

Conservation of a species



**ASSIGN
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Randal Dykstra May 29, 2011 BIO 100 Michael Rothrock Jr. Turtles in Trouble

Researchers have designated 2011 as the Year of the Turtle. The reason for this designation is that, according to researchers and supporters, more than half of the species of turtles are in trouble. In fact many of these species are nearing extinction. Of the many reasons listed for the demise of these species, nearly all of them are of human origin. One of the problems, according to ScienceDaily (February 15, 2011), is that, ??? The sex of some species of turtles is determined by the temperature of the nest: warm nests produce females, cooler nests, males.

??? Scientists have speculated that due to global warming, more females are being produced than males. This imbalance leads to fewer turtles in the next generation, and so on. While global warming cannot be fully blamed on humanity, much of it is believed to be caused by burning of fossil fuels and deforestation, causing more carbon dioxide in the atmosphere. This problem affects all of the planet, and especially those turtles in this way.

Other problems caused by humans are loss of habitat and exploitation. Many people around the world consume turtles as a delicacy, and others as a staple food. Turtles, along with other species have lost their habitats to colonization by humanity, building their own habitats over the existing habitats of animals. Sprawling cities have long been taking over the areas once occupied solely by animals.

These communities also have high energy demands that lead to more production of greenhouse gasses, which exacerbates global warming. These

are the main problems destroying many, if not all of the species of turtles. Yet, these problems are all within the scope of humans to correct.

There is not a problem that mankind has created that he is not able to reverse. Recently, there has been a lot of progress in reversing the effects of global warming, but there remains a long way to go. One of the main ways to correct this damage to the whole earth is to reduce our carbon footprint. For some that is as simple as putting up with a few less luxuries, such as adjusting the temperature on the thermostat.

Many strides have been made in making heating and cooling units more efficient in recent years. Automobile manufacturers have made many changes to vehicles to make them more efficient. These and other adjustments by humans are good beginnings in reversing the trend of global warming. Along the same vein, the tree harvesting industry can focus on replanting trees as they harvest. This would help to maintain the habitat for animals, including turtles, as well as working to increase photosynthesis. Increased photosynthesis will use up more of the carbon dioxide in the air, reducing one of the main greenhouse gasses. The benefits of an action such as this would not only help to reduce global warming, but ensure trees for future harvest.

This is one instance which would benefit not only the whole of nature, but mankind as well. Besides the issue of global warming, mankind can help the turtle by protecting its habitat. Many things damage the turtle's habitat, among them oil spills and building communities where they live. Chemical spills and chemical runoff from such things as fertilizer damage many natural

habitats. Mankind has come up with ways to grow more crops on less land, which would lead one to believe that there is more land available for natural habitat. However, because of the amount of fertilization that is required for the ground to produce those extra crops, there is a lot of runoff into lands and waterways. These chemicals not only damage the animals directly, like turtles that inhabit those ecosystems, but can also damage the plants that they consume for their food.

As these animals consume this food, they are also ingesting the chemicals that are in the plants. The chemicals also can destroy the animals as they build up over time. Possible solutions to chemical runoff could be continuing to develop better, more hybrid strains of plants. Another good possibility is crop rotation. Rotating the crops in a field allows a farmer to plant a crop one year that enriches the soil without chemicals followed by crops that require those nutrients to grow. This method helps to keep the areas around the fields from being polluted by runoff. According to scientists, turtles have been on the planet for around 220 million years. In that time they have adapted in many ways to ensure the survivability of their species.

They have evolved a remarkably hard shell for protection that has remained virtually unchanged by evolution in the time they have been on the earth. (Turtles in Trouble, 2011) Other adaptations include delayed sexual maturity, high fecundity combined with high juvenile mortality, and a long adult lifespan with low natural adult mortality. All of these have left the turtle vulnerable to human exploitation. In many places all over the world, people consume turtles, and often use their shells for simple decorations. The practice of harvesting turtles for any use is one that has often been

uncontrolled. The solution to this problem is simple. Regulations controlling the harvesting of turtles should be established and enforced.

These laws would, of course, be controlled by local governments for their populations. The world is facing a turtle survival crisis unprecedented in its severity and risk. Humans are the problem, and must therefore also be the solution. Without concerted conservation action, many of the world's turtles will become extinct within the next few decades. It is now up to us to prevent the loss of these remarkable, unique jewels of evolution. Without intervention, countless species will be lost. We humans need to work together for the survival of turtles throughout the world, to understand the risks and threats turtles face, to define survival and conservation objectives, and to develop the successful management strategies and organizational alliances that can help us reach those goals. References USDA Forest Service, Pacific Northwest Research Station (2011, February 15).

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Alliance, Turtle Conservancy, Chelonian Research Foundation, Conservation International, Wildlife Conservation Society, and San Diego Zoo Global, 54 pp.-----1