

Last Stand of the Mountain Gorilla

by Paul Raffaele

Deep in the rain forest, dedicated scientists and trackers are risking their lives to save this rare primate from extinction.

For more than five hours our expedition has battled up the rugged rain-forest slopes of a volcano in Rwanda, central Africa. We are tracking a group of nomadic mountain gorillas, the rarest and largest of the great apes. As we rise to 12,000 feet, my lungs are ready to burst, but our three trackers relentlessly lead on. Swinging machetes, they carve a narrow path through the vines and bamboo.

At midafternoon our path is abruptly blocked by a giant silverback, a six-foot, 400-pound male gorilla perched on a slope above us. He is swathed in jet-black hair, except for his back, which glistens silvery white. His brawny arms are several times thicker than a weightlifter's, and his crested head is bigger than a bull's.

English veterinarian Jonathan Sleeman quickly pulls me to the ground and imitates a submissive pose used by lower-ranking gorillas. "His name is Kwakane, and he's got a grudge against me," Sleeman whispers.

Suddenly the gorilla roars a ferocious battle cry. We cannot retreat, for to do so would provoke a charge. Sleeman nervously plucks a vine leaf and grips it with his teeth. I join him in this gesture of peace.

Kwakane is not persuaded. He stands and pounds his great chest. The thock, thock, thock turns my heart to water. Then without warning he charges straight at us on all fours, his massive hands and feet slamming against the ground.

After thriving for hundreds of thousands of years, mountain gorillas are now endangered. A surging tide of humans has pushed these apes into just two areas of rain forest in central Africa. Only 600 mountain gorillas are left,



about half living on the slopes of the Virungas, a curve of volcanoes straddling the border between Rwanda, Zaire, and Uganda.

"Their gene pool is so limited that even the loss of a few puts the species at peril," says Sleeman, field director of the Mountain Gorilla Veterinary Center in Rwanda. "We are fighting desperately to save them. It is a courageous battle, one of the most inspiring conservation efforts of our time."

Gentle Giants. Local inhabitants have always feared the gorillas. In 1861, British explorer John Speke was warned that the volcano slopes were inhabited by manlike monsters. The mountain gorillas were unknown to Western scientists until 1902, when a German explorer shot two. Over the next 25 years hunters killed or captured more than 50 of the rare primates.

By the 1960s, with the human populations of Rwanda and Zaire exploding, much of the gorillas' highland habitat had been taken, leaving 450 of the apes squeezed into the Virungas. By 1981, there were just 254 left.

Their unlikely savior was American primatologist Dian Fossey, author of *Gorillas in the Mist*. Setting up the research center in Rwanda in 1967, Fossey trained a crew of trackers to monitor the gorillas and lead her to them each day. She soon alerted the world to their threatened extinction.

Among her recruits was Fidele Nshogoza. Over a shared pot of *pombe*—banana beer—Nshogoza, now 47, told me of his first encounter with the gorillas. He came across more than a dozen sprawled in an alpine meadow, looking just like a family on a picnic. Nshogoza watched as the brawny patriarch lay on his belly, resting his chin on blockbuster arms. "*Le grand chef*," Nshogoza whispered in awe. "The chieftain."

Gathered about the leader were his six wives, typically less than half his size. An imp-faced youngster clambered onto the silverback's shoulders, pulling his hair in fun. The father let the infant yank away. *The silverback has the power of several men*, Nshogoza thought, *but is so gentle with his family*. The great ape was not the monster of native legend.

Over the years, Fossey monitored three groups of more than 50 gorillas. But in December 1985 she was hacked to death, many

believe by poachers angry at her efforts to force them from their hunting grounds. Nshogoza was numb with shock, but dedicated himself to continuing Fossey's work.

Then, in April 1994, Rwanda erupted in brutal warfare between the Hutus and Tutsis. As the genocide unfolded, Nshogoza, a Hutu, was forced to join his family in exile in neighboring Zaire. From there, he would gaze up at the misty blue volcano peaks and worry about the gorillas, unprotected amid the carnage.

Finally, he crossed back into Rwanda, braving the machete-armed militias, and roamed the Virungas. He was relieved to find all the gorillas safe.

Common Ancestor. Today the threat of renewed bloodshed still looms. Many people nonetheless carry on their courageous work to save the gorillas. One afternoon I am with Justin Rurangirwa-Nyampeta, conservator of Parc National des Volcans on the Rwanda side of the Virungas. He points to the many mud-hut villages that lap against the volcanoes' foothills. "We have to send out daily patrols to prevent villagers from going into the forest for firewood or to forage for their cattle," he says. "The destruction threatens the gorillas' habitat."

Rurangirwa-Nyampeta is working to shield the gorillas by reforesting the park's border. "Many wonder why we devote so much attention to the gorillas," he says. "It is because they are so precious they belong to the world."

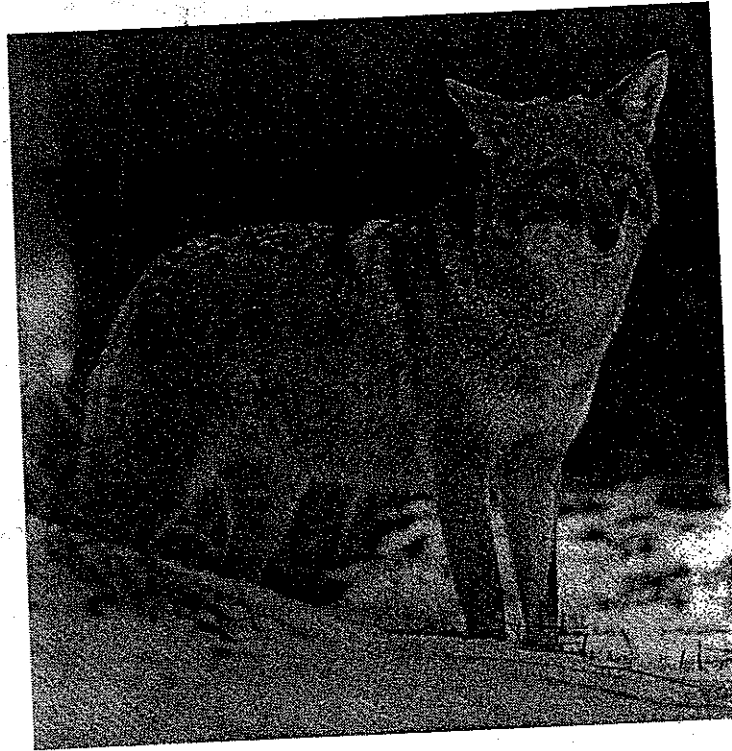
TOO CLOSE FOR COMFORT

Marcia Grant of Rockford, Michigan, was shocked when she looked out her kitchen window one morning and spotted a coyote in her backyard, sniffing around her barbecue grill.

All across America, humans and wild animals are coming face to face in suburban towns like Rockford. That is because our suburbs are pushing deeper and deeper into the habitats of wild animals, causing their natural food supplies to shrink. As a result, animals are leaving their habitats deep in the wilderness to move closer to suburban food sources, such as vegetable gardens and garbage cans.

Marcia's son Toby says, "It's exciting to live here. It's like being in a wildlife park." But wildlife experts say the confrontation between animals and humans is causing problems—for both sides.

Alan Kovacs of the State Game Department reports, "When animals become dependent on humans for food, they become aggressive, sometimes attacking pets and even people. Animals can also carry diseases, such as rabies, which put people at risk. In addition, wild



animals cause millions of dollars in property damage each year."

Pam Tobin of the Wildlife Conservation Group says a bigger concern should be the damage suburbs are doing to the animals. "As territories shrink, some animals won't be able to adapt and will either starve or be killed by stronger animals. Not only will weaker animals disappear, but some plants and insects will also vanish. These changes could affect ecosystems everywhere," she warns. "We must monitor suburban growth carefully, and regulate it if necessary."

Answer Numbers 1 through 4. Base your answers on the articles "Last Stand of the Mountain Gorilla" and "Too Close for Comfort."

- 1 How are the gorilla and coyote situations similar?
 - A. Both situations provide examples of how humans and animals depend on one another.
 - B. Both exhibit how human behavior places restrictions on animal habitats.
 - C. In both situations, animals pose a serious threat to human life.
 - D. Both situations show ways in which humans help preserve animal habitats.

2 In "Last Stand of the Mountain Gorilla," what can you infer about Sleeman's general feelings toward gorillas from the following comment?

His name is Kwakane, and he's got a grudge against me.

- F. Sleeman is afraid of gorillas.
- G. Sleeman doesn't get along with gorillas.
- H. Gorillas frustrate Sleeman.
- I. Sleeman feels gorillas are humanlike.

3

READ
THINK
EXPLAIN

From reading the passages, what can you infer about the future of gorillas and coyotes? Support your answer with details and information from BOTH passages.

4

READ
THINK
EXPLAIN

What are some similarities in the treatment of coyotes and gorillas? What are some differences? Support your answer with details and information from BOTH passages.

ENVIRONMENTAL LIMITS

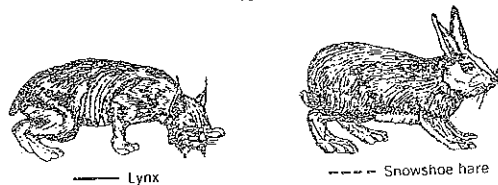
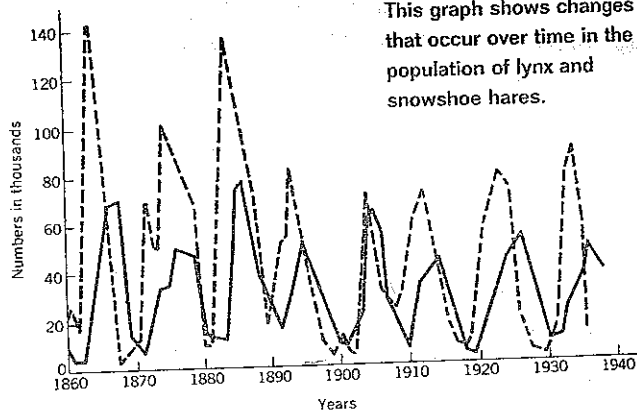
The size of a population within an ecosystem is limited by the resources, or the amount of matter and energy, available. The number of organisms that can be supported by the resources in an ecosystem is called the **carrying capacity**. The carrying capacity of an ecosystem or a habitat is not constant. It can vary during the year as seasons change or from year to year due to climate factors.

The ecological conditions that control population size are called **limiting factors**. For plants, limiting factors include hours of light per day, availability of light, availability of water, presence of nitrogen in the soil, and the presence of essential minerals. These factors affect the efficiency of photosynthesis and the amount of energy available to the plants. For animals, the limiting factors include plants or prey animals (food), water, and shelter or cover.

Within an ecosystem, when a population increases, the resources available to each individual decrease. Once the carrying capacity is reached, fewer offspring are produced or more organisms in the population die. Births are then balanced by deaths. Once the carrying capacity is exceeded, overcrowding occurs, and the environmental resources are "stretched."

Impact of Predators

Predator and prey populations can cause recurring cycles in population size for both the predators and the prey, or they can stabilize populations of both species. When predators keep the prey population from reaching the carrying capacity of the ecosystem, the result is stability. When predators do not reproduce as fast as their prey, the prey exceeds the carrying capacity of the ecosystem. The predator population grows due to the increased availability of prey, thus increasing predation



and causing the prey population to drop. The drop in prey population is then followed by a drop in predator population.

Throughout the North American coniferous forests, lynx feed on snowshoe hares. Fluctuations in each population affect the other. An increase in the hare population is followed by an increase in the lynx population. This leads to a decrease in both populations. The decreased lynx population then allows the hare population to rise. Each species is a natural limiting factor on the population of the other.

A reduction in the population of predators can tip the balance within an ecosystem since it removes a natural limiting factor. In 1906, when the Kaibab Plateau in northern Arizona was declared a wildlife refuge, it supported a large mule, deer population. Even though many rancher grazed cattle on the Kaibab, there was little competition for food. The diets of the deer and cattle were quite different. The deer browsed on ground shrubs and leaves while the cattle grazed on grasses.

To protect the mule deer and cattle populations, all predators were eliminated from

the ecosystem. Wolves, coyotes, bobcats, and mountain lions were exterminated or relocated. In response to decreased predation, the mule deer population exploded and exceeded the carrying capacity of the area. Soon there were not enough ground shrubs, seedlings, or leaves to feed the increased deer population. The deer began to compete with the cattle for grasses until there was not enough forage left to support either population. The deer became malnourished and many sickened or died, thus causing the population to fall sharply.

Finally the cattle were removed, and the size of the deer herd was reduced through limited

hunting by humans and the reintroduction of natural predators. The ground shrubs slowly returned, and as the health of the ecosystem improved, so did the health of the mule deer herd.

To prevent this disaster from recurring, game management practices are used to maintain the size of the mule deer herd. To effectively manage the size of the herd, a yearly deer count is made. When the deer population approaches the carrying capacity of the area, a managed harvest allows a certain number of deer to be killed by hunters or game wardens in order to reduce the deer population.

Answer Numbers 1 through 5. Base your answers on the article "Environmental Limits."

- 1 Which statement BEST describes the main idea of this passage?
- A. Environmental factors can affect population size.
 - B. Predators and prey populations are dependent on one another.
 - C. Every year the population size of every species changes.
 - D. Carrying capacity is the single determiner of the population size of a species.
- 2 What does the author mean by the phrase "tip the balance" in the following sentence?
- A reduction in the population of predators can tip the balance within an ecosystem since it removes a natural limiting factor.*
- F. establish harmony
 - G. increase the level
 - H. reduce
 - I. change the equilibrium
- 3 What can predators do to make the prey population exceed the carrying capacity?
- A. Predators can reduce the prey population.
 - B. Predators can overcrowd their habitat faster than their prey population.
 - C. Predators can fail to reproduce at the same rate as do their prey.
 - D. Predators can continue reproducing at the same rate.

