

1: Amazing Animal Skin (Creature Features) (January 30, edition) | Open Library

Amazing Animal Skin is a fantastic non-fiction book that covers animal adaptations, with particular focus on their skin and how they use it. Half the book is filled with stunning full colored page photography of animals and their various derma.

Share5 Shares One of the most important organs of the body is also one of the most overlooked and abused: Seldom do we stop to consider the vital fleshy sheath that holds in all of our squishy organs and fluids. Skin is like the tortilla that keeps our enchilada filling from running everywhere. It keeps us safe from parasites and microscopic invaders while also giving us a marvelous tactile sense of the world around us. Across the animal kingdom, skins come in all shapes, sizes and flavors narwhal skin has as much vitamin C as an orange. But a few are so amazing that they qualify as outright super powers. Their skin is legendary for its toughness and is still sought after today for boots and clothing. It is also unexpectedly sensitive. Besides possessing one of the toughest hides on the planet, members of the crocodile family have a battery of sensors unlike any other animal. Not bad for a reptile that looks like a mean callus. Bumps around their jaw and down the sides of their bodies can sense the faintest ripples in the water. They also have a lot of sensors in their mouth and around their teeth. A croc mother can gently break open the egg of one of her hatching babies and then carry him into the water, all with her sensitive mouth. Crocodiles also have chemical receptors in their skin. Scientists suspect they use this to help them find prey or suitable habitats. Crocs of course have some tough skin. Rhinoceros leather is thick and durable. Moby Dick has skin that can be up to 35 centimeters thick—almost 14 inches. Incidentally, sperm whales also have the largest teeth and the largest brains Link6 of any animal. So do Sperm Whales. The African spiny mouse has neither, possessing some of the thinnest skin in the world. Still, this unassuming little rodent possesses one of the most astounding abilities in nature. The tender epidermis of the African spiny mouse has a high number of hair follicles. With less connective tissue than normal skin, it comes apart pretty easy. Which means two things: First, the spiny mouse has a reliable way to get away from predators. If it gets nabbed, its skin will just peel right off. But is tearaway skin really a good defense? Skin is kind of important, right? They can regenerate skin, hair follicles, sweat glands, and cartilage in a matter of days, without any scarring. A wound can shrink by 64 percent in one day. No creature on earth can play hide and seek like the squishy critters of the cephalopod family. They literally disappear into the background. And science has no idea how they do this. The real question is, how do cephalopods get enough information about their surroundings in order to match them? Octopus and cuttlefish can match the color of their backgrounds perfectly even though they themselves cannot see those colors. It is very likely that cephalopods can see with their skin! Opsin is a protein used for photoreception that is found in the eyes of everything that has an eye. From cows, to fruit flies, to jellyfish, to people, we all see because of opsin. Cuttlefish of course have opsin in their eyes too, but they also have it in their skin. Having light-sensing cells all over their body may well explain how these creatures match their environment so perfectly. If they can see everything all around them, then they can easily match patterns and colors. Sea urchins do it too. Some scientists believe that sea urchins can even perceive images from the light-sensing opsin covering their body, even though they are more or less brainless. They live in the deserts of Australia, where nobody messes with them because every solid inch of them is covered in wicked looking spikes. The moloch eats only ants and has a number of interesting adaptations and strategies that help it to survive in such a hostile environment. Perhaps none of them is so astounding though as the way they get their liquids. The thorny devil can drink with its feet—or just about any other part of its body, because their skin is super-hydrophobic. The water is absorbed and it climbs up the sheet, apparently in defiance of gravity. The same thing happens with the thorny devil. Its skin uses capillary action, which is the tendency of liquids to move through narrow spaces because of intermolecular forces. It stores the water in its skin, then, by means that are not entirely understood, utilizes some movement of the jaw or tongue to pump this fluid from pockets on its face into its mouth. How would you like to be able to eat soup by standing in it? The moloch has achieved this dream. To keep cool, lions sleep in the shade, elephants cover themselves with mud and the fat hippos while the day away in the water.

So how does the tallest animal on the planet keep cool? Giraffes actually have a few adaptations for dealing with heat. Conserving water is critical for an animal that has to bend over 5. By staying a few degrees above the surrounding temperature, they never have to sweat. Then by orienting themselves into a breeze or out of the worst of the sun they can work the excess heat out of their systems. And having the long narrow neck gives the animal more surface area relative to its mass. That means it has more skin than an animal of similar weight. This heat exchange system allows giraffes to thrive in very arid conditions that would turn the rest of us into a sweaty, stinky mess. To confuse predators, right? A herd full of black and white stripes makes it more difficult to distinguish one animal from the next. Dazzle camouflage, which was used on warships in WWI, often used zebra patterns. So maybe running zebras are hard to chase down. There may be quite a few uses for the distinctive black-and-white markings. But perhaps the most compelling is as an insect repellent. New tests have shown that biting insects like horse flies are even less likely to attack a black-and-white pattern, such as that the zebra sports. And since bugs in Africa carry all kinds of terrible diseases, it makes sense to have a good defense. The secret in the stripes has to do with polarized light. Light moves in different directions and some animals, like bugs, can see this polarization. The black hide of a horse polarizes light particularly well, whereas white depolarizes light. Nor does it have any gills. It is one of the few tetrapods on earth that gets all of its oxygen through its skin. But lungs exist for a reason. Breathing through your skin is not very efficient. As for why they gave up their lungs, researchers can only speculate. It might be that carrying around an air bladder in a swift moving stream will get you swept away. The bad news is that pollution is killing them off. Their colors are used for communication between other chameleons, to regulate heat, and as camouflage from predators. But recent research shows that even with this range of uses, chameleons are much more sophisticated than we thought. Analysis with a spectrometer showed the reason for this. Somehow the chameleon knows how its predators see. A cousin of the humble snail, this aquatic escargot only eats algae. After fueling up the tank on a few good meals, the green sea slug is done. Thereafter the green sea slug can get all of its energy from the sun, like a plant. It does this by stripping the tools that the algae uses, the green photosynthetic organelles called chloroplasts, and storing them in its skin cells. It steals from algae so that it can become solar-powered. Fortunately the green sea slug can simply produce more. It should be impossible. Once the slug has some chloroplasts to hold its chlorophyll, it can live on sunlight alone. That would be like us gorging at a salad bar, then never needing to buy food or toilet paper ever again. Monte Richard writes for Cracked.

2: Creature Features | Awards | LibraryThing

Sat, 16 Nov GMT amazing animal skin creature pdf - Check out these amazing animal superpowers! You won't believe what these animals are capable of!

Share2 Shares We all know that animals love to put us humans to shame when it comes to amazing abilities. I mean, if we really considered ourselves animals, our intelligence alone would put us quite high on this list – but not at the top. So what could be better than supreme intellectual capabilities? I guarantee a few of these strange and amazing animal abilities will pique your interest. That is why opossums were also created with a protein called LTNF Lethal Toxin-Neutralizing Factor that all but makes them immune to the venom of snakes, bees, and scorpions. The way this works is just as it sounds: Amazingly, the marsupial is not only granted immunity to local snakes, but also to snakes on other continents with which it has never had contact. The LTNF protein has been injected into rats, and has apparently been successful in granting the rodents immunity to otherwise lethal venoms. Facts and interesting tidbits abound when it comes to these semi-aquatic titans. Only one comes close to this list entry in creep-level: In order to deal with the sweltering African heat, hippos spend much of their time partially submerged in lakes and rivers. As a bonus, it turns out that the substance is also a strong antibiotic, helping to prevent infections from open wounds inflicted on one another during fights. Sure enough, in some forested regions of Southeast Asia, you might be un lucky enough to encounter a crazily writhing, mildly-venomous serpent – at head level. These snakes are able to flatten out their bodies, suck in their stomachs, and make a daredevil leap from the treetops in order to travel more quickly and safely in the presence of predators. The really strange thing is, they can glide even more effectively than their limbed counterparts – up to meters – despite lacking wings or even wing-like protrusions. Not to mention the cocktail of chemicals that is now covering their bodies. Even predators have bad days at the office. By snapping shut this single, massive claw, it produces a bubble capable of stunning or killing its prey. To put the latter in perspective, it takes about decibels to rupture a human eardrum. The bubble they create is an interesting sort of phenomenon: This causes a violent chemical reaction: And if you were thinking that the beetle has to face the right way to shoot its victim, think again. In some species, the gland openings are able to swivel more than degrees, and can even be directed between their legs for a frontal attack. All octopuses have the ability to change their color and texture, in order to blend with their surroundings. But the Mimic Octopus takes underwater chameleonism a few leaps further: Depending on what might be attacking it, the mimic octopus intelligently decides which predator to impersonate. For example, a mimic octopus has been observed under attack by a damselfish. It proceeded to bury itself and six tentacles in the sand, leaving the other two pointed in opposite directions – and thereby mimicking the movement of a sea snake. Though confined to the water, it has a rudimentary set of lungs which it occasionally uses to gulp air at the surface. And it has the healing powers of a superhero. When one of these creatures is damaged cut, or having a limb torn off , coagulation begins immediately – and new cells start to develop. In the case of a missing limb, a layer of skin cells begin to form from the cells at the location of the trauma. Following this, new tissues begin to grow: The length of time it takes to grow a brand new limb? Just a few months. The same regeneration occurs with non-vital organs, and even parts of the brain. It is renowned for its ability to continually revert back into the immature polyp stage after reaching sexual maturity. During this process, the medusa physically regresses back into the beginnings of a polyp colony, absorbs its own tentacles and bell, then settles on the sea floor and once again starts growing to maturity – just think of it as turning back into a baby after becoming an adult. *Turritopsis nutricula* can essentially do this forever – making it the only known creature that is biologically immortal. This makes it highly unlikely that any immortal jellyfish will actually live up to its name in the wild.

3: Amazing Animal Skin by Linda Bozzo

Amazing Animal Skin (Creature Features) by Linda Bozzo, January 30, , PowerKids Press edition, Library Binding in English.

From the navigational abilities of a honey bee to the loving care of a mother whale, our fellow animals are awe inspiring, to say the least. Did you know that each dolphin has a uniquely identifying signature whistle? Or that cows are able to smell odors that may be five or six miles away? Read on and learn about some of the amazing traits and knowledge that our fellow animals possess! They live in matriarchal societies with strong social bonds that endure for decades. Elephants grieve at the death of a family member or friend. Touching is an important form of communication among elephants. Individuals greet each other by stroking or wrapping their trunks. An elephant can lift up to pounds with her trunk, but it can also be used for delicate tasks like wiping an eye. When under water, an elephant uses his or her trunk as a snorkel. If you put a honey bee in school they would ace physical ed, geography and geometry! They are also the only birds able to hover, and they can fly backwards and even upside down! They will stay with injured or ill pod mates, even helping them to breathe by bringing them to the surface if needed. This altruism is not limited to members of their own species, but has crossed species boundaries throughout time. They have performed such heroic tasks as protecting humans from sharks and guiding a sperm whale and her calf out of shallow water to safety. Each dolphin has a uniquely identifying signature whistle, much like an individual name. Dolphin clicks are among the loudest sounds made by marine animals. Although they lack vocal cords, these sounds are produced using six air sacs near their blowholes. Cows have almost total degree panoramic vision. They also have an excellent sense of smell and are able to detect odors miles away. They can also hear both high and low frequency sounds beyond human capability. The oldest cow on record, Big Bertha, was born in Ireland, and died three months shy of her 49th birthday. They grow throughout their lifespan, and are able to add new muscle cells at each molt. They can stay mobile, agile and fertile as they age and older lobsters may in fact be more fertile than younger lobsters. This is possibly because of a special enzyme they produce that repairs DNA sequences. Some Butterflies, such as the Monarch, migrate over extremely long distances. Butterflies often lay their eggs on plant species that have toxic substances in them. The hatched caterpillars then eat these plants, retaining the toxic substance in them into adulthood and making the caterpillars unpalatable to birds and other predators. Free-living rabbits live around 10 years, while domesticated rabbits can live to 16 years, and the longest on record is 18 years. Rabbits can live in a home or protected porch, and even be litter-box trained. They also have great memories and can differentiate between over different faces of their fellow chickens. A mother hen and her chicks begin communicating even before the chicks hatch out of their eggs. Chicks also begin to cheep inside their eggshells after about days of incubation. Both male and female penguins take turns caring for their eggs and chicks. While swimming, penguins jump out of the water in low arcs called porpoising. This act coats their feathers in tiny bubbles, which helps reduce friction and allows them to swim faster: Goldfish are the only animals that can see in both infrared and ultraviolet light. Mice are remarkably adaptable to almost any environment, making them one of the most successful mammals living on Earth today. They are excellent diggers, constructing burrows with one or more entrances. A burrow includes a steep entrance pipe, a nesting chamber, a food-storage chamber, and a branch for urination – in other words, an entrance lobby, a bedroom, a kitchen and a bathroom! Tuatara may have the slowest growth rates of any reptile, continuing to grow larger for the first 35 years of their life. The female seahorse deposits eggs into a pouch on the male, who carries them through gestation and births them. A mockingbird can imitate other birds, animals and even mechanical sounds such as a car alarm. They use an overhand movement of the wings that is similar to the butterfly stroke. Goats are inquisitive, intelligent and readily revert to the wild become feral if given the opportunity, which is rare for domesticated animals. Sheep have very good memories. They remember up to 50 sheep and human faces for up to two years, and they do this by using a similar neural process and part of the brain that humans use to remember. Healthy lambs can stand within minutes after birth and are able to move with the herd almost immediately. Rats like playing collectively and love to sleep curled up together.

They often share parenting responsibilities and take care of any injured or sick rats in their group. Ducks have waterproof feathers which is good for a species that spends so much time in or on the water! There is a special gland near their tails to produce oil that spreads and covers the outer feathers. Beneath the outer coat is a layer of fluffy and soft feathers down that keeps them warm. Free-living turkeys can adapt to virtually any dense native plant community as long as openings such as a meadow are present. Like all mammals, whales breathe air, are warm-blooded, nurse their young with milk from mammary glands, and have body hair. Cat nose pads are uniquely different, like fingerprints in humans. They can also have a litter of kittens fathered by more than one male. This species is not found anywhere else in the world! They are just different. Yet in many ways we still hold power over them, if only through our own manufactured mechanical and industrial evolution. Regardless of their remarkable abilities though, it is so obvious that other animals are perceptually aware, with the capacity to feel, and especially to experience fear and suffering. They want to live. This is why it is so important to use our power wisely to protect and care for our fellow animals, be they small and scaly or large and furry.

4: 10 Amazing Animal Abilities - Listverse

Buy a cheap copy of Amazing Animal Skin (Creature Features) book by Linda Bozzo. Readers learn facts about how the skin of animals helps them to survive in their habitat in this high-interest title.

Both Below A fundamental concept of the theory of evolution is that of gradual change from a "primitive," less complex organism into a highly structured organism over an imagined period of millions of years. How valid is this idea? Can we really verify the evidence supporting this idea? There are many animals existing today that totally defies evolution by their very existence. This chapter will give examples of some of these animals and explain the problems they give the theory of evolution. The logical frame of reference used in concluding that these animals could not have been the product of evolution is called an indirect proof. The way this works is to assume the opposite of what you wish to prove, proceed logically until you reach a contradiction or an impasse, then conclude that the alternative is true. In this chapter, we will use the concept of indirect proof with evolution, proceed logically until we reach an dead end, leaving creation as the only other alternative. The realization that each animal is an interdependent, interrelated system was the greatest factor that influenced me to believe that evolution could not have occurred. To survive in a particular environment, an animal has to have features that work in that environment. For example, air breathing animals needs lungs. Flying creatures need wings. If evolution is valid, transitions from one environment to another had to have occurred. If such transitions are impossible, evolution is impossible! Gradual evolutionary change from one species to another requires many mutations and genetic changes. But, the fossil record exhibits anything but gradual change. There is a gap between living systems and non-life, invertebrates and vertebrates, fish and amphibians, amphibians and reptiles, reptiles and birds, reptiles and mammals, and mammals and man. Dolphins and Whales We can demonstrate one such transition problem by using the example of dolphins and whales. These mammals bear their young alive and breathe air, yet spend their entire lifetime in the sea. Presumably, in order for dolphins and whales to have evolved, they must have originated from a land mammal that returned to the water and changed into a sea creature. It would be a lot like trying to change a bus into a submarine one part at a time, all the while it is traveling at 60 miles per hour. The following is a list of transitions evolutionists have to account for in the dolphin in its evolution from some unknown land dwelling pre-dolphin: Could the dolphin acquire these features gradually one at a time over a period of millions of years? What about the transitional stages? Would they have survived with just some of these features? Why is there a total absence of transitional forms fossilized? Consider the whale and its enormous size in comparison with the plankton it feeds upon. The whale is a nautical vacuum cleaner, with a baleen filter. While it was "developing" this feature, what did it feed upon before? For me, it takes a great stretch of the imagination to picture the evolution of dolphins and whales. The Duckbill Platypus The explorer who first saw a hide of the duckbill platypus thought that it was composed of the hides of several different animals sewn together as a joke. Later, when a preserved specimen was brought to him for dissection, he finally declared it outrageous, but genuine! The more you study the duckbill platypus, the more problems you find for evolutionists. Here is a list of some of its features: Except for the fact that it lays eggs, it is about as different as you can get from the platypus. Can you imagine what a pre-platypus might have looked like? Nothing in the fossil record gives us a clue about the origin of this animal, which is an outrage to evolutionists. This animal does very well in its natural environment in spite of its unusual features. To look at it, it would appear that this animal was pieced together from a variety of completely different animals. The Koala Koalas are marsupials that spend nearly their entire lives high in eucalyptus trees. Their diet consists of eucalyptus leaves toxic to humans. They survive without drinking water or shelter, survive high temperatures by panting, and a well insulated coat protects them from the cold. But, many apes also have a foot with an opposable great toe. Not to be outdone, the koala not only has an opposable great toe, but two opposable digits on each hand. Now, also, the first digit of the foot lacks claws, but the second has two claws! One might imagine a double mutation, one that would delete a gene from one place and paste it elsewhere, or you could just believe that the koala was created that way. This would be like a baby born without a fingernail on the index finger, but two

finger-nails on the middle finger. What about the unique pouch that opens aft? This feature is similar to that of the wombat, which is a completely different animal than the koala. What could the ancestry of the koala have been to account for these features, especially since transitional forms are missing in the fossils? Most marsupials are confined to the isolated continent of Australia. Why then is the opossum so widespread in America? It is highly unlikely that one species of marsupial would be so highly removed from its ancestors. Proponents of the theory of evolution would have us believe that reptiles began to grow appendages on their back as extensions of scales, and these appendages supposedly developed over periods of millions of years into wings and feathers. Then, they believe that these reptiles began to climb trees and attempted to jump out and fly. Imagine all the ancestral birds attempting to do this until one day one of them had wings structured properly and took off and flew. There is nothing that is gradual about a transition from a land environment to an air environment, or a land to sea, or sea to land. One of the most complex structures in the animal kingdom is the feather. The feather is lightweight, yet very strong and sturdy. It is made up of a network of fibrils that interconnect with one another in such a way providing the best economy of surface area for the weight. There is a main stem serving as the main support for the feather. It branches out into tributary stems, each of which branches again until they interconnect by using hooks and barbicels. How would a reptile react to feathers on his back? Such structures in a transitional form would be detrimental to a reptile. Some birds have unique structures that enable them to perform specialized functions in nature. He has special shock absorbers in his beak and skull providing protection from the severe migraine headaches that might otherwise result from his hazardous occupation. Imagine all the poor pre-woodpeckers knocking themselves out, getting their beaks stuck in trees until this feature "evolved. The woodpecker has two in front and two behind to enable him to grasp onto the side of a tree and peck away. He also has stiff tail feathers to support him and a long sticky tongue designed for fishing the insects he feeds on out of the holes he pecks in the trees. We have to conclude, God designed him for his special occupation. Consider the water ouzel, a bird that not only flies in the air, but swims underwater with his wings! Air sacs provide buoyancy, enabling him to rise to the surface. He "blows his tanks" to submerge. Since he does not have webbed feet, he uses his wings as underwater oars. He normally makes his nest behind a waterfall, through which he must pass to reach his front door. He makes his nest out of living moss, which is kept alive from the spray of the cascade. How many eons of diving school did this bird endure before he mastered the delicate balance of the air and water environments? These functions would have to be perfected before our skinnydipping friend would ever discover the juicy morsels on the bottom of the stream. Bird migration poses a problem for evolutionists. How does one account for birds like the Arctic tern that migrates from pole to pole, and returns to the same nesting spot each year? How does one account for this apparent design if we rule out creation by God? Instead, it is the male who has to assume all the housewifely chores of nest building, incubation, and family feeding. Only one of two options is available: What was the origin of sex and the roles each sex plays? Courtship behavior, sex roles and reproductive activity vary almost from species to species. This is an indicator of special creation. When did the two sexes diverge? According to evolution, a long slow process over millions of years created the sexes. But, reproduction is either asexual or sexual, there is no in-between. Even if some mutation created a male sexual creature, it would not reproduce unless the same mutation occurred in matching female as well! The smallest bird in nature, and one of the most amazing is the hummingbird. Its rate of metabolism is so high that it must feed almost constantly. The nest of the hummingbird is not much bigger than a postage stamp, made out of thistle-down and cobwebs. But, built into this pint-sized bird is one of the most complex flight mechanisms known. This produces the equivalent of pitch in a helicopter. This feature causes the wing to operate like a propeller to give both lift and propulsion. A tuft of feathers at the junction of the wing adds extra airfoil surface during landing and takeoff. It is unreasonable to suggest that the hummingbird "developed" all of these features as a product of evolution gradually over millions of years. Time and chance cannot produce such design and order.

AMAZING ANIMAL SKIN (CREATURE FEATURES) pdf

The water, however, does nothing to protect the exposed skin of the creatures, and that's where hippopotamus sunscreen comes into effect: this blood-red, gelatinous secretion is produced much like sweat, though it differs in that the glands that produce it are located under the skin, rather than in it.

6: Accelerated Reader Bookfinder US - Book Detail

Get this from a library! Amazing animal skin. [Linda Bozzo] -- This book introduces how some animals use their skin to survive.

7: Animals That Prove Creation

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8: Rosen Publishing

Across the animal kingdom, skins come in all shapes, sizes and flavors (narwhal skin has as much vitamin C as an orange). But a few are so amazing that they qualify as outright super powers. But a few are so amazing that they qualify as outright super powers.

9: Egyptian Vulture | The Parody Wiki | FANDOM powered by Wikia

It's actually not really hair but thin skin-like structures that protrude from its body that looks like hair. But what makes this frog so amazing isn't its hair. It's its claws.

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