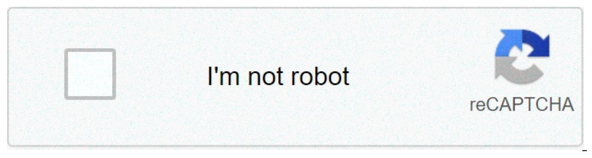

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Camouflaging animals information

Whether they crawl, fly, swim, slither, walk, run or pounce, wild animals rely on their instincts. Read about all kinds of wild animals, mammals, birds, fish, insects, reptiles and amphibians. The animal kingdom is a wild, wacky place where animals have to be clever in order to survive. One of the most amazing techniques for survival is animal camouflage. Animals have the ability to mimic plants, ground cover, or even other animals in order to hide or hunt. The following is a list of some animals that are particularly gifted in the art of invisibility.Contrary to popular belief, chameleons only change color when in imminent danger. Their everyday skin color, a light khaki, keeps them hidden from enemies during those not-so-dangerous times. Nearly half the world's chameleon species live in Madagascar, but they're also found in Africa, the Middle East, and southern Europe.Whether their coats are spotted (useful for hiding in sun-dappled areas in the African outback) or black (perfect for nighttime stalking or lurking in shadows), these elegant and deadly cats are born with fashionable camouflage. Rabbits, young buffalo, and monkeys don't stand a chance when a hidden leopard makes a surprise attack.Other bears and human poachers are the biggest threats to the majestic polar bear, but by blending into the blindingly white snow of the Arctic with equally white fur coats, some danger can be avoided. Only a polar bear's nose and foot pads are without fur.If you're a fish, you better look twice before resting near that big rock . . . it could be an snapping turtle. There are hundreds of species of turtles and tortoises that use camouflage to blindside their prey and hide from large predators like alligators. Sadly, camouflage can't protect turtles from the poacher's fishnet.Sure, chameleons are well-known to change color and blend into surroundings, but some of the animals who use camouflage on the next few pages may surprise you.Ah, the Arctic tundra: cold, barren, and totally white. Arctic owls have a coat of snow-white feathers to keep them warm and safe from predators, such as foxes and wolves.For most bugs, birds are the bad guys. For bark bugs, which hang out on trees around the world, this is especially true. In order to hide in the middle of nature's birdhouses, bark bugs appear to be part of the tree itself.If you're ever swimming in the shallow waters off Australia or New Guinea, look for the ornate wobbegong -- though you probably won't be able to see it! This shark's body flattens out on the seafloor where its spots and blotchy lines resemble rock and coral. Wobbegongs take camouflage a step further with a little "beard" under their chins that looks like seaweed. Prey that swim in front of their mouths are gobbled up without knowing what hit them.In order to hide from their prey, gaboon vipers -- among the most venomous snakes on Earth -- make the most of their brownish-gray, mottled scales. These big snakes hide in the layer of dead leaves that carpets the African rain forest floors. They also like to snuggle into forest floor peat and sneak up on unsuspecting prey.Complete with fake leaf stalk, fake leaf veins, and perfect dead-leaf coloring, leaf butterflies have the whole camouflage thing down pat. Birds pass them by without a second glance since these insects from southeast Asia look more like dead leaves than butterflies.Spiders, snakes, birds, and even other lizards all want a piece of the dragon lizard, so they have some of the most effective camouflage around. Not only do dragon lizards look nearly invisible when hanging out on a tree branch, they keep extraordinarily still, knowing that their predators react to the smallest movements. It doesn't make for an exciting life, but at least they live to tell about it.Careful-- that flower you're thinking about smelling might have a flower mantis hiding inside. The flower mantis of western Africa uses colorful, pistil-and-stamen-like camouflage to trick smaller insects into smelling the roses, then snap -- lunch is served.CONTRIBUTING WRITERS:Helen Davies, Marjorie Dorfman, Mary Fons, Deborah Hawkins, Martin Hintz, Linnea Lundgren, David Priess, Julia Clark Robinson, Paul Seaburn, Heidi Stevens, and Steve Theunissen Most animal species in the world have developed some sort of natural camouflage that helps them find food and avoid attack. The specific nature of this camouflage varies considerably from species to species.There are several factors that determine what sort of camouflage a species develops:Camouflage develops differently depending on the physiology and behavior of an animal. For example, an animal with fur will develop a different sort of camouflage than an animal with scales, and an animal that swims in large schools underwater will develop different camouflage than one that swings alone through the trees.An animal's environment is often the most important factor in what the camouflage looks like. The simplest camouflage technique is for an animal to match the "background" of its surroundings. In this case, the various elements of the natural habitat may be referred to as the model for the camouflage.Since the ultimate goal of camouflage is to hide from other animals, the physiology and behavior of an animal's predators or prey is highly significant. An animal will not develop any camouflage that does not help it survive, so not all animals blend in with their environment the same way. For example, there's no point in an animal replicating the color of its surroundings if its main predator is color-blind.For most animals, "blending in" is the most effective approach. You can see this sort of camouflage everywhere. Deer, squirrels, hedgehogs and many other animals have brownish, "earth tone" colors that match the brown of the trees and soil at the forest ground level. Sharks, dolphins and many other sea creatures have a grayish-blue coloring, which helps them blend in with the soft light underwater.There are two ways in which animals produce different colors.Biochromes, which are microscopic, natural pigments in an animal's body, produce colors chemically. Their chemical makeup is such that they absorb some colors of light and reflect others. The apparent color of a pigment is a combination of all the visible wavelengths of light that are reflected by that pigment.Animals may also produce colors via microscopic physical structures. Essentially, these structures act like prisms, refracting and scattering visible light so that a certain combination of colors are reflected. Polar bears, for example, actually have black skin but appear white because they have translucent hairs. When light shines on the hairs, each hair bends it a little bit. This bounces the light around so that some of it makes it to the surface of the skin and the rest of it is deflected back out, producing white coloration. In some animals, the two types of coloration are combined. For example, reptiles, amphibians and fish with green coloration typically have a layer of skin with yellow pigment and a layer of skin that scatters light to reflect a blue color. Combined, these layers of skin produce green. To learn more about coloration and light, check out How Light Works.Both physical and chemical coloration is determined genetically; they are passed on from parent to offspring. A species develops camouflage coloration gradually, through the process of natural selection. In the wild, an individual animal that more closely matches its surroundings is more likely to be overlooked by predators, and so lives longer. Consequently, the animal that matches its surroundings is more likely to produce offspring than an animal that does not match. The camouflager's offspring will likely inherit the same coloration, and they will also live long enough to pass it on. In this way, the species as a whole develops ideal coloration for survival in their environment.The means of coloration depends on an animal's physiology. In most mammals, the camouflage coloration is in the fur, since this is the outermost layer of the body. In reptiles, amphibians and fish, it is in the scales; in birds it is in the feathers; and in insects it is part of the exoskeleton. The actual structure of the outer covering may also evolve to create better camouflage. In squirrels, for example, the fur is fairly rough and uneven, so it resembles the texture of tree bark. Many insects have a shell that replicates the smooth texture of leaves.Camouflaging coloration is very common in nature -- you see it to some degree in the majority of species. But it is much less common for an animal to be able to change its coloration to match a changing environment. In the next section, we'll look at a few of the animals that use this sort of adaptive camouflage.