

Super Creatures?

JOHN ROACH

Look! Up in the sky! It's not a plane! It's not even Superman! It's a bird! With a speed of about 50 miles (80 km) an hour and a maximum velocity of 322 km an hour while dive-bombing prey, the peregrine falcon glides with real-world superpower pace.

The crow-size peregrine falcon achieves its greatest speed during the 'stoop'—the technical term for its dive-bombing maneuver. The raptor folds its wings, brings its talons forward, and careens toward the outstretched wings of an unsuspecting bird flying below. The midair impact kills the prey, which the falcon immediately snares with its talons and flies away to eat, according to the US Fish and Wildlife Service.

The peregrine falcon's speed is necessary for the raptor's survival—the bird catches almost all its food on the stoop. Michael Mace, the curator of birds at the San Diego Zoo in California, says that the eyesight of raptors such as the peregrine falcon is another exceptional trait: It's seven times the power of human vision.

While the peregrine falcon is nature's speeding bullet of the skies, the cheetah is the fastest animal on land, according to Randy Rieches, the San Diego Zoo's curator of mammals. Scientists have clocked the big cat running up to 70 miles (113 km) an hour for short 200-yard (183-m) bursts. Cheetahs use their speed to outrun their prey, which includes such fleet-footed creatures as gazelles and wildebeests.

Sailfish, swimming at a blazing 68 miles (109 km) an hour, take the prize for fastest in the water, say experts at the Smithsonian Institution's National Zoo in Washington, D.C. Powerful fins propel the streamlined fish toward meals of smaller fish and squid and away from hungry sharks. While super-sprinting is certainly

a trait to admire, the Arctic tern is the high-endurance bird that just keeps on trucking.

According to the international conservation organization World Wildlife Fund, the 10.6-ounce (300-gm) bird makes a 21,750-mile (35,000-km) round-trip journey each year to the Antarctic so it can enjoy summer's bountiful food at both Poles.

In terms of weightlifting and tugging strength, the African elephant impresses scientists with the strength of its trunk. Packed with hundreds of muscles, the trunk alone can lift 600 pounds (270 kg), according to the University of Michigan Museum of Zoology's Animal Diversity Web site. However they are wimps when compared to rhinoceros beetles on the weight they can lift in proportion to their body size.

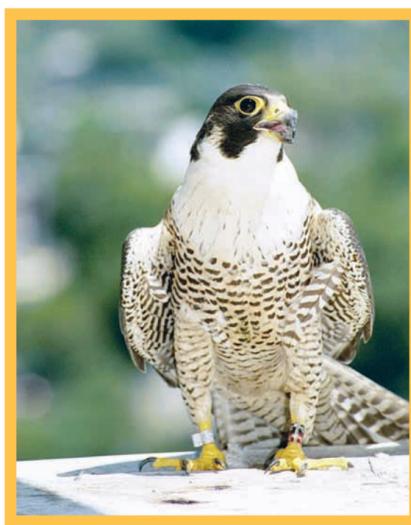
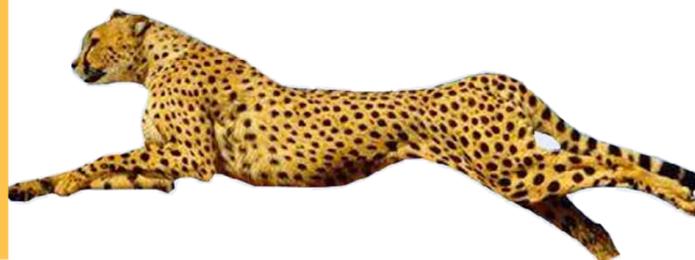
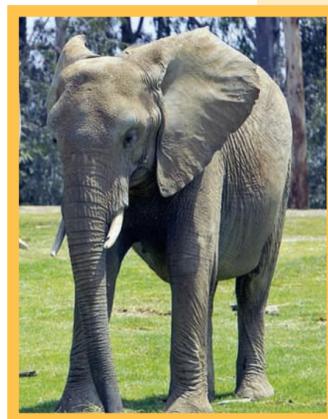
So named because of a horn-shaped appendage on its head, the 0.7-ounce (20-gm) beetle can lift 850 times its own weight, according to the Smithsonian. Elephants, by contrast, can only lift about a quarter of their weight. Scientists believe the beetles use this strength to plow through the woody debris that covers their tropical jungle habitat.

The tiny spittlebug, or froghopper, is a 0.2-inch-long (6-mm-long) insect that can catapult itself 28 inches (70 cm) into the air. According to scientists, the feat is equivalent to a human leaping over a 690-foot-tall (210-m-tall) skyscraper in a single bound.

The flea, the froghoppers' runner-up, can jump 7 inches (18 cm) high and 13 inches (33 cm) long, according to the Insecta Inspecta World Web site. That's the equivalent of a human long-jumping 450 feet (137 m).

Another animal that's impressed zoologist with its high-jumps is the impala, or the African antelope, that cruises at 35 to 45 miles (56 to 72 km) an hour and can jump almost 12 feet (3.7 m) high in the air. And when they get a running start they can cover almost 30 ft (9.1 m) in distance. Now that's Olympian achievement.

(National Geographic Today-NYT Syndicate)



Fading away

Tiger habitat has dropped to 40 per cent in the last 10 years



BRIAN HANDWERK

Tigers have far less room to roam than they did just a decade ago, according to a comprehensive new study. The critically endangered big cats now live in 40 percent less habitat than they did 10 years ago, the study finds.

Says Eric Dinerstein, chief scientist for the international conservation group WWF in Washington, "Another decade like the last one would be catastrophic for tigers."

Tiger range has been shrinking for decades. The cats are now believed to live in only about seven percent of their historic range. Their numbers have been decimated by habitat loss, hunting, and a thriving illegal trade in their skins and body parts, which are used in traditional Chinese medicines.

Estimates suggest that 5,100 to 7,500 tigers still live in the wild—a small remnant of the estimated 100,000 animals that thrived at the dawn of the 20th century.

"Tigers won't disappear next year, but they are on a treacherous trajectory," says Eric Sanderson, a landscape ecologist with the New York-based Wildlife Conservation Society and lead author of the study. "And now is the time that we can reverse that."

Despite the bad news, the study's authors hold out hope that the cats can be saved. The authors — from WWF; the Wildlife Conservation Society; the Smithsonian's National Zoo in Washington, D.C.; and the Save The Tiger Fund — outlined an international plan for tiger protection.

The plan suggests that the tigers' best hope is big-picture habitat protection that includes not just antipoaching efforts but also the preservation of prey species and large, unbroken tracts of tiger country. Like many large predators, tigers do not thrive in small, fragmented "islands" of suitable habitat, even if they are protected.

But some areas of healthy tiger habitat do survive, the experts note. Several tiger populations are stable, and a few are even increasing. Last summer a comprehensive survey reported that Siberian tiger populations were holding steady in eastern Russia.

Tigers are also doing well in the Terai Arc region of India and Nepal, a corridor of land that runs along the border.

"Success in tiger conservation tracks pretty well to how we've invested," Dinerstein says. "We know how to conserve tigers. If we stop the poaching of tigers and their prey and protect their habitat, they come roaring back. Tigers and wolves are the two large carnivores that breed faster than their prey, so you don't need generations of patience to see tigers bounce back."

"We've seen it happen almost overnight, and that gives me hope." The study's authors identified 76 prospective tiger conservation areas where the cats have the best chance for long-term survival.

The big cats' four greatest strongholds appear to be the Russian Far East; the Terai Arc of India and Nepal; the northern forests of Myanmar (Burma), Bhutan, and India; and the Tenasserim forests connecting Myanmar and Thailand.

(National Geographic Today-NYT Syndicate)

Superman might not be the only super being around. Our planet has its share of super animals that are faster than a speeding bullet, more powerful than a locomotive, and able to leap tall buildings in a single bound

Umm... that dinosaur!

SEAN MARKEY

Meet Umoonasaurus, about the size of a sea lion, the ancient marine reptile that swam the shallow waters of an inland sea that covered Australia about 115 million years ago.

Distinguished by its relatively small size and three crest-like ridges on its skull, Umoonasaurus belonged to a group of ancient meat-eating marine animals known as plesiosaurs. "The classic analogy for a plesiosaur is a snake threaded

through the body of a turtle," says Benjamin Kear, a paleontologist at the University of Adelaide and the South Australian Museum. "Imagine a sort of compact body with four flippers, a reasonably long neck and a tail about half (as long) coming out the other end."

Mr Kear and his colleagues identified the new species based on fossils of 30 skeletons, including seven partial skeletons, found in old collections and recent excavations.

"The beauty of a lot of the

Umoonasaurus material is that it comes out of opal mines," Kear says. "You can imagine that these are quite spectacular-looking fossils, bright blue or green. You end up with this totally opalized skeleton."

The team named their archaic reptile swimmer after Umoona, the Aboriginal name for the South Australia region where the most complete Umoonasaurus skeleton was found with a gut full of small fish.

(National Geographic Today-NYT Syndicate)

