

Nature Journal

Introduction

Wildlife plays an important role in economical, ecological, environmental as well as cultural spheres. It can include a wide range of species, ranging from amphibians, insects, and birds to mammals. As a rule, fauna includes some organisms that are native and the ones that were introduced or re-introduced to their current habitat (Day, Klingler & Bloomberg 283). This report is an in-depth examination of five wild animals living in the United States of America. These animals are Red Fox (*Vulpes vulpes*), Northern Harrier (*Circus cyaneus*), Black and Yellow Garden Spider (*Argiope aurantia*), Northern Copperhead (*Agkistrodon contortrix mokasen*) and American Bullfrog (*Rana catesbeiana*).

The discussion of every species will answer the following questions:

- Are the species under discussion native or introduced to the environment?
- Describe their physical characteristics in terms of color as well as specific differences between the sexes.

Additionally, the issues regarding the species' habitats will be addressed. This is attained by establishing their local habitat as well as their habitat range, their ecological role, the types of food they eat and other relevant relationships such as parasitism, mutualism are brought to light. The species' category under IUCN is also brought to light. At the same time, discover life cycle of these species and life span as well as how they coexist with people.

Red Fox (*Vulpes vulpes*)

According to Rue (72), Red fox is the largest of animals considered as true foxes. This species is in the family of Canidae, which is comprised of wolves, dogs and coyotes. These animals are characterized by an orange or red fur. Red foxes have white fur on their chest as well as beneath their neck. The tail is usually fluffy and white at the tip. The ears are black and pointed. Their legs are colored black. The animal is about three feet long and weighs 10 pounds.

Red fox inhabits a greater part of the United States as well as Canada, but there is no record to show that they ever existed in Alaska and Texas (Clapham 122). According to IUCN, it is categorized as least concern for extinction and named as world's worst alien invasive species. They live on a wide range of territories, covering approximately 70 million square kms, including wood lands, farmlands as well as prairies.

Historically, red foxes were being preyed by lynx, wolves, and bobcats but due to the reduced number of these predators, people became the major predator hunting these animals for various reasons, such as sport hunting, as well as for their fur or by farmers in protecting their crops and livestock (Rue 121). Due to the value of its fur, fox has a long history of being a victim of humans. The depiction of this relationship can be found in human folklore as well as in myths. Red foxes are opportunistic feeders whose feeding pattern varies with season as they eat everything available during certain periods. Generally speaking, this species eats fruits, herbs and berries. They also feed on birds, insects, and small mammals. They can investigate over five miles looking for

food despite the fact that they are not hungry. Surplus food stuffs are hidden to be consumed later (Clapham 54).

With regards to reproduction, red foxes reproduce only once a year during spring. Female estrus lasts for 21 days during which the male mates with her for a number of days in burrows during which there is at least an hour of copulation tie. The gestation period is approximately two months. Prior to littering, the female/vixen will get two den ready. The litter size ranges between 4 and 8. As the female is nursing the litter, males look for food. Within a period of about 2 weeks, the kits open their eyes, and 4 days after, lower teeth start emerging. The juvenile takes a period of six to seven months, and then, the adulthood comes. In their natural habitat, red foxes live for a maximum of five years as compared to the fourteen years as their average life length in captivity (Rue 65).

These mammals are nocturnal and can hear sounds on the lower frequencies. They stalk their prey just like a cat does, pouncing and chasing it afterwards. Foxes spend only insignificant amount of time in dens. As a rule, these animals seep in the open air, using their tails to save warmth (Clapham 23).

Northern Harrier (*Circus cyaneus*)

Also known as marsh hawk, the bird is between 17 and 24 inches with a wing span ranging from 3.5 to 4.5 feet and weighing between 12 and 18 ounces. Males are typically smaller than females. This bird inhabits North America along with Asia and Europe. Their common habitats include open areas, wetlands, cultivated areas, meadows, grasslands and tundra. New Jersey's costal marshes provide northern harrier with the comfortable habitat. They are typically found in New Jersey, Texas, and Alaska

and known to wander over 100 miles a day in search of food (Ferguson-Lees & Christie 97). The species has appearance that resembles that of an owl. Males are grey and white above and below respectively and have a wingtip that is black as well as the trailing edge towards the wings. Male's white breast has rusty spots on it. Females are brown and buff colored above and below in that order. Contrary to their males counterparts, females' under-wings are dark and the black wingtip is obscured. The juvenile specimen looks like a female.

They feed on a variety of foods, including insects as well as small mammals. It is worth mentioning that the bird itself is a prey to skunks and raccoons that steal its eggs, as well as some birds of prey, feral cats, and red foxes. The acute eyesight makes them a perfect hunter that can ambush and grab their victim suddenly. Owing to their sharp eye, they are able to spot their prey. As they circle the area once satisfied with their ambush, they swoop downwards and grab their prey using their sharp claws. *Circus cyaneus* has coexisted with mankind for a long time. For instance, in Europe, there was a superstition that a northern harrier perching on a house predicts that 3 people living in the house will lose their lives (Ehrlich, Paul Dobkin & Wheye 162). Some Native Americans considered this bird to be a symbol of good luck. If it shows up on a wedding day, it is a sign of a long and happy life of a couple. Majority of farmers like these birds because they help control pests, for instance, eating eggs of quail, and insects that could have destroyed their crops.

According to Ehrlich, Dobkin & Wheye (231), these birds are migratory but native to the region. Due to the decline in population as a result of predation and habitat destruction, the species has been categorized as endangered. They attain reproduction

maturation at the age of 1 year. Females lay between 3 to 6 eggs, depending on the prevalence of small rodents in the neighborhood. The incubation period takes approximately one month. While females hatch their eggs, it is the responsibility of males to hunt, bring food and feed the females. The species can live for up to 12 years.

Black and Yellow Garden Spider (*Argiope aurantia*)

According to Gertsch (1947), other common names attributed to the species of Black and Yellow Garden Spider include writing spider or corn spider. Black and yellow garden spiders are mostly found in the 48 states of the United States of America. Additionally, the species can be found in Mexico, Canada and Hawaii. The species is uncommon to the Rocky Mountains as well as the Great Basin but can be found in Costa Rica. The abdomen and the cephalothorax of the insect are colored black and yellow, respectively. It is worth noting that females are larger in size than males ranging from 19 to 28 mm and 5 to 9 mm, respectively.

Through its co-habitation with humans, it has been cleared out that *Argiope aurantia* is harmless to human beings, and for that reason, it coexists with people in peace. The spider can also help men in predating some disturbing insects. The representatives of this species are typically carnivores and employ a strategy of waiting for their prey in the web which is zigzag shaped. Once the prey appears in the web, it is deemed to be captured by the spider and injected with venom which immobilizes the prey. Then the spider wraps it and stores it somewhere to eat it later. The prey can be flies, moths, beetles, wasps and mosquitoes (Gertsch 2003). The species is native in most parts of the country, but it is most widely spread in California. These spiders inhabit gardens as well as old fields. Their prevalence in California is explained by their

ability to avoid predators. Birds and wasps, such as mud daubers, for example, as well as lizards and shrews, can eat them.

Concerning the reproduction, they breed only once per year. For reproduction purposes, males are the ones searching for females. As a sign of interest in the reproduction, the male individuals go plucking strands on the web constructed by a female. It is worth noting that after mating, the male dies often not consumed by the female. Eggs are laid at night on silky material and covered. The sacs produced range between 1 and 4 each having close to 1,000 eggs. The female protects the sac until spring because it is during the spring season that the juveniles come out. During the period of growth and development, they shed the exoskeleton. At time, they may lose their legs, but they also have an ability to regenerate limbs. Moreover, concerning the status of the species, Herbert, Levi & Strekalovsky reveal that the representatives of this species should be treated as endangered/threatened (72).

Northern Copperhead (*Agkistrodon contortrix mokasen*)

The venomous snake called Northern Copperhead is found statewide apart from barrier islands living in wetlands, edge areas, and forests. *Agkistrodon contortrix mokasen* is found in numerous states, particularly including Illinois, Alabama, Georgia as well as Massachusetts. For that reason, its habitat is wide. The species can be also found in open areas made up of rocks which they use for cover. According to Herrmann (par. 1), the snake has been categorized by the government as endangered.

The snake grows to approximately 76 cm in length, the head is characterized by unmarked copper color head and reddish-brown body. They are thick in body having keeled scales. An organ which is sensitive to temperature is located on the sides of its

head. The juveniles are 7-10 inches being greyer than the adults which fade when they reach the age of 3-4 years. They are sexually dimorphic, males being smaller than females. Sexual maturation is attained at the age of 4 years. They have two main breeding seasons that usually last from August to October and from February to May. Using the tongue, males seek for sexually active females. Once this is done, a male starts to rub his head on the ground after courting. When sufficiently stimulated, the female avails the cloaca. They mate for a period of between 3 1/2 and 8 1/2 hours. During mating, males release a special pheromone which makes a female unattractive to other males. It takes between three and nine months for young ones to pass the larval stages. The life span of this reptile is about 18 years (Herrmann par. 4).

It is worth noting that adult Copperhead feeds on a range of small mammals, for instance, mice and other rodents. Occasionally, they eat lizards, small birds, insects as well as amphibians. Their long evolutionary history owes to their ability to escape predators by staying motionless (Herrmann par. 3).

American Bullfrog (*Rana catesbeiana*)

According to Stebbins (32), Bullfrog is the largest frog that reaches 9 to 20.3 cm in length. Its color ranges from yellow to green with some dark grey mottles. The frog has a large external eardrum having the hind legs webbed apart from the last joint made up of longer toe. The amphibian has no dorsolateral ridges. The belly's color ranges from cream to white, and sometimes, it has grey mottles. The species is not native to all the parts of the USA with the exception of central and eastern parts of the country. The range of its habitat is typically eastern and central U.S, New Brunswick as well as Nova Scotia. They inhabit aquatic areas, including ponds, low moving streams and lakes.

In terms of diet, it is interesting that they are capable of eating any types of food, if they are able to swallow it. Their diet is made up of fish, mammals, frogs, insects as well as birds. Their hatchlings eat algae, invertebrates as well as plants. The introduced species is responsible for the decline in the number of native fauna (Day, Klingler & Bloomberg 83). This species have gained a competitive advantage over the native ones, because the first grow and develop in an environment where competition is fierce, thus their prey is deemed to be captured.

The reproduction periods take place between May and August and March and October. Fertilization is external. Bull frogs attain sexual maturation between one and three years of age. After tagging a territory, a male makes a call at night to attract a female. The choice is made after a female enters the tagged territory. Eggs (about 20,000) are laid initially floating the sink under aquatic vegetation (Stebbins 34). The tadpoles are between 10 and 17 cm in length taking 2 years to transform. It has been established that when, these amphibia can live a maximum age, from eight to ten years, in their natural habitat. However, in captivity, they live even longer, usually reaching the age of sixteen years (Alexander, Zim & Arnold 163).

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