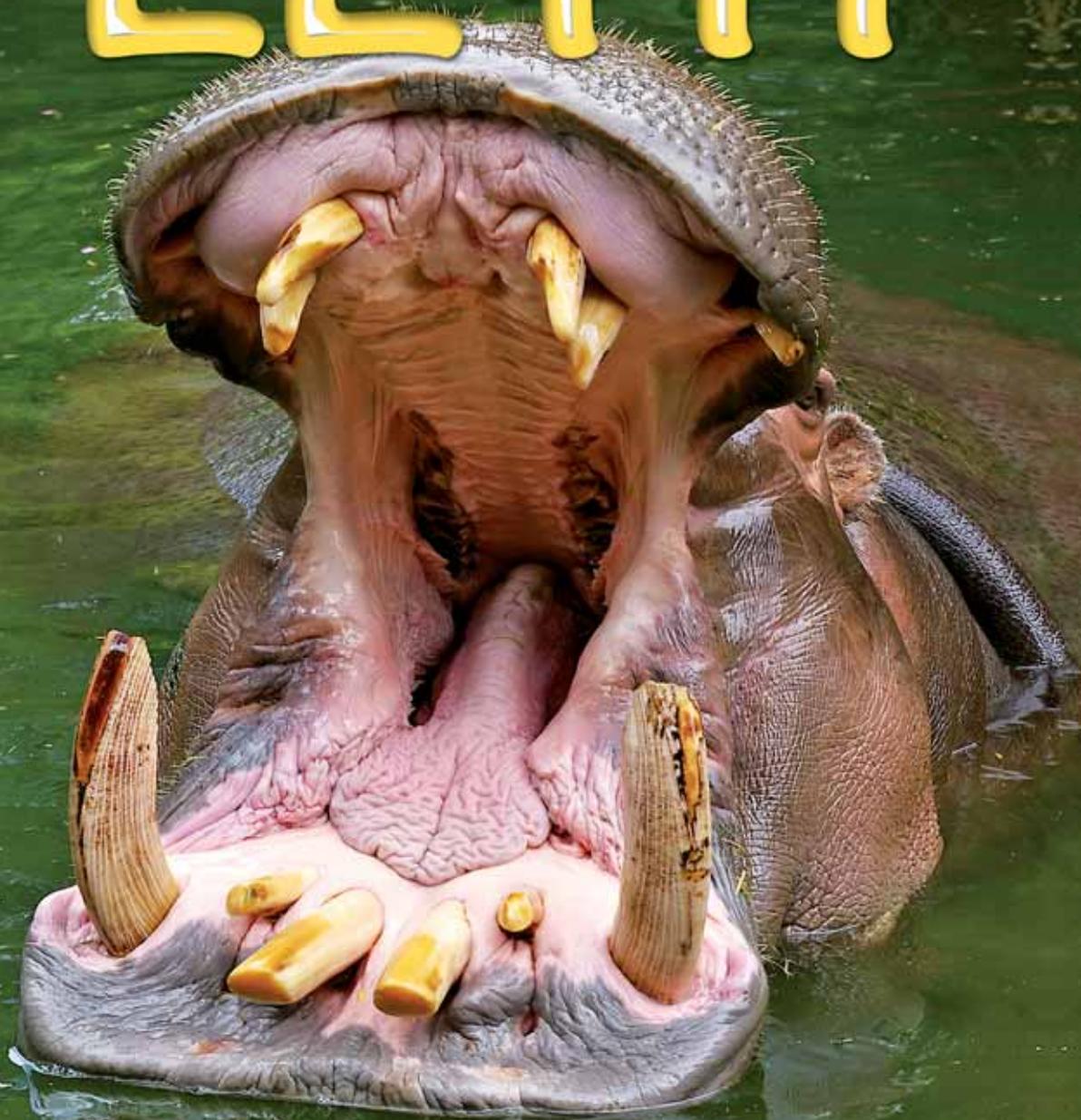


DESIGNED TO SURVIVE

ALL ABOUT TEETH





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ALL ABOUT TEETH



The Energy and Resources Institute

A note by Dr R K Pachauri

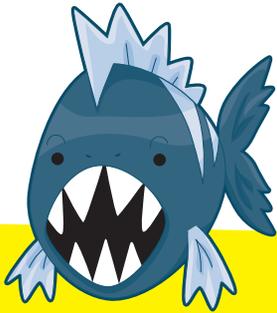
The animal kingdom is replete with fascinating examples of a wide variety of species and the care with which nature has 'designed' each of these creatures. Animals, birds, and fish are equipped with unique tools necessary for their survival, right from unique tails, teeth, fins or claws to beaks or trunks.

This series focuses on animals and the amazing adaptation that nature has equipped them with to suit their habits and habitats. Some have tails that help animals move, while others possess tails that can kill; skin could serve as camouflage in a particular species but be used to breathe in others. The examples are as innumerable as they are remarkable.

As the human race moves towards industrialization and urbanization, we have been cutting down trees, polluting water bodies and contaminating the air, thus endangering the lives of many creatures of the wild. While learning about these wondrous creatures, I hope that our young readers will be inspired to protect the beautiful world brought alive on these pages and keep these fascinating species alive for generations to come.



R K Pachauri
Director-General, TERI
Chairman, Intergovernmental Panel on Climate Change



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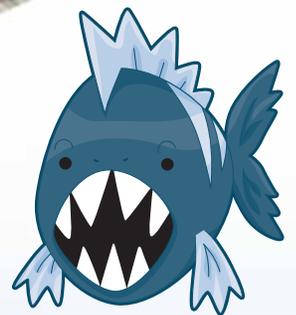
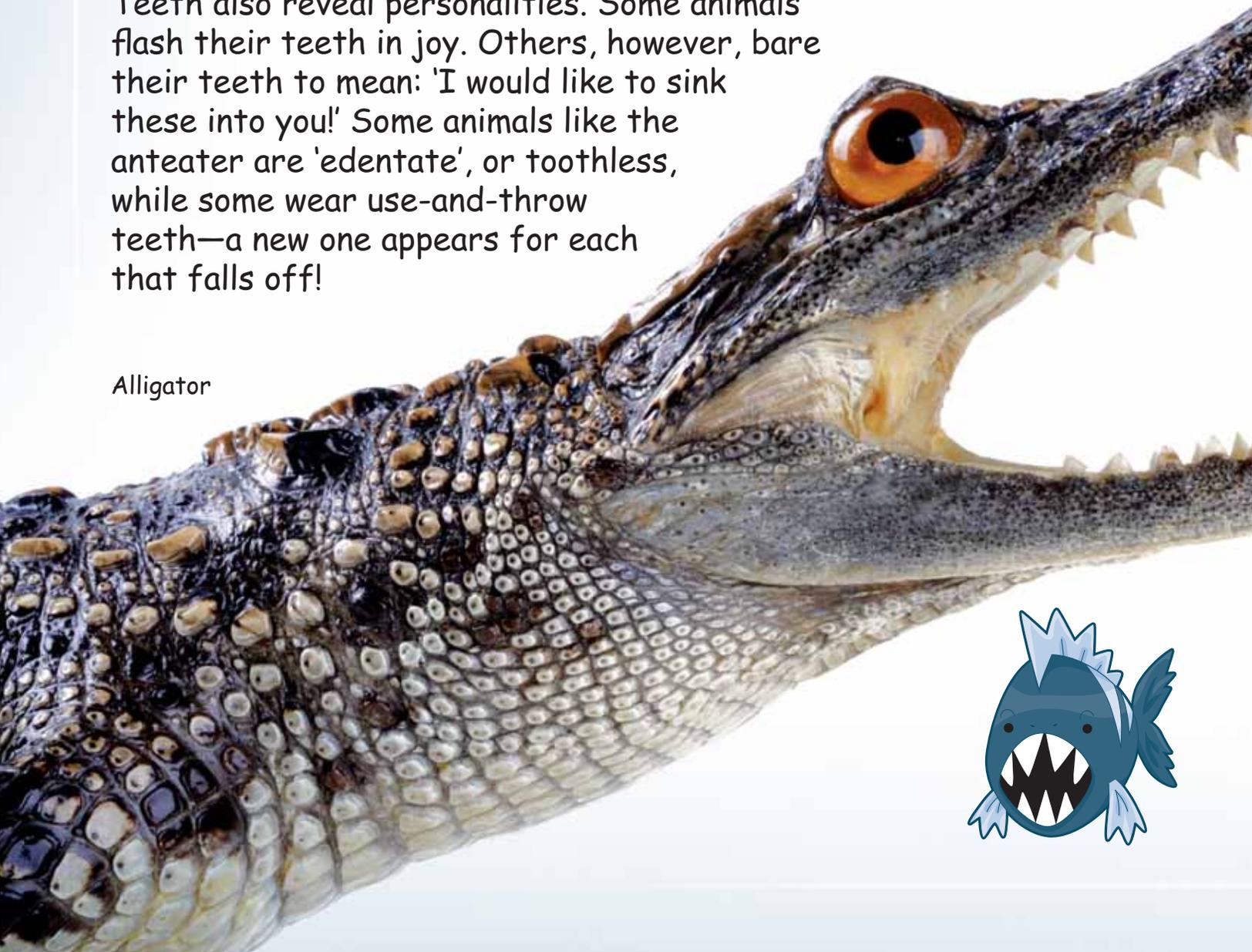
NOTHING BUT THE TOOTH



To get an idea of an animal's diet, just take a look at its teeth. For example, plant eaters, or herbivores, such as the deer have broad, flat teeth. Alligators, sharks, killer whales, and other meat eaters, or carnivores, on the other hand, have razor-sharp teeth that are good at ripping and chewing flesh. Animals that love both meat and veggies have a mix of flat and sharp teeth.

Teeth also reveal personalities. Some animals flash their teeth in joy. Others, however, bare their teeth to mean: 'I would like to sink these into you!' Some animals like the anteater are 'edentate', or toothless, while some wear use-and-throw teeth—a new one appears for each that falls off!

Alligator





Shark



Anteater

The teeth of carnivores are quite different from those of herbivores.



Deer



Killer whale



Toothy truth



Tiger sharks use their sharp teeth to eat almost anything, from turtles and other sharks to lobster traps and even old oil drums!



Teeth can help find friends or locate meals. Toothed whales make high-pitched clicking sounds. When these sounds bounce back from other underwater animals they know where to look for food. The whale's teeth are arranged inside its mouth in such a way that they help in this process of detecting meals. Males of some animals use their teeth to attract females. Others filter food through their teeth.

With so many uses, this much is for sure—while growing teeth is a troublesome experience, having no teeth at all would have made life difficult for animals.

MEAT-LOVING TEETH

Animals that love to eat meat are called carnivores. Their teeth are specially designed to tear into flesh. The pointed teeth in front stab and grip, while the longer ones at the back work like scissors to cut the meat.

MEAN JAWS

Crocodiles and alligators have 60-80 knife-like teeth. They grab their prey with a pair of large teeth located on the lower front jaw. Crocodiles have nasty grins because even though their teeth fit into slots in the upper jaw, they are still visible when the mouth is closed. In alligators and caimans, however, the teeth remain hidden. Whenever a crocodile loses a tooth, another one grows back. These reptiles are known to have at least 2,000 teeth during their lifetime! The bone-crushing jaws are actually quite weak and can be held apart quite easily.



Crocodiles may have a pile of teeth in their stomach, as they often swallow their teeth!



The lion's teeth are perfect for killing prey.



Toothy truth

Piranhas have very sharp triangular teeth. The jaws of dead piranhas were used by South Americans as cutting tools.



KILLER CANINES

All members of the cat family have sharp, pointed canines that can kill with a bite, and strong, cutting teeth to slice meat. Tigresses and lionesses kill with a single bite to the throat or choke their prey by holding its muzzle with their teeth.

VEGETARIAN TEETH



Many animals prefer to eat only plants and grass. Grass, however, contains minerals that damage their teeth. Thus, a number of such animals have developed large back teeth with thick chewing surfaces.

CHEWING IT OVER

Pandas love to eat bamboo, which they tear into narrow pieces with their strong teeth. Then they keep chewing until the tough bamboo shoots and leaves are crushed between their large, flat teeth. Koalas have cheek pouches to store eucalyptus leaves. Once the pouches are full, they grind the leaves with their flat teeth.



Giant panda



Koala

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