Strength and courage offer no antidote to these arrows.

Biological warfare seems like a modern invention. But the idea of turning poisonous plants or creatures into weapons has a very long history. One clue that biological warfare is an old idea comes from ancient languages. The English word “toxic” traces its origins to the ancient Greek word for “arrow”—toxicon—offering evidence that people made poison arrows many thousands of years ago. The ancient Romans also used biological weapons. “Spear poison” was the ancient Latin name for the toxic plant belladonna.

The Fangs Have It

More clues for the amazing antiquity of poison weapons come from Greek mythology. In the story of the Hydra, a monster believed to live in Lerna, an area in central Greece, the mighty hero Hercules sets out to destroy a giant poisonous serpent with 100 heads. He quickly realizes that his brute strength and ordinary weapons are useless against the Hydra. When he tries wrestling the huge snake into submission, it coils around his body and readies its many heads to strike. Drawing his sword, Hercules desperately chops off the heads. But as soon as he lops off one, two more instantly grow in place! Soon the Hydra was bristling with multiplying heads and fangs dripping venom. Hercules then grabs a burning torch and sears each neck to keep it from sprouting new heads.

But, to Hercules’ horror, he realizes that the Hydra’s central head was immortal, meaning it can never be destroyed. What should he do? Suddenly, Hercules has a plan. He takes the Hydra’s head, buries it alive in the ground, and sets a heavy boulder on the spot. In ancient times, the Greeks would point to a certain colossal stone and say it marked the place where Hercules had entombed the Hydra’s head.

Murder! Mayhem!

Again, according to myth, it was Hercules’ encounter with the Hydra that gave him the idea of dipping his arrows into the Hydra’s poisonous venom. With that simple act, Hercules invented the first biological weapon, a projectile tipped with poison. From then on, Hercules’ quiver held arrows so deadly that even a tiny nick would be fatal. The story was mythical, but the use of poison arrows was not. The discovery meant
that even an unskilled archer shooting from a safe distance could easily inflict terrible suffering and death on an enemy. Worse, not even the bravest warrior could defend himself from poison arrows shot from afar.

In the myth, Hercules' invention started a tragic chain of events. After accidentally killing several friends, he himself fell victim to second-hand Hydra venom. Hercules' wife, angered by his infidelity, sent him a robe she had dipped in the blood of an enemy Hercules had killed with his poison arrows. When he put the robe on, the
poison seeped into his body. As he lay dying, he entrusted his toxic arrows to a young Greek archer named Philoctetes.

Sometime later, Philoctetes left Greece for Troy in Asia Minor to fight in the great war between the Trojans and the Greeks. By accident, he dropped a Hydra arrow on his foot. Even though it just scratched the skin, the venom made it impossible for the wound to heal. Soon after, Philoctetes was stranded on a desert island for 10 years—all the time suffering terrible pain caused by his own weapons. Finally, he was rescued, and, by the time he arrived in Troy, his foot had healed. In the ensuing battles, Philoctetes used his arrows against the Trojans, even though he knew well the torture of being wounded with poison projectiles.

**Hope for the Future?**
The myth of Hercules and Philoctetes helped ancient people understand why poison weapons are unfair and dangerous. Today, we bury toxic weapons deep underground—just as Hercules buried the Hydra's head under a heavy boulder—and hope they will harm no one.

While the Hydra myth is an imaginary tale, it offers wise lessons. It also highlights scientific realities. "Hydra" was the Greek name for one of many poisonous snakes. Even though the Greeks, Romans, and other ancient people believed it was dishonorable and cruel to use biological weapons, they continued to create them with many different poison substances, including snake venom. For example, the Scythians, nomads who lived around the Black Sea, made a dreadful arrow poison by mixing together steppe viper venom and germs from dung. When Alexander the Great invaded India, some defenders fought back with swords and arrows dipped in the venom of the deadly Russell's viper, one of the most dangerous of Asian snakes.

If making war with toxic weapons is such an ancient story, is there any hope for today's world? Once again, ancient mythology has an important message. After the Trojan War, Philoctetes decided not to pass the poison weapons on to another young archer. Instead, he left his bow and arrows inside a temple of Apollo, the Greek god of healing.

Adrienne Mayor is the author of *Greek Fire, Poison Arrows & Scorpion Bombs: Biological and Chemical Warfare in the Ancient World* (Overlook, 2003).
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