



Guardian of the Gharial

Protecting a Critically Endangered Species

Dr. Phoebe Griffith is a conservation scientist focused on the management of crocodiles. She grew up in Nepal, where she was first introduced to the gharial crocodile. The gharial gets its name from the *ghara*, or clay-pot-shaped lump found at the end of an adult male's snout. The function of the *ghara* was a mystery for a long time. Scientists think it is used to make the loud popping sounds that males use to communicate with other crocodiles.

In addition to their unusual looks, gharials also have a unique parenting behavior. They lay their nests communally. When the babies hatch from their eggs, a dominant female and sometimes a dominant male will guard the hatchlings to protect them from danger. These guardians may be in charge of hundreds of hatchlings at the same time.

"My favorite thing about gharials is that they are absolutely fantastic parents," Griffith says.

To study this unique species, Griffith captured and tagged both wild-born and captive-raised crocodiles. She then monitored their movements over a period of three years. These movements showed her where they were feeding, breeding, and nesting. This information is necessary to better understand the species, their habitat needs, and threats to their survival.

Gharial crocodiles are only found in parts of Nepal and India. They were once the most common crocodile species in the open river systems of South Asia.

Since the 1940s, their population has declined by 96 percent. Scientists estimate that there are fewer than 700 adult gharials living in the wild today. Although hunting gharials was banned in the 1970s, gharial populations remain threatened by habitat loss due to damming and sand mining.

"Gharials are still critically endangered, despite a 40-year program to try and save them," Griffith says.

However, there is hope for the future. Griffith's research has shown how to improve the success of reintroducing captive-reared gharials to the wild. Combining this with dedicated work by local conservationists, gharial numbers are beginning to increase in Nepal. ■

Thinking Critically

Scientific Knowledge Why is gaining a better understanding of gharial behavior an important part of developing conservation strategies to protect this species?



Top left Wild-caught gharial crocodiles like the one Griffith is holding are fitted with a radio collar so she can monitor their movement. | **Top right** Newly hatched gharials rest on a female guardian's head. | **Bottom** The gharial crocodile gets its name from the jar-shaped lump on the end of a male's snout.

▶ Watch our interview with Griffith and learn more about her career and research.

