

The diet of a mountain gorilla is 93% leaves, plus the stems of herbs, vines and shrubs. They don't eat as much fruit as other gorillas because there are fewer fruit trees at high altitudes

APPETITE FOR LIFE

Despite their formidable appearance, gorillas are peaceful plant-eaters – and their eating habits help to maintain their forest home

With their muscular physique and long, sharp canines, you could be forgiven for thinking gorillas are meat-eaters.

But you'd be wrong. Despite their obvious size and strength, gorillas subsist on a largely vegetarian diet, save for the odd invertebrate. Exactly what each of the four subspecies eats depends on where they live and the season.

The forest-cloaked slopes inhabited by mountain gorillas serve up a year-round buffet of leaves, roots, bamboo shoots, bark and wild celery. In the high-altitude Virunga mountains, your adopted gorillas enjoy a largely leaf-based diet, but groups living at lower elevations, such as in Bwindi Impenetrable National Park, have more fruit in their diet due to the greater variety of plant species that grow here. Further down in the tropical lowland forests of central Africa, western lowland gorillas have even sweeter tastes – their menu is made up of 70% fruit during the peak fruiting season, and 70% leaves at other times. In central Africa's dense rainforests, eastern lowland gorillas handpick the most succulent parts of at least 100 plant species.

Gorillas range widely in search of the best-quality food, grazing their way through the forest, plucking the tips off the foliage in a way that encourages the vegetation to regrow. Their wanderings are strongly influenced by the season. Different species of bamboo produce shoots at different times of year, for example, so gorillas search out the areas with the tastiest new growth. Fruits also ripen at different times.

Adapted for eating

Unlike chimpanzees and orangutans, gorillas rarely use tools to reach or process their food, but they do use their hands. When it comes to often-eaten plant species such as nettles and thistles, preparation is key. To overcome the prickly self-defences of these plants, gorillas have developed complex food-preparation techniques. Mountain gorillas, for example, will

intricately fold the leaves of nettles to contain most of the



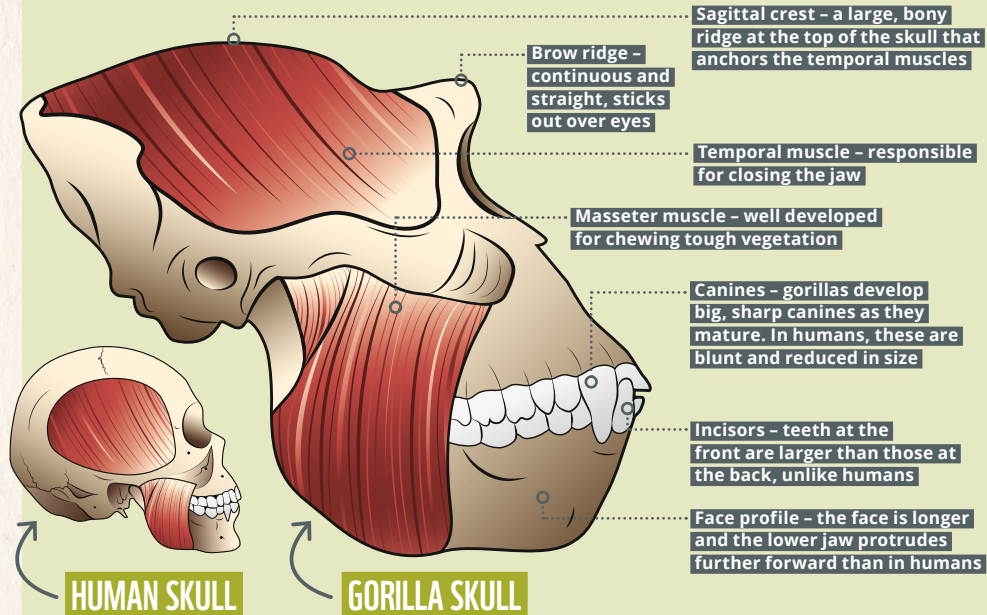


HAPPY MEAL

Wild gorillas have been observed 'singing' and humming while they eat, which appears to be an expression of contentment. Gorillas rarely drink water in the wild as they get all the hydration they need from the succulent vegetation they eat. They'll sometimes drink rainwater by extending their lower lip to catch it as it falls or licking it off their fur.

MASSIVE MUNCHERS

Gorillas have large heads with 32 teeth – the same number as humans and other apes. Their teeth are large and strong, adapted for consuming coarse vegetation. Like humans, gorillas have two full sets of teeth during their lifetime – necessary as they're worn down by plant fibres.



underside's stinging hairs and minimise pain. Infants learn these skills from their mothers through observation and practice.

Chewing it over

Most of a gorilla's day is devoted to eating, so it's just as well their teeth are up to the job. With sharp points, their large molars are adapted to chew tough vegetation for hours on end. But what about those big, sharp canines? Though they do help strip bark and crack open tough seed pods, adult male gorillas mainly use their impressive canines for display, to intimidate rival males competing

for dominance, and as defence against predators such as leopards.

Their robust teeth are powered by huge, super-strong temporal muscles – put your fingers on your own temples while chewing to feel these muscles working. In gorillas, they run all the way up to the sagittal crest – a bony ridge running along the midline of the skull (see above). A gorilla's enormous jaws produce one of the strongest bite forces in the animal kingdom at 1,300lb force per square inch (psi) – twice that of a lion, and enough to bite through a coconut. By way of comparison, the average human bite force is 162lb psi.

DID YOU KNOW?

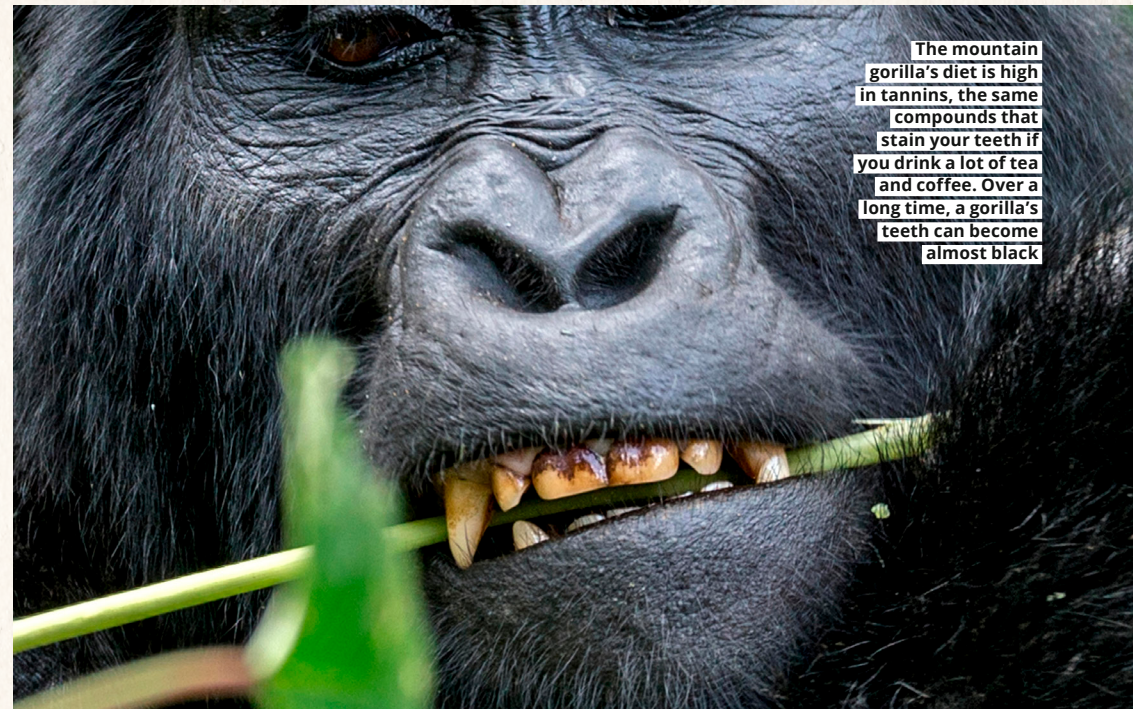
While searching for food, gorillas will communicate with each other to help members of their family group find the best plants.

Vegetation has a relatively low nutritional value, so gorillas need to eat a lot of it to survive. An adult male can easily consume around 30kg of vegetation every day, and a female can manage 18kg – it's no wonder their abdomens are much larger than our own and those of other apes. They house extra-long intestines to digest copious quantities of fibre-rich food.

Eating such vast amounts of plant matter isn't without consequences, though. Ash and dirt are swallowed to aid digestion

and neutralise the toxic chemicals contained in some of the plants and, due to the bacteria in their gut, gorillas live in an almost constant state of flatulence.

What goes in must come out the other end, and gorilla poo helps maintain a healthy forest. Thanks to their fruit-rich diet, western lowland gorillas are important seed dispersers, spreading seeds in their dung throughout the forest. They rely on the plants and renew the forest at the same time – it's no wonder they're known as the gardeners of the rainforest. ■



The mountain gorilla's diet is high in tannins, the same compounds that stain your teeth if you drink a lot of tea and coffee. Over a long time, a gorilla's teeth can become almost black