

# CHARACTERISTICS OF ISLAND FAUNA

Dr Poonam kumari

Dept Of Zoology

B.SC PART III PAPER 08

Fauna is all of the animal life present in a particular region or time. Fauna comes from the name Fauna, a Roman goddess of earth and fertility, the Roman god Faunus, and the related forest spirits called Fauns. All three words are cognates of the name of the Greek god Pan, and panis is the Greek equivalent of fauna. Fauna is also the word for a book that catalogues the animals in such a manner. The term was first used by Carl Linnaeus from Sweden in the title of his 1745.

Islands surrounded by vast stretches of sea support unique fauna depending upon the location of the island and its history of connection and separation from the mainland. Based upon the geography and history of the islands, they can be grouped into two categories, namely, Continental islands and oceanic islands.

1. Continental Islands. They are located in the continental shelf and separated from the mainland by sea that is less than 200 m deep. They connect to the mainland during the ice age when sea level goes down by that measure and provide broad corridor to the animals to migrate. Hence their fauna shows similarities with the mainland fauna and is derived from it.

Recent continental islands. Examples: Britain, Japan, Tasmania, Sumatra, Java, Borneo, Taiwan and Sri Lanka. The separating sea between the islands and the mainland is less than 200 m deep and they have been repeatedly connected and disconnected to the mainland.

Ancient continental islands. Examples: Madagascar and New Zealand. They were connected to the mainland in the ancient past, sometime in the Mesozoic period but have never had any connection with the mainland ever since. Sea separating them from the mainland is very deep and hence even lowering of the sea level during ice age does not connect them to the mainland.

2. Oceanic Islands. Examples: St. Helena, Galapagos, Easter Islands, Fiji, Azores, Bermuda, Mauritius, Seychelles, Tristan da Cunha and Andaman-Nicobar Islands.

Characteristics. They are generally the islands of volcanic origin far away in the sea which never had land connection with the continents. Strong winds prevail on these islands forcing insects to become wingless. Flora and fauna is different from the nearest mainland, although some of it may have been derived from there. Freshwater fishes, amphibians and mammals are rare or absent. Most likely mammals on these islands are bats, rats and insectivores. Birds also have a tendency to become flightless as in the case of Dodo in Mauritius. Lizards and turtles have a tendency to become giants as on the Galapagos Islands.

#### Fauna of St. Helena Island

This is a 10 mile long oceanic island in the south Atlantic ocean and is located 1000 miles west of Africa.

Fauna is poor and sparse. There are no native mammals, reptiles, amphibians and fishes. Sheep were introduced by Portuguese in 1593. African plover is the only resident bird. Land molluscs include snails, which perhaps have reached here through their eggs carried stuck on the legs of migratory birds. Plants resemble those of South America, whose seeds must have also been carried by birds.

#### Fauna of Galapagos Islands

This is a group of 15 oceanic islands located 600 miles west of Ecuador in South America. They are dry and bare, containing thorny bushes and cacti. There are tall trees towards the middle of islands.

There are no freshwater fishes and amphibians. Two species of giant iguana lizards occur, of which one is cactus feeding on land and the other dives in the sea to feed on sea-weed. Tortoises are giant, their shell about a metre in diameter. There are two species of snakes and two species of geckos. Few bird species exist and resemble South American birds. Darwin's finches are famous for their varied adaptations. There are flightless cormorants and one species of penguin, the only

one that managed to come out of Antarctica region. Mammals are represented by bats and rice rats.

### Fauna of Madagascar

This is an ancient continental island, 260 miles east of Africa and supports dense tropical vegetation. The fauna lacks the variety of Africa.

Mammals. Only 5 mammalian orders are present, namely, Insectivora (one family), Chiroptera (bats), Primates (3 families of Primateans, lemurs and aye-aye), Rodentia and Carnivora that is represented by civets.

Birds. There is large number of endemic birds and 4 families are exclusive which include helmet birds, cuckoo roller and rufous. Ostriches, secretary birds, hornbills, woodpeckers of the mainland

Africa are absent here.

Reptiles. There are Chameleons, spiny lizards and rough-tailed snake (Uropeltidae). Agamid and Lacertid lizards, turtles and poisonous snakes are absent.

Amphibia. There are only tree frogs (Polypedatidae) which are shared with Africa but 4 genera are endemic.

Fishes. There are no freshwater fishes here.

### Fauna of New Zealand

This is an ancient continental island, 1000 miles south-east of Australia.

There is absence of many mainland animals and relics of ancient vertebrates are present.

Mammals. There are no native mammals except 2 families of murid bats which have reached here through flight.

Aves. The flightless birds include kiwi, rails and owl parrot (Kakapo). There is a flesh-eating kea bird that feeds on the kidneys of sheep by making a hole on the back. Giant moas have become extinct recently in 13<sup>th</sup> century. Flightless goose and wrens are also extinct. Wattle birds are endemic.

Reptilia. The living fossil Sphenodon, commonly called Tuatara exists here. There are no snakes but geckos and skinks are present.

Amphibia. Amphibians are represented by the frog, Liopelma.

Fishes. Strictly freshwater fishes are absent.

#### Fauna of the British Islands

This is a group of recent continental islands which got separated from the mainland Europe about 7000 years ago.

Mammals. There are hedgehogs, shrews, moles, red fox, wild cat, two species of deer that includes red deer (*Cervus elephas scoticus*), hares, one rabbit, rodents and bats. However, there are no hamsters, lemmings, bears, ibex, wolves, beavers and reindeers of the mainland.

Aves. Only red grouse (*Lagopus*) is endemic. Other birds are migratory in nature.

Reptiles. There are 3 species of snakes that include grass snake, adder and smooth snake and two species of lizards (brown and green sand lizard and limbless lizard (*Anguis*)). There are no crocodiles and turtles.

Amphibia. Only 6 species of amphibians are present, namely, 3 species of salamanders, 2 species of toads and one species of frog.

Fishes. Perches, pikes, carps and loaches are present.