The galapagos islands

The Galapagos IslandsThe Galapagos Islands which are located in the Pacific Ocean from the Ecuadorian coastline in South America, are considered a living museum and showcase of evolution because of the diverse life forms that inhabit these nineteen islands and the surrounding marine (World Wildlife Fund).

The development of unusual animal life such as the land iguana, the many types of finch, and the giant tortoise was a result of the islands being isolated and escaping human colonization for so long which is also why the islands original biological makeup had remained relatively intact. These islands are what inspired Charles Darwin??™s theory of evolution by natural selection and the origins of life (World Wildlife Fund). The diverse life forms that are found on the Galapagos Islands have shown to be the ideal living laboratory for the study of biological evolution, and that is why it is important to preserve these life forms and the ecosystems in which they inhabit. It can be said that the Galapagos Islands are an important scientific and natural treasure because of the untold amounts of information on unique species and evolutionary processes (World Wildlife Fund).

The habitats of the Galapagos Islands are determined mostly by the vegetation and this vegetation is zoned by altitude into four different vegetation zones (Charles Darwin Foundation, 2006). These zones include the Littoral Zone which is mainly influenced by salt spray along the coast, the Dry Zone which is the largest vegetation type of the islands, the Transition Zone which is dry woodland, and the Humid Zone which consists of Scalesia forests, Miconia scrub and highland grasslands (Charles Darwin Foundation, 2006). The islands promote evolutionary change due to the

many different degrees of geographical isolation found there, and each of these zones has its own distinct collection of species (Charles Darwin Foundation, 2006). The Galapagos marine ecosystems have an unusual range of biological communities that are exceptionally diverse because of the extreme variation in temperature and underwater landforms (Charles Darwin Foundation, 2006).

The Galapagos Marine Reserve has at least three distinct biogeographic regions and each of these biogeographic regions have their own distinct mix of species also (Charles Darwin Foundation, 2006). There are nearly 9, 000 species, most found nowhere else on earth but the Galapagos Islands and their surrounding waters and have been adapting undisturbed since prehistoric times (World Wildlife Fund). All the species on the Galapagos Islands are grouped as either endemic, native, or introduced (Charles Darwin Foundation, 2006). There are more than sixty endemic land snails, and most of the endemic species may possibly even exist only on one particular island (Charles Darwin Foundation, 2006). The Galapagos Islands contain a total number of 560 native species of flora in which 180 are endemic, and there are at least 700 alien plant species that are known to have been introduced (Charles Darwin Foundation, 2006). For the reptiles and amphibians of these islands, the most notable endemic species is the giant tortoise and the marine iguana which is the only lizard in the world that is sea-going (Charles Darwin Foundation, 2006). Also, there are two distinct species of land iguana, seven species of lava lizards, and different snakes and geckos that are known to be found only on the islands of Galapagos (Charles Darwin Foundation, 2006).

Introduced reptiles and amphibians include three species of geckos and the tree frog Scinax quinquefasciata (Charles Darwin Foundation, 2006). The bird species found on the islands are mostly endemic which include the finches, flightless cormorant, elegant swallow-tailed gull, waved albatross, mockingbirds, and of course the Galapagos penguin which is the only penguin in the northern hemisphere that lives on the equator (Charles Darwin Foundation, 2006). Introduced birds include six species such as chickens, turkeys, Muscovy ducks, Rock Pigeons, and wild species such as Smooth-billed Ani and Cattle Egrets (Charles Darwin Foundation, 2006). Most of the land mammals that are found in the Galapagos Islands are introduced, but there are six endemic species of rice rats that are native to these lands (Charles Darwin Foundation, 2006). The land mammals that are introduced include the house mouse, black or ship rats, brown rats, guinea pigs, rabbits, dogs, cats, donkeys, goats, horses, cattle, and pigs (Charles Darwin Foundation, 2006). There are almost 480 introduced invertebrate species that are known in the Galapagos, and there are numerous native and endemic species present on the islands and new species are being discovered all the time (Charles Darwin Foundation, 2006). There is more than 2, 900 marine species that have been reported and over eighteen percent are endemic (Charles Darwin Foundation, 2006). Some of the endemic and native species include the Galapagos sea lions, sharks, rays, parrot fish, corals, and sea cucumbers, and it is unknown how many species there are that are introduced or potentially invasive to the marine life (Charles Darwin Foundation, 2006).

Humans are the new species to the Galapagos Islands, arriving in the 1800s and increasing in numbers even more by the 1920s (World Wildlife Fund). It is known that the introduced species pose a threat to the endemic and native species of the Galapagos Islands. Many of the endemic species are endangered of becoming extinct because of the introduction of alien species which are affecting the balance of delicate Galapagos ecosystems (Charles Darwin Foundation, 2006).

The biological interrelationships among the life forms include many forms of interactions such as competing, predator-prey, and symbiosis which include parasitism, commensalism, and mutualism because species are not independent entities and frequently interact with each other (Charles Darwin Foundation, 2006). All life forms on the Galapagos Islands are important to their environment and play an important role to one another. The humans are the biggest threat to the delicate ecosystems of the Galapagos Islands.

Increasing human population on the islands and the movement of goods to the islands from the continent has led to the introduction of some of the most invasive alien species that pose a threat to the area (World Wildlife Fund). Growing tourism is another problem that is threatening the habitats and the species that inhabit them (World Wildlife Fund). Pollution from the local population and tourism contribute to damage to the ecosystems (World Wildlife Fund). Illegal fishing and poaching by humans, also, poses a threat because it causes a massive reduction in populations like the sharks and sea cucumbers and even endangered species (Public Broadcasting Service, 2008). Solutions to these problems have tried to be addressed by organizations that feel it is very important to preserve these islands. Some of

these solutions include eradicate selected alien species, improve quarantine system preventing new arrivals of alien species, and get the support of the Galapagos residents to fight against alien species (Charles Darwin Foundation, 2006). Individuals whether it is tourist or residents can take a part in preserving these ecosystems. The laws that are made to protect the Galapagos Islands needed to be strictly enforced because there are so many species that are only found in the Galapagos Islands and that is what makes these different life forms so unique and special.

References derrida essays online ? Bio Web, (1997). Evolution by Natural Selection.

Retrieved November 22, 2008 fromhttp://bioweb. cs. earlham. edu/9-12/evolution/HTML/natural. htmlCharles Darwin Foundation for the Galapagos Islands (2006). GalapagosConservation Management. Retrieved November 17, 2008 fromhttp://www. darwinfoundation.

org/en/galapagos/gal-managementCharles Darwin Foundation for the Galapagos Islands, (2006). Galapagos LandEcosystem. Retrieved November 17, 2008 fromhttp://www.

darwinfoundation. org/en/galapagos/landCharles Darwin Foundation for the Galapagos Islands, (2006). Galapagos MarineEcosystem. Retrieved November 17, 2008 fromhttp://www. darwinfoundation. org/en/galapagos/marineCharles Darwin Foundation for the Galapagos Islands, (2006). Terrestrial Zones.

Retrieved November 17, 2008 fromhttp://www. darwinfoundation. org/en/galapagos/land/land-zonesPublic Broadcasting Service (2008).? Threats to the Galapagos Islands.

RetrievedOctober 18, 2008 from http://www. pbs. org/safarchive/5_cool/galapagos/g25_threat. htmlWorld Wildlife Fund. The Galapagos: The worlds most treasured islands.

RetrievedOctober 18, 2008 from? http://www. worldwildlife. org/what/wherewework/galapagos/index. html[pic]