can scarcely be expected to explain why the mind of man insists on conjuring up false images. Individual veracity has little to do with the matter; the ability is a universal one although it may be much more highly developed in some persons than in others. Since reading with dismay parts of my diary that had been put away for some twelve years I have had no illusions about my own case. The herpetologist will justly remain skeptical until the layman can say, "There is a mother snake swallowing its young for protection," not "When I was a boy in Florida I saw a mother snake swallow its young for protection."



Pope, Clifford H. 1949. "A Field for Psychology--Snake Stories." *Bulletin* 20(9), 8-8.

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