

Fun Facts Friday: A Rare Way to Chew

Most herbivores grind food from side to side. Carnivores primarily chew up and down. Elephants, as large herbivores, do something different.

Elephants slide the lower jaw forward and backward. As it pulls back, enamel ridges on the molars act like a rasp, crushing bark, branches, and grasses. Some rodents and rabbits use similar motion, but in elephants, it is dominant and highly specialized, scaled to several tons of body mass.

Unlike predators that deliver sharp, explosive bites, elephants apply hundreds of pounds of steady grinding force. They chew 16 to 18 hours a day while processing 100 to 200 pounds of vegetation. To withstand constant abrasion, they rely on molars weighing up to 8 to 10 pounds each.

Unlike ruminants such as cows, deer, and goats, which regurgitate partially digested food as cud to chew a second time, elephants do not re-chew their food. Once swallowed, it moves to the stomach and large intestine, where microbes continue digestion. Elephants feeding sequence includes trunk selection, controlled placement, backward grinding, and fermentation in the lower digestive tract.

Video: Tarra demonstrates the art of elephant chewing.