

The Mysterious Viper of Mangshan

By Frederick Boyce

The Chinese New Year begins on the new moon between January and February and lasts for 15 days. In 2022 (Year of the Water Tiger), this will fall on February 1. Also known as the Spring Festival, it is celebrated by about one-quarter of the world's population. With that in mind, I thought it might be a good time to take a step beyond eastern North Carolina and consider the interesting story of an elusive and beautiful Chinese snake, a rare pitviper that until 1989 was thought to be a mythical creature.

China is home to 240 species of snake, of which 69 are venomous. In contrast to most western cultures where snakes have been (rather unjustly) reviled and persecuted as symbols of evil, in China snakes are traditionally regarded as auspicious symbols of good luck, long life, honor and a bountiful harvest. Many snake-themed cultural relics have been found in southern China, including an ancient bronze jug depicting two snakes fighting with frogs that was unearthed in Guangxi along the Nanling Mountains where, in neighboring Hunan province, Mang Mountain (or Mangshan) is located.



Mangshan viper showing the white tail—Photo by Bill Love, courtesy of Tom Crutchfield

This remote region is the home of the Yao people, an ancient mountain tribe said to be direct descendants of Fuxi and Nuwa, a pair of deities with human faces and intertwined snake-like tails who embody the concept of Yin and Yang. According to legend, Fuxi and Nuwa passed on to the Yao people their human nature, while their snake nature was inherited by Xiaoqinglong, who was described as a huge green snake with a white tail. The Yao people regarded Xiaoqinglong as their totem and brother, and though he could not be seen in the mortal world, they were convinced that he lived with them in this vast green mountain (or shan).



Dr. Chen Yuanhui (left) works with his team to save a Mangshan viper in 2012 that was hit by a vehicle. The snake survived.—Photo by Johan Randelin

For thousands of years, Xiaoqinglong, the “little green dragon with a white tail,” was known only from legend. Then, in 1984, a worker at the Mangshan Forest Farm was bitten by an unknown snake. He sought the help of Chen Yuanhui, a doctor at the local staff hospital who was skilled in the treatment of venomous snake bites. The patient described the snake that had bitten him as being “thicker than a beer bottle” with “green markings and a white tail,” but this description did not match any of the local snakes. The size and severity of the bite was also unlike anything that Chen had encountered before. It did, however, make him think of Xiaoqinglong, and he began to wonder if the “little green dragon” of Yao lore could actually be an undiscovered species of snake.

For the next five years, Chen searched high and low in the dense green forest of Mang Mountain for a large green snake with a white tail. Everyone knew that Dr. Chen was looking for a strange snake, and every time someone caught a snake they didn't recognize, they would bring it to Chen to see if it could be the white-tailed snake he was looking for. Did such a white-tailed snake really exist, or had it been a hallucination of the envenomated employee?

The huge spacing of the fang punctures and severe symptoms convinced Chen that an unknown snake did indeed live somewhere in the forest of Mangshan, a traditional burial place of Chinese emperors. Then, in 1989, he heard that two villagers were selling rare snakes. The snakes matched the description given by his patient years before, and Chen immediately purchased them with the 400 yuan (\$60) he had been saving to buy a new refrigerator for his home.

“I was excited because I thought it might be a new species, but nobody would believe me,” Chen said. He finally took the snakes on a two-day journey by train to the renowned zoologist, Zhao Ermi, in Chengdu, Sichuan province. In 1990, they published a joint paper announcing the discovery of a new species of pitviper. It was named *Trimeresurus mangshanensis*, the Mangshan pitviper, after the mountain where it was discovered. In China it is commonly called the Mangshan iron-headed snake (or the “soldering iron-head” snake). In honor of Dr. Zhao, a new genus, *Ermia*, was created just for this species in 1993. But since that name was already being used for a genus of locusts, the name of *Zhaoermia mangshanensis* was instead proposed and briefly adopted until 2007 when,

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