AUSTRALIAN BLUE-TONGUED SKINK





Range	New Guinea, northern and eastern Australia	
Habitat	Semi desert to brush steppes, sometimes in agricultural areas	
Diet (wild)	Plants, arthropods and snails	
Diet (captivity)	Fruits and vegetables, crickets and wax worms	
Description	Length: 6–20 inches. Heavily built, flattened dorso-ventrally. Ventral side is grayish, head is pale brown and the back has alternating streaks or blotches of dark brown and cream. Head is large, deep and conical. The eponymous blue tongue contrasts against a red oral cavity. Limbs are well developed and relatively short. Scales are smooth.	
Lifespan	N/A	
Reproduction	Females are ovoviviparous, giving "birth" to 6–20 young each year. Babies are nourished by the body of the parent by means of a primitive placenta that develops between mother and embryo.	
Behavior	Mostly secretive in nature, Australian blue-tongued skinks are diurnal ground-dwellers. Since their legs are so short, they move by waddling from side to side. Australian blue-tongued skinks are commonly sold in pet stores. Females stay within a defined home base. The males wander over an area the size of about 15 house blocks and have several females.	
Our animals	1 female. Born: 1998 in captivity	
Cool stuff	 Blue-tongued skinks show little aggression. They are very docile creatures that tame easily. They are shy and secretive and seldom stray far from their shelters of hollow logs and ground debris. The most peculiar behavior is use of their bright blue tongue. When disturbed, blue-tongued skinks gape their mouth open, stick out their bright blue tongue, puffs up their body and hiss loudly. This defensive behavior makes the animals look bigger than they really are and the blue tongues are a warning that these animals may be distasteful to a predator. Blue-tongued skinks, particularly young ones, may drop their tails if necessary to escape a predator. The stump will heal quickly and a new tail will start to grow. It takes about a year for the new one to fully regenerate. 	

BEARDED DRAGON





Range	Eastern, central Australia to its southern coast	
Habitat	Rocky semi deserts to outer forests	
Diet (wild)	Opportunistic omnivores	
Diet (captivity)	Various insects, chopped produce, pinky mice	
Description	Length: 7–12 inches; tail: additional 7–12 inches. Large head with long pointed throat and cheek scales. Coloration varies from nearly black to a mottled pattern of spots and irregular fine lines. Dorso-ventrally flattened bodies. Scales on the back of the throat and along the sides of the head have spiny extensions.	
Lifespan	5–12 years	
Reproduction	The female buries up to 30 eggs in the sand, which will hatch after seven months. The young can grow an inch per week during the first three months. Mating season is highlighted by the males' courtship dance, during which they display their best colors, inflate their beards, and open their mouths to display yellow interior.	
Behavior	Diurnal ground-dwellers, bearded dragons remain deep in burrows during heat of the day. When fleeing, they may run short distances upright on their hind legs. Head nodding is a typical expression of different stages of excitement. Another interesting behavior is arm waving. Bearded dragons will stand on three legs and wave one of their forelimbs in a slow circular pattern (looks a lot like they're waving hello). One function arm-waving seems to be is species recognition. It's also used to show submission. When housed together, tail raising indicates tension or state of alertness. When housed together, males maintain a hierarchy with the dominant males occupying most advantageous spot for basking. In the wild, the males will space themselves apart from one another.	
Our animals	1 sex undetermined	
Cool stuff	• Tail is without predetermined breakage points; tail regeneration capabilities are poor. • Since the 1960s, Australia has strictly prohibited the exportation of any native wildlife. It is believed that the "founder stock" of captive-bred bearded dragons found outside of Australia today were smuggled out of the country between 1974 and 1990.	

BRAZILIAN RAINBOW BOA





Range	Lower Central America, east South America	
Habitat	Preferred habitat includes rivers, streams, lakes and swamps	
Diet (wild)	Warm-blooded vertebrates	
Diet (captivity)	Dead rodents	
Description	Length: $3-6\frac{1}{2}$ feet. In sunlight, it has a multicolored iridescent sheen. Its color ranges from red to orange to mahogany brown with a dark ring pattern down the dorsal surface and dark spots along the sides.	
Lifespan	Up to 20 years	
Reproduction	Females are ovoviviparous: young develop in eggs the female retains inside her body. The eggs have an incubation period of 8–12 weeks and each clutch will yield 2–35 live young. They reach sexual maturity at 2–4 years of age.	
Behavior	Brazilian rainbow boas are shy and nocturnal. Boas are considered primitive snakes; they have vestigial limbs that appear as spurs on either side of the cloaca. Adult males have substantially larger spurs along the side of the cloaca and also have noticeably thicker bases of their tails due to their hemipenes.	
Our animals	1 female, 1 male. Born: 01/2004 (male); 01/2004 (female)	
Cool stuff	 Conventional wisdom held that pythons, anacondas, and boas suffocate their prey. Actually, these predators cut off their victims' blood supply to their major organs. When a boa tightens its powerful body around its prey, the snake cuts off its victim's circulation, causing the prey to pass out within a matter of seconds (most animals can actually survive a relatively long time without breathing.) Once blood flow ceases, organs with high metabolic rates, such as the brain, liver, and heart, begin to immediately shut down (doctors call this ischemia). Death follows within seconds. Rainbow boas have heat-sensing pits on their face that allow them to detect the body heat of their warm-blooded prey at night. Rainbow boas are so named because of the iridescent sheen imparted by microscopic ridges on their scales, which act like prisms to refract light into rainbows. 	

BROWN RAT





Range	Has been introduced everywhere except Antarctica; originally native to northern China	
Habitat	Occupy a variety of habitats including garbage dumps, sewers, open fields and woodlands, basements, and nearly anywhere else that food and shelter might be found	
Diet (wild)	Birds, mammals, amphibians, reptiles, fish, eggs, carrion, insects, terrestrial non-insect arthropods, mollusks, terrestrial worms, crustaceans, marine invertebrates, zooplankton, leaves, roots and tubers, wood, bark, or stems, seeds, grains, and nuts, fruit, nectar, flowers, sap or other plant fluids	
Diet (captivity)	Rat pellets, fruit and seeds	
Description	Length 14–16 inches, including tail; weight: 14 ounces. Males are usually larger than females. In natural populations, have coarse, brownish fur (sometimes splotched with black or white hairs) on their back, which usually lightens to a gray or tan color nearing the underside. Rat bred for the pet trade may be white, brown, or black. The ears and tail are bald. Ears are typically shorter than those of related species and do not cover the eyes when pulled down.	
Lifespan	2–3 years	
Reproduction	After a gestation period of 22–24 days, the female gives birth to a litter of eight pups (average). The young are very small and underdeveloped; it takes 14–17 days for their eyes to open. Weaning occurs at 3 to 4 weeks, and the young then leave the nest. Often, the litters of numerous females will occupy the same nest and all the young are cared for by the adults, regardless of who the true mothers are. This communal care makes them something of a cooperative breeder. Once a female enters her six-hour estrus period, she may mate as many as five-hundred times with competing males. An average female can give birth approximately seven times per year. About 18 hours after giving birth, females experience postpartum estrus, and mate again. This reproductive function is responsible for their high birthrates, which can reach 60 young each year per female. Males usually reach sexual maturity at 3 months and females at 4 months. However, it is usually the female who mates first because competition for mates among males prevents the smaller, less-dominant individuals from succeeding immediately.	
Behavior	Rats are mostly nocturnal or active at dusk, when they dig burrows, forage for food, and prepare nests. Brown rats often live in areas near water. They are excellent swimmers and are often referred to as "water rats." Like most mammals, brown rats use a variety of communication avenues; they are very vocal and also use visual cues such as body postures when communicating. They have relatively good hearing and tactile capabilities. Brown rats are able to sense very minute vibrations in the ground, and can feel their way through total darkness with their paws and whiskers. However, these rats would not have such an advantage over all other foragers if it were not for their spectacular sense of smell. Scent is brown rats' best sensory channel and is used to find food and distinguish between individuals of a group.	
Our animals	2 males. Born: 05/11/2016	
Cool stuff	 Also known as Norway rats, this species no longer exists in the wild. Rats' tails help them to balance, communicate and regulate their body temperature. They can swim for three days, fit through a hole the size of a quarter, chew through glass, cinderblock, wire, aluminum, and lead, but they need to eat/drink every day or they go into a kind of "crazy mode." Rats are easy to train, are extremely social, and form social bonds. A 2011 controlled study found that rats are actively prosocial. They demonstrate apparent altruistic behaviour to other rats in experiments, including freeing them from cages: when presented with readily available chocolate chips, test subjects would first free the caged rat, and then share the food. All female rats in the study displayed this behaviour, while only 70% of the males did. Scientists have trained rats to detect TB in lab samples. The rats can identify more samples in 10 minutes than a human lab tech can identify in a whole day; 6,000 TB patients have been ID'd so far. Dutch National Police have trained rats and use them at airport security to distinguish counterfeit vs. real cigarettes. Tanzania and Mozambique researchers have trained giant pouched rats to detect land mines. The rats are too light to set off the explosives and have found over 8,500 land mines so far. 	

Phylum	Class	Order	Family	Genus	species
Chordata	Mammalia	Rodentia	Muridae	Rattus	R. norvegicus

CHILEAN ROSE-HAIRED TARANTULA

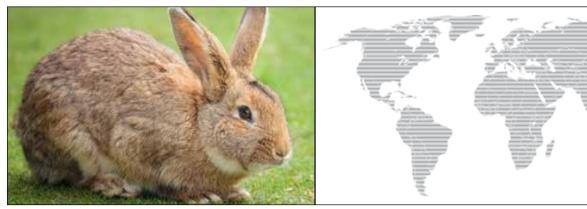




Range	Chile, Argentina		
Habitat	Semi-tropical forests		
Diet (wild)	Insects and other arthropods		
Diet (captivity)	Crickets		
Description	Leg span: 3–4 inches. A large, hairy, reddish-brown spider with highlights of pink and some metallic purple/rose hues on the cephalothorax. It has two body parts (cephalothorax and abdomen), eight legs, two pedipalps, and two chelicerae (fangs). There are eight closely grouped eyes—two large round eyes in the middle surrounded by three eyes on each side—located on the cephalothorax between the chelicerae.		
Lifespan	15 years for females; 3–4 years for males		
Reproduction	The female cares for her egg sac, which contains 500–1,000 eggs and is made from her silk. From egg laying to emergence takes 45–65 days. She rolls it out of the entrance of the burrow to warm in the sun, and either sits over it like a hen on her eggs or keeps one or two feet on the cocoon so she can pull it back inside when something comes near. The maternal protective behavior is not absolute; if she's disturbed or the sac is not viable, the mother spider may extract the young and eat them. Safely hatched young stay in the birth burrow for several weeks. Baby tarantula mortality is high because the young may eat each other at that point, and their mother will eat them if they stay with her too long. Tarantulas do not grow quickly but grow steadily; females reach sexual maturity at 3–4 years; males are at least two-years-old before reaching sexual maturity. These tarantulas mate readily in captivity.		
Behavior	Rose-haired tarantulas live in shallow burrows in the wild and are often found under discarded lumber and old signs as well as in more "natural" places. They kill their prey by biting and injecting it with venom. The venom contains strong enzymes that break down the prey's insides. The spider's mouth is a short straw-shaped opening that can only suck, meaning that anything taken into it must be in liquid form. As a means of defense, rose-haired tarantulas will use their hind legs to kick off guard hairs from their abdomens. These hairs cause an uncomfortable rash to those who are sensitive to them. The bite of a tarantula is no more harmful than a bee sting and feels like a pinprick with mild pain.		
Our animals	1 female. Born: 08/01/2004		
Cool stuff	 Rose-haired tarantulas are probably the most common species of tarantula available in American and European pet stores today. Though all spiders are venomous and some bites cause serious discomfort that might persist for several days, there is no record of a tarantula bite causing a human fatality. The spider originally bearing the name "tarantula" was a species of wolf spider native to Mediterranean Europe. The name derived from the southern Italian town of Taranto. The term "tarantula" was subsequently applied to almost any large, unfamiliar species of ground-dwelling spider. Compared to tarantulas, wolf spiders are not particularly large or hairy, so among English speakers the usage eventually shifted to describe members of the family Theraphosidae, even though they are barely related to the wolf spiders (family Lycosidae). 		

Phylum Arthropoda **Class** Arachnida **Order** Araneae **Family** Theraphosidae **Genus** Grammostola species G. rosea

DOMESTIC RABBIT



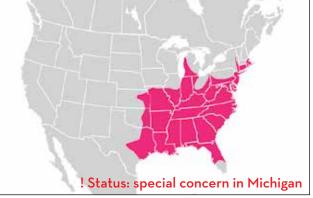
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Range	The last Ice Age confined the species to the Iberian peninsula and small areas of France and northwest Africa, but due to human action and adaptability of this species, European rabbits today exist in the wild on every continent except Antarctica. Domesticated rabbits are found worldwide.		
Habitat	Burrows (warrens) in open fields and woods		
Diet (wild)	Mainly grass, clover, and selected herbs. In winter, they can eat the bark of trees		
Diet (captivity)			
Description	Length: 16 inches; weight: 4 pounds. Males (bucks) are larger than females (does). Have short tails and fur that's usually thick and soft. Hind legs are longer than the forelimbs. Soles of the feet have hairy cushions.		
Lifespan	9 years		
Reproduction	After a gestation period of 28–31 days, the female gives birth to 2–8 young. Newborns, called kittens, are naked, blind and helpless (altricial). Sexual maturity is reached at 4–5 months of age. Mating season is usually in the spring and summer, but can last longer. The mother visits the nest for only a few minutes each day to nurse, but her milk is extremely rich. Young are weaned at four weeks of age and attain sexual maturity at about eight months. Within hours of giving birth, the female can mate again and can produce up to seven litters per year.		
Behavior	Rabbits are crepuscular. They have a digestive system that allows them to eat large amounts of food at one time. They excrete a soft feces made of partially digested food, which they will eat in order to get maximum nutrition out of their food (called "coprophagy"). Burrows are a complex network of passages and interconnecting tunnels of up to 10 feet deep. A typical colony consists of six to 10 adults of both sexes. Colonies have distinct dominance hierarchies which are particularly important for males, as dominance position determines which male will have preferential access to mates. Rabbits can cause extensive damage to crops and are considered a pest by most farmers. They are useful, however, for controlling the spread of unwanted plants such as gorse, bramble, and coarse grasses. Rabbits thump their hind legs to warn others of impending danger and display their tails when fleeing. When annoyed, rabbits will grind their teeth, making gnashing sounds.		
Our animals	2 males. Born: 2007 and 2013		
Cool stuff	 European rabbits are the ancestor of all domestic rabbits (about 80 varieties). The first reliable evidence of rabbit breeding dates back to the Roman period. Rabbits are well-known for their reproductive capacity; however, their mortality rates in the first year of life frequently exceed 90 percent. Rabbits represent one of the most economically important mammal species. They are a popular game animal, especially in Europe, and varieties of this species are raised commercially for meat, skin and wool, and are popular as pets. Rabbits are also used extensively in medical research and for testing the safety of chemicals and consumer products. Rabbits are altricial. In contrast, hares are generally born with hair and are able to see (precocial). Unlike most mammals, rabbit females are usually larger than males. Angora rabbit wool is five times warmer than sheep wool. Rabbits are not rodents, but lagomorphs. Lagomorphs differ from rodents in that lagomorphs have four incisors in the upper jaw (not two, as in rodents) and have enamel on the front and back side of the incisors, whereas rodents only have enamel on the front side. Also, lagomorphs are almost strictly herbivorous unlike rodents, many of which will eat both meat and vegetable matter. Hares and jackrabbits are in the genus Lepus; all remaining species are referred to as rabbits. While hares are well-adapted for running long distances, rabbits run in short bursts and have modified limbs adapted for digging. Hares are often larger than rabbits and have black tipped ears. Newborn hares are precocial; newborn rabbits are altricial. 		

potter park zoo docent manual 2017

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EASTERN BOX TURTLE

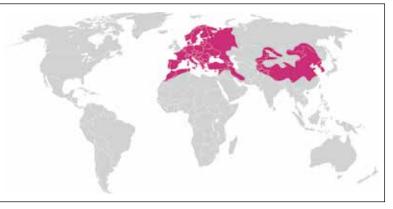




_	Strictly North American, this species is found Maine to Florida along the east coast, west to Michigan, Illinois,	
Range	Kansas, Oklahoma and Texas	
Habitat	Open woodlands and adjacent meadows, thickets and gardens; often hear shallow ponds, swamps or streams	
Diet (wild)	Plants, berries, fungi, insects, worms, slugs, snails, and carrion; young are primarily carnivorous; adults tend to be mostly herbivorous (but don't eat green leaves)	
Diet (captivity)	Romaine, spinach, fruit, monkey chow, bird of prey diet, boiled eggs, smelt, mealworms	
Description	Length: 4½–8 inches. High-domed carapace is dark with a radiating pattern of yellow or orange. Have hinged plastron that allows it close its shell almost completely. Head and legs have yellow markings. Male usually has red eyes and red on front legs. The most reliable way to distinguish males from females is the plastron: males have a concave area centered beneath the hinge. Toes are slightly webbed.	
Lifespan	Typical: 40 years. Captivity: Up to 138 years	
Reproduction	The female lays 3–8 eggs in the ground in June and they hatch in 75–90 days depending on soil temperature. Nests that are 72–81° F (22–27° C) tend to be males, and those above 82° F (28° C) tend to be female (aka temperature dependent sex determination). Babies grow at a rate of about ½ inch (1½ centimeters) per year during the first five years, when they reach sexual maturity. Growth slows down considerably after that but has been reported to continue for over 20 years. Mating can occur spring through fall; females may remain fertile for four years after mating. Nests are started at twilight and usually finished by dawn.	
Behavior	Michigan's only completely terrestrial turtle. Diurnal during warmer months, box turtles depend on sight rather than other senses. Population number are declining due to habitat loss, collecting for pets, and road mortality. Box turtles overwinter buried in up to 2 feet of leaves and soil. Home range is roughly 750 feet (230 meters) in diameter and frequent overlaps other box turtles, who are usually tolerated without antagonism.	
Our animals	1 female (Polly). Captured from the wild in 1992	
Cool stuff	 Box turtles are protected by Michigan law as a species of special concern. When frightened, box turtles retract their head, tail, and limbs into their shell and clamp it shut. They wait in this position until the threat is gone. While juveniles have several predators, adults have very few due to this defense technique. Box turtles are dangerous to eat, presumably due to the turtle having eaten poisonous mushrooms that don't hurt the turtle, but that retain their ability to poison humans. The age of a growing box turtle in the wild can be roughly estimated by counting the growth rings on the scutes. However, by around age 15, the rings grow more closely together and accurate aging of turtles becomes very difficult. If habitat conditions remain constant, a box turtle may spend its life in an area scarcely larger than a football field. 	

EURASIAN EAGLE OWL





Dance	All sources marked half of Europe and Asia		
Range	All across northern half of Europe and Asia		
Habitat	Variety of habitats including coniferous forests, warm deserts, mountain ranges, and river beds; prefer to live in rocky landscapes, especially when nesting		
Diet (wild)	Small to medium-sized mammals, birds, reptiles and amphibians		
Diet (captivity)	Bird of prey diet, dead mice, rats, chicks		
Description	Height: $23-30$ inches; wingspan: $5-6\frac{1}{2}$ feet; weight: $3\frac{1}{2}-9$ pounds. Very large owl with prominent ear tufts and vivid orange eyes. Buff-brown upper-parts are heavily marked with a black, grayish facial disk. Under-parts are a paler buff-brown with black streaks, and fine brown barring on the belly with a white throat. Females are larger than males.		
Lifespan	Wild: 20 years. Captivity: Over 60 years		
Reproduction	The female lays 1–4 eggs and incubates them for about 35 days. Young begin to leave nest at about five weeks and can fly within eight weeks. Owlets are independent by about 24 weeks. Breeding is in late winter. They never build their own nests; instead, they use a cavity, debris platforms in trees or on cliffs, or old large stick nests from another raptor. They reach breeding age at two years.		
Behavior	Eagle owls have a large repertoire of hoots and growls, chirps and clicks and beak-clacks they use to communicate moods and needs. Owlets leave the nest before fledging and are called "branchers." The young climb around on tree branches until their wings are sufficiently feathered for flight.		
Our animals	1 male (Oslo) Born: 1994 at the World Bird Sanctuary, St. Louis; arrived at PPZ from the Cincinnati Zoo		
Cool stuff	 Eagle owls are the largest owls in the world, and they are best known for their large, striking, orange eyes. They are often called the Old World version of America's widely distributed great horned owl (<i>Bubo virginianus</i>). Eagle owls prefer to stay within the same territory unless they are forced to leave due to food shortages or if they are driven out by other owls. Once eagle owls reach adulthood, they are at a very low risk of predation. They are at the top of the food chain in their niche and they are not a major food source for any other species. The oldest known paintings in the world, in the Chauvet Cave in southern France, dated between 30,000–32,000 years of age, depict a solitary image of an owl. It has conspicuous ear-tufts and a heavily streaked breast and bears a strong resemblance to the Eurasian eagle owl. Despite their nocturnal lifestyle, owls do not have a tapetum lucidum, which is a layer of highly reflective cells found in the eyes of many nocturnal mammals, including carnivores, ungulates, rodents, whales, fish, sharks, crocodilians, and fruit bats. The tapetum bounces the light that hits the retina back again into the eye, increasing the amount of total light that hits the retina. It's the reason that many animals' eyes glow when light is shone into them and different species glow in different colors. 		





Range	Europe, except most of Scandinavia	
Habitat	Forest zones and open plains	
Diet (wild)	Small rodents, frogs and fish	
Diet (captivity)	Feline cat food	
Description	Length: 15–20 inches; weight: 2 pounds. Long bodies with short legs, dark mask around eyes. Dark fur on backs with yellowish fur underneath. Small ears and thick whiskers. Males usually bigger than females.	
Lifespan	Wild: 1–2 years. Captivity: 10 years	
Reproduction	After a gestation period of 34–37 days, the female gives birth to 4–8 young. Females can produce 2–3 litters per year. Like most mammals, males do not assist in the care of the young and live in separate burrows from females. Male ferrets have a hooked penis. After penetration of the female, they can't be separated until the male releases. Young domestic ferrets are cared for by their mothers until they are about eight weeks of age.	
Behavior	Nocturnal hunters, ferrets have teeth adapted for killing and cutting up prey. Their flexible backbone allows them to move through tight spaces. and sharp prominent claws assist in digging. Ferrets have been semi-tamed and are used for hunting to catch rodents.	
Our animals	2 females. Born: 01/2011; 09/2012	
Cool stuff	 The name "ferret" is derived from the Latin <i>furittus</i>, meaning "little thief," a likely reference to the common ferret penchant for secreting away small items. Aside from selection towards particular fur colors, domestic ferrets closely resemble their wild ancestors, European polecats. Pet ferrets can revert back to a wild state within two weeks if they escape. Ferrets were likely domesticated from European polecats over 2,000 years ago. A healthy domestic ferret will often sleep 18–20 hours per day. Domestic ferrets are naturally crepuscular, having activity periods during dawn and dusk, but will often change this activity period depending on when their owner is around to give them attention. Domestic ferrets are playful, fastidious and will seek attention. They will often interact with other ferrets, cats, and dogs in a friendly manner. They are naturally inquisitive and will tunnel into or under anything. They can be taught tricks and will respond to discipline. Domestic ferrets have an instinct to urinate and defecate in the same places and therefore can be trained to use a litter box. Black-footed ferrets, a close cousin, are one of North America's rarest animals. Thanks to a successful breeding program at Omaha's Henry Doorly Zoo started in 1991, the black-footed ferret has made a dramatic comeback. 	

LESSER HEDGEHOG TENREC





Range	Southwestern and west coastal areas of Madagascar	
Habitat	Semi-desert, thorny brush country and other dry areas	
Diet (wild)	Invertebrates and small vertebrates	
Diet (captivity)	Dry cat food	
Description	Length: 5–7 inches; weight: 6–7 ounces. The legs are short; the tail is short, flattened, broad, and covered in spines. as is the rest of the dorsal side of the body. The spines are not barbed. The fur is brown above, whitish below, with a whitish cast where spines are present. Eyes and external ears are bigger than in other tenrecs. The feet are five-toed, with claws adapted for digging. The nose is extended, but not to the trunk-like extent found in other tenrecs.	
Lifespan	3–4 years	
Reproduction	Females give birth to $2-10$ offspring in nests constructed in burrows. Tenrecs reach sexual maturity between $1-1\frac{1}{2}$ years of age. When sexually excited, the males secrete a white milky substance from their hardian glands, located in the corner of the eye.	
Behavior	Lesser hedgehog tenrecs are nocturnal, usually found sleeping during the heat of the day in small groups under boulders, tree roots, and in tree holes close to the ground. They roll into protective balls while sleeping or threatened. Insect prey is stalked using sight and sound, sniffing with outstretched nose until they are very close. The catch is made with a quick forward thrust of the mouth. Agile climbers, tenrecs rest in forks of trees. They frequently groom their faces with their front paws. During Madagascar's dry winter when food is scarce, tenrecs go into torpor: with their eyes closed, they roll into balls with their noses between their forepaws. During this time, they are cold to the touch and breathe once every three minutes. If touched, they snort, grunt, and snap at the intruder. During torpor, tenrecs forgo food and water, cease defecating and remain fat. Tenrecs can freeze to death at temperatures below 62° F (17° C). When active at temperatures in the mid-60s, tenrecs raise their body temperature through constant motion.	
Our animals	4 females, 2 males. Born: 2007–2014	
Cool stuff	 Due to the scarcity of lesser tenrecs in zoos, and PPZ's success in breeding, an AZA breeding program was established with PPZ being an anchor institution. As a group, tenrecs have radiated evolutionarily so that they include species that resemble, both physically and ecologically, a diverse array of mammals including hedgehogs, shrews, opossums, mice and even otters. Members of the tenrec family (Tenrecidae) also occupy a diverse collection of habitats, including aquatic, arboreal, terrestrial and fossorial. Although tenrecs may resemble shrews, hedgehogs, or otters, they are not closely related to any of these groups; their closest relatives are other African insectivorous mammals, such as golden moles and elephant shrews. Tenrecs have a cloaca, a single genital opening, like birds and reptiles. Many tenrecs do not maintain a constant body temperature, but rather let their bodies cool down while they are at rest. Males lack a scrotum and the testes remain within the body cavity. The lesser hedgehog tenrec is one of 16 mammalian species that will have its genome sequenced as part of the Mammalian Genome Project. It is increasingly popular in the pet trade, and in the future may serve as an important model organism in biomedicine, as it is only distantly related to the mice, rats, guinea pigs, and rhesus macaques that comprise the most common research animals. 	

MADAGASCAR HISSING COCKROACH





Range	Madagascar	
Habitat	Warm, moist forest (at ground level)	
Diet (wild)	Primarily plant parts such as fallen fruit and other plant debris	
Diet (captivity)	Produce, dog food	
Description	Length: 4 inches. Large and wingless. Mostly shiny brown with a black head, prothorax, and legs; males have thick horns located just behind their heads; females have only small "bumps," giving them a much rounder look. Antennae of males are hairy; females' are relatively smooth.	
Lifespan	Wild: 1 year. Captivity: 2–5 years	
Reproduction	Ovoviviparous, the female incubates the eggs in a special brood pouch for 60 days; her body provides no nourishment, just a safe environment for the eggs. One female can produce 30–60 nymphs (immature stage resembling miniature adults). Nymphs consume the brood pouch lining almost immediately after hatching. After undergoing six molts, nymphs reach maturity in 5–7 months.	
Behavior	Cockroaches in general are reclusive and nocturnal, usually spending their time hiding in crevices. The hissing cockroach, however, becomes aggressive when disturbed. They are also unusual in their ability to produce sound by hissing. Hissing is produced by expelling air through a pair of modified abdominal spiracles (breathing pores) rather than by rubbing body parts (such as crickets) or by vibrating a membrane (such as cicadas). Hissing cockroaches produce disturbance hisses when disturbed or handled; males will hiss during hierarchy disputes and courtship interactions. Aggressive behavior involves males charging each other with their horns or pushing each other with their abdomens. Size and hiss play important roles in these encounters, as winners are usually larger and hiss more. While hissing cockroaches are primarily nocturnal, male fighting can be seen during the day. These cockroaches live in large colonies and are eaten by birds and other predators.	
Our animals	Varies	
Cool stuff	 Tropical cockroaches are good fliers and will fly toward a light source. Hissing cockroaches, however, do not possess wings. Males can discriminate between hisses of familiar males and strangers. Symbiotic bacteria in their gut allow them to digest a wide variety of foods, including wood. Cockroaches can run fast and even jump a little. All but five or six of the 3,500 species of cockroaches have been domesticated. Cockroaches represent an ancient life form, basically unchanged, since the Carboniferous Period (270–350 million years ago). The name comes from the Spanish <i>cucaracha</i>. 	

dated March 2017 MEDITERRANEAN SPUR-THIGHED TORTOISE





Range	Eastern Europe	
Habitat	Semi-arid scrub and Mediterranean forest. Prefer areas with large amounts of vegetation	
Diet (wild)	Omnivorous, though it mainly feeds on plant matter, dark leafy greens/weeds such as mallows, dandelions and various legumes; will also eat insects such as slugs or grubs	
Diet (captivity)	Hay, pelletized tortoise food, non-succulent greens such as kale	
Description	Length: 7–8 inches. Females are slightly larger than males. Broad, oval, high-domed carapaces that are brown to yellow in color. Those living at higher elevations may be entirely black. They have growth rings on the scutes that are strongly marked with age. Skin color is golden to yellow-brown and very, very thick. They have large symmetrical markings on top of the head, large scales on the front legs, and spurs on each thigh.	
Lifespan	75–100 years	
Reproduction	Before laying eggs, the female will dig in the dirt and even taste it to decide on the proper spot to lay eggs. One or two days before egg laying, the female becomes aggressive and dominant. She takes on the aggressive characteristics of a male so she is not disturbed by other tortoises while laying her eggs. Mating begins after awaking from hibernation. The males will follow the females with great interest, encircling them, biting them in the limbs, ramming them, and trying to mount them. A successful mating will allow the female to lay eggs multiple times.	
Behavior	Mediterranean spur-thighed tortoises are diurnal and are mostly active during the day. They spend their days grazing and retreat to burrows at night. They may not return to the same burrows every night; they will find one that is close by or they will make a new one.	
Our animals	1 female, 2 undetermined. Born: 2003 and 2005; confiscated by the USFWS at Detroit Metropolitan Airport	
Cool stuff	 Spur-thighed tortoises, or Greek tortoises, are one of five sub-species of Mediterranean tortoise (<i>Testudo graeca</i>). Spur-thighed tortoises are commonly traded as pets, despite the illegality of this trade. Members of the tortoise family (Testudinidae) generally have one of the longest lifespans of any animal. Some individuals are known to have lived longer than 150 years. Timothy, a spur-thighed tortoise, lived to be about 165 years old. In spite of her name, Timothy was female (it was not properly known how to sex tortoises in the 19th century.) For 38 years, she was carried as a mascot aboard various ships in Britain's Royal Navy. In 1892, at age 53, she retired to the grounds of Powderham Castle in Devon. Up to the time of her death in 2004, she was believed to be the United Kingdom's oldest resident. 	

potter park zoo docent manual 2017

NORTH AMERICAN PORCUPINE





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Range	North America between Arctic Ocean and northern Mexico; found throughout most of Alaska and Canada, in the northern part of the Great Lakes region, all throughout the west and northeast regions of the United States	
Habitat	Coniferous, deciduous and mixed forests. In the west, it can be found in scrubby areas	
Diet (wild)	Tree cambium (inner bark), foliage, broad-leaved herbs, seeds, grains, fruit, flowers	
Diet (captivity)		
Description	Length: 24–36 inches; tail: 12 inches; weight: 11–31 pounds. Distinguished by its stout, slow, lumbering form and by its spiny coat. Dark brown to black fur, with back guard hairs and spines that contain bands of yellow. Quills extend from head to tail on the back. The middle of the tail and lower back are marked by a black line. Quills on the black area are fringed with white. Each quill is 1–4 inches long and contains a fluorescent material that brightens the quills at night, when porcupines are most likely to meet predators.	
Lifespan	Wild: 6–15 years	
Reproduction	Gestation is 7 months, after which a female gives birth to a single offspring. Babies are born precocial and fully quilled, able to defend themselves with tail slaps. Their quills are soft at birth, but dry within several hours and are ready for action. They become independent at approximately five months of age, but are not sexually mature until two years old. Breeding occurs in October and November. A dominant male breeds with a number of different females, but only when the females are willing.	
Behavior	Nocturnal and arboreal, porcupines, for the most part, have a sweet and trusting disposition that comes only to those who have little reason to be afraid. Females maintain a territory and defend it against other females; however, male territories typically overlap those of several females. An individual knows its territory quite well and usually does not venture too far from it; the main exceptions being salt or apple excursions. Porcupines have long claws that help them climb large tree trunks and surprisingly small branches. The palms and soles of porcupines have a pebbly surface and no fur. Along with their keen sense of touch, this special texture on the hands and feet improves a porcupine's grip. Because they are so good at gripping trees, porcupines can even stay in trees using only their hind feet to hold on. This frees their forelimbs for use in eating.	
Our animals	1 male. Born: 2015	
Cool stuff	 North American porcupines are the largest of all porcupines and the second largest rodents in North America, outsized only by beavers. Their Latin name means "quill pig." A single porcupine may have 30,000 or more quills. Quills are modified hairs formed into sharp, barbed, hollow spines. Quills are not a porcupine's first line of defense. Their first line of defense, after the bright color of their quills perhaps, is a loud tooth-chattering. They also stomp their feet and shake their bodies, which can make their quills rattle. When severely stressed, porcupines will emit a strong, repellent odor. In a confined space, the stink can make a human's eyes water and serves as an efficient deterrent against predators. Porcupines can't shoot their quills. They have a distinctive layer of musculature just below their skin with which they can raise and lower their quills and let them go when they come in contact with a predator. The quills have barbed tips that make them difficult and painful to remove. The barbs are angled in such a way that if the quills are left unattended, they will dig deeper and deeper into an animal as it moves. If the quills avoid large bones and vital organs, with enough time the quills can work their way through an animal and come out another area. Quills also present dangers to porcupines. Falling out of trees is quite common for porcupines and self-impalement is definitely a hazard. Antibiotics present on the quills prevent infection when a porcupine falls out of a tree and is stuck with its own quills. Porcupines can digest wood fiber in their guts as well as or better than many ruminants. Porcupines can locate truffles by scent and will feed heavily on them when in season. Apples are also a favorite when available. Despite their quills, some animals, like coyotes, cougars, and fishers, are expert predators of porcupines. 	

Phylum Chordata

Class Mammalia

Order Rodentia

Family Erethizontidae

Genus Erethizon

species E. dorsatum

RED-TAILED BOA CONSTRICTOR

updated March 2017





Range	Central Mexico, Central America, and northern and central South America.
Habitat	Tropical rain forest is preferred, but also found in semiarid savanna
Diet (wild)	Mostly small mammals (rodents, monkeys, bats) and birds; will eat any animal they can capture and fit in their mouths
Diet (captivity)	Dead guinea pig offered weekly
Description	Length: 4–9 feet; weight: 30 pounds. Color is cream or brown, marked with dark "saddle-shaped" bands. These saddles become more colorful and prominent towards the tail, often becoming reddish brown with either black or cream edging. Females are usually larger than males.
Lifespan	20-30 years
Reproduction	Females are ovoviviparous (produce eggs inside their body, then give "birth" to live young when the eggs hatch); 20–60 young are born after a gestation period of 4–7 months (depending on local temperatures). No parental care provided. Boa constrictors are primitive snakes with vestigial pelvic girdles and hind limbs that are represented externally as a pair of spurs next to the cloaca. Spurs are usually more developed in males and are utilized during courtship and copulation. Breeding occurs during rainy season and females are capable of sperm storage up to two years.
Behavior	Red-tailed boas are common as pets with a non-aggressive temperament. Red-tailed boas are arboreal as youngsters and primarily terrestrial as adults. They are able to consume prey up to twice the diameter of their head because of loosely hinged jaws. Boas have over 200 backward-curved teeth. Special permits are required for the import/export of red-tailed boas. Their numbers in the wild are declining because of habitat destruction. Although protected, many skins are still sold to the leather trade each year.
Our animals	1 male. Born: 2008 in captivity
Cool stuff	 PPZ's snake, a red-tailed boa, is a subspecies of the common boa constrictor (<i>B. constrictor</i>). At least nine subspecies are currently recognized. Conventional wisdom held that pythons, anacondas, and boas suffocate their prey. Actually, these predators cut off their victims' blood supply to their major organs. When a boa tightens its powerful body around its prey, the snake cuts off its victim's circulation, causing the prey to pass out within a matter of seconds (most animals can actually survive a relatively long time without breathing.) Once blood flow ceases, organs with high metabolic rates, such as the brain, liver, and heart, begin to immediately shut down (doctors call this ischemia). Death follows within seconds. Although heat-sensing pits are common in the family Boidae, they are absent in <i>B. constrictor</i>. Males possess hemipenes, a double-penis, of which only one side is commonly used in mating. Like most snakes, boa constrictors rely on strong vomeronasal senses. Their tongues flick continuously, bringing odor molecules into contact with the chemosensory (vomeronasal) organ in the top of their mouths (Jacobsen's organ). Their forked tongue increases surface area, enabling more odor molecules to be sensed.

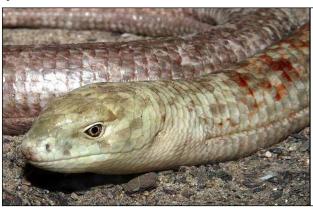
RING-NECKED TURTLE DOVE





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Range	Domestic bird that has escaped and been introduced everywhere; originally found in east and southern Africa
Habitat	Trees in urban areas, residential areas, and parks
Diet (wild)	Seeds and fruit
Diet (captivity)	Dove food mix
Description	Length: 10 inches. Head and underparts are a pale, creamy-buff. Upper parts are grayish with a thin black collar. The long, squared tail has an underside of a black base and white tip with an upper surface of gray with white tips. Sexes are similar. Ours are of uncertain origin, but most closely resemble the ring-necked turtle dove (or Barbary dove, <i>Streptopelia risoria</i>).
Lifespan	Unknown
Reproduction	The female lays a clutch of usually two eggs. Both male and female share incubating duties for about 18 days. Chicks are altricial and require attentive care and feeding. Both sexes produce "pigeon milk," which is a secretion of the crop that is regurgitated and fed to the hatchlings. Young can fly when they are three weeks old. In beginning stages of courtship, males coo loudly, displaying before the females. At a more advanced stage, the movements become more like a bowing to the female. These displays sometimes go on for days, followed by nest building. The male chooses the nesting site, in shrubs and trees, and gathers twigs, roots, and other materials, which are set in place by the female. These birds are monogamous and tend to mate for life.
Behavior	Pigeons and doves are strong fliers; their wing muscles can make up 30 percent of their body weight. Unlike most birds, which have to gather water in their bill and tip their head backwards to drink, pigeons and doves are able to drink by immersing their bills in water up to their nostrils and sucking, without raising their heads. Despite being domesticated, ringed turtle-doves will freeze in place if a large shadow overhead appears to be hawk-like. They are fond of bathing and will lay on one side in a shallow pool of water with the wing on the other side of the body extended upward.
Our animals	2 females. Born: 2012
Cool stuff	 Doves are in the same order and family as the common pigeon (aka rock dove, homing pigeon, carrier pigeon, "rats with wings"; Columba livia). The extinct dodo bird is also classified in the Columbiformes family. Their coo is created by muscles that vibrate air sent up from the dove's lungs. These muscles belong to the fastest known class of vertebrate muscles, contracting as much as 10 times faster than muscles used for running. This class of muscles is usually found in high-speed tissue such as a rattlesnake's tail. Pigeons can distinguish identities and emotional expressions on human faces, letters of the alphabet, even paintings by Monet vs. Picasso. Pigeons can also be trained to distinguish between malignant and benign breast cancer tissue on mammograms. The common pigeon delivered the results of the first Olympics and news of Napoleon's defeat at Waterloo. Pigeon droppings were considered so precious in the 16th century that all pigeon droppings in England were declared property of the English crown to make gunpowder. The common pigeon can fly 500+ miles in one day at over 60 mph with just one ounce of seed and no water. In WWII, carrier pigeons flew through artillery, poison gas and rifle fire and made it to their destination 98 percent of the time.

SHELTOPUSIK





Range	Southern Europe to Central Asia
Habitat	Burrowing animals; found in temperate climates in dry habitats, rocky hillsides with some cover, and dry stone walls, embankments and stone piles
Diet (wild)	Insects, snails, slugs, mice, bird eggs, baby birds
Diet (captivity)	Crickets, mealworms, young mice
Description	Length: $2-3$ feet (tail: $1-2$ feet); weight: $1-1\frac{1}{2}$ pounds. The adults are rather plainly colored, primarily shades of brown or green. Juveniles have more contrasting markings. They are equipped with powerful jaws and broad and blunt teeth.
Lifespan	Wild: 17–18 years (longer in captivity)
Reproduction	The females lays 6–12 eggs which hatch 6–8 weeks later. Females guard the eggs during the incubation period but abandon the young once they hatch. The young measure 3–6 inches long. Mating usually occurs between June and August. During the breeding season, the female finds a damp spot where they deposit soft-shelled eggs. Females reach sexual maturity at 2–3 years of age.
Behavior	Sheltopusiks are diurnal predators, often active after rainfall (snails and slugs appear to be its favorite prey, which may explain why it is particularly active in wet weather.) Due to their small size, sheltopusiks tend to respond to harassment by hissing, biting, and musking. Like many lizards, they are capable of dropping their tail, although they are less likely to do so than other species. If the tail is lost, it grows back slowly and is shorter and darker. The sheltopusik is a good swimmer.
Our animals	1 undetermined sex. Born: 06/2001 in captivity; donated to PPZ in December 2001
Cool stuff	 Although legless lizards may look like snakes, sheltopusiks are true lizards, with external ears, movable eyelids, and uniform scales on their belly and back. Their common name comes from the Russian "желтопузик," which literally means "yellow-bellied." Sheltopusiks are the only living species in the genus Pseudopus. A released tail may break into pieces, leading to the myth that the lizard can shatter like glass and reassemble itself later, hence its other names "glass lizard" and "glass snake." Lateral folds along the sides of the body may aid sheltopusiks in breathing, sensing food, expansion for eating, allowing for space for eggs in females, and detecting sound waves through the soil. The longest sheltopusik on record was 4 feet.

SINALOAN MILK SNAKE





Range	Southwest Sonora, Sinaloa, southwest Chihuahua (Mexico)	
Habitat	Rocky and semi-arid dry lands	
Diet (wild)	Rodents, small snakes, lizards and occasional small birds and other snakes	
Diet (captivity)	Dead mice	
Description	Length: 48 inches. A slim snake. Easily distinguished from other subspecies by the very broad bands of red which are wider than on most other subspecies. The head is black with a thin yellowish or cream-colored band just behind the eyes across the top of the head. The belly is yellowish or creamy white. Non-venomous.	
Lifespan	10-15 years	
Reproduction	The female lays 5–15 eggs under logs, rocks, or vegetation. The eggs hatch after about 60 days. The young are brightly colored at birth, though color dulls as they mature, which takes 3–4 years. They mate in May and June.	
Behavior	Milk snakes are often nocturnal and stay in their desert burrows during the heat of the day. Very secretive, they are often found under rocks or in hollow logs or stumps and emerge at night. The brightly banded color of the non-venomous Sinaloan milk snake may confuse predators into thinking that they are venomous coral snakes. This type of camouflage is called mimicry.	
Our animals	1 undetermined sex. Born: 01/2004	
Cool stuff	 The mnemonic "Red touch yellow, kill a fellow. Red touch black, friend to Jack" (and other variations) only reliably applies only to coral snakes native to North America. Venomous coral snakes found in other parts of the world can have red bands touching black bands. Milk snakes were so named because of a false belief that they sucked milk from cows. In truth, barns are excellent places to hunt for rodents, and milk snakes extremely important in limiting pest populations. Eastern milk snakes (<i>L. t. triangulum</i>), found in Michigan, typically have a skin pattern of reddish or brown blotches on a gray or tan background color that camouflages well in their deciduous forest habitat. Since coral snakes are not native to Michigan, the eastern sub-species hasen't evolved the mimicry camouflage that southwestern populations have. 	

updated March 2017

SOUTHERN THREE-BANDED ARMADILLO



Range	South America: north Central Argentina, east central Bolivia and sections of Brazil and Paraguay
Habitat	Found in grassy or marshy areas between scattered forestland; do not dig burrows but use abandoned anteater burrows, or they make dens under dense vegetation
Diet (wild)	Beetle larvae, ants, termites, fruit
Diet (captivity)	Crickets, fresh fruit, mealworms
Description	Length: 13–17 inches; weight: 4–7 pounds. Dark brown and heavily armored with a thick leathery shell with three bands; their "armor" is composed of a series of plates of ossified scutes covered with a leathery keratinous skin. Underside is covered with soft skin and fur. Tail is very stout and immobile. Middle three toes of the back foot are grown together and have a thick claw. Generally walk on the tips of the foreclaws, even when running.
Lifespan	Captivity: Over 20 years
Reproduction	One young is born per litter; gestation period is about 120 days. The young are born fully formed, resembling miniature adults, and can walk and roll into a ball immediately from birth. Young are born with soft leathery skin which hardens in a few weeks. Young are weaned at 72 days and are sexually mature at 9–12 months. Most of the young are born between November and January, but births have been reported throughout the year indicating that there is no distinct breeding season.
Behavior	They are primarily solitary, although groups of up to 12 have been observed sharing the same den site during cold spells. Southern three-banded armadillos roll themselves into a ball as a defense against natural enemies. This shell is also very efficient at trapping air, which is warmed by body heat, and thus conserves heat loss.
Our animals	1 male. Born: 05/1994. Donated from Chicago
Cool stuff	 The word "armadillo" means "little armored one" in Spanish. The Aztecs called them "ayotochtli," which means "turtle rabbit." Fuleco, a Brazilian three-banded armadillo, was the official mascot of the 2014 FIFA World Cup in Brazil. Southern and Brazilian three-banded armadillos are the only armadillo species that can roll completely into a ball. They usually leave a small space between a section of their armor, which can forcefully close on a finger or paw of a would-be predator. Other armadillo species cannot roll up because they have too many plates. North American nine-banded armadillos tend to jump straight in the air when surprised and consequently often collide with undercarriages and fenders of passing vehicles. Armadillos have very poor eyesight and use their keen sense of smell to hunt for food. Southern three-banded armadillos have a long, sticky straw-like pink tongue that allows them to gather up and eat many different species of insects, typically ants and termites. All armadillo species are found in South America.

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YELLOW-NAPED AMAZON PARROT



updated March 2017



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Range	Central America to northern South America	
Habitat	Open woodlands and adjacent meadows, thickets and gardens; often hear shallow ponds, swamps or streams	
Diet (wild)	Fruit and/or seeds and flowers of trees. Flocks also take cultivated crops such as corn, green bananas, mangoes, lemons, avocados and alfalfa	
Diet (captivity)	Apples, bananas, grapes, oranges, whole grain bread, carrots, greens, parrot food	
Description	Length: 13–15 inches. Green, more yellowish below; forehead and crown green; variable yellow band across lower nape and hind neck. Bill is dark gray, paler towards base of upper mandible.	
Lifespan	Wild: 30 years. Captivity: 80 years	
Reproduction	The female lays 2–3 eggs that are incubated for 25–26 days. Breeding season is February–May in Mexico and northeast Venezuela; December–January in Columbia; and January in Surinam.	
Behavior	These colorful, loud, noisy, early risers often do not take to new owners. Yellow-naped Amazons are known as one of the three best mimics of all parrots. Males are more aggressive to handlers during breeding season.	
Our animals	1 female (Tucker). Born: January 10, 1994, at PPZ	
Cool stuff	 The upper bill is not fused to the skull, allowing it to move independently and giving parrots tremendous biting pressure. Touch receptors along the inner edges of the bill aid in parrots' highly dexterous manipulation. Studies show that parrots exhibit "handedness," with regards to which foot they prefer. Wild populations of Amzaon parrots are decling due to deforestation and illegal removal of young for the pet trade. Parrots are extremely intelligent, social birds. Many of them are very long-lived and need good memories to remember nesting places, different food sources, mates, and even how to best cope with droughts and/or floods that they may experience several times over a lifetime. A variety of parrot species have shown the ability understand abstract concepts like bigger, smaller, more fewer, and even zero. Many researchers believe they even have a sense of humor. Almost all parrots live in flocks and need to know how to maneuver the social complexities dealing with the particularities of each flock member. In some species, a mated pair will create a certain song that they sing as a duet, each filling in special notes. Parrots also have different call dialects that change depending on the social setting. They may use one dialect when interacting with a familiar flock member, another when dealing with their mate, and yet another with a member of an unknown flock. Several parrot species are known to use tools. The philosopher Aristotle had a pet parrot, although the exact species is unknown. However, her name lives on: It was Psittace, from which scientists derive the name for the scientific order of parrots, Psittaciformes. 	