

Wildlife Habitats

Their effect on animals and plants and what can be done to help

Tag words: endangered; species; wildlife; habitat; destruction; pollution; bobcat; peregrine falcon; EPA

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Summary

An endangered species is a plant or animal that is in danger of becoming extinct due to its existence in low numbers. Reasons that a species can become endangered include habitat destruction, commercial exploitation, and introduction of exotic species, disease, pollution, and limited distribution. Many laws have been passed over the years to try to minimize and prevent the demise of certain species, including the Endangered Species Act. These animals are affected mainly by their habitats being destroyed, but their numbers are also greatly affected by poaching, pesticides, and other factors that are mostly due to human involvement. A way to try to help animal and plant species is by certifying towns as National Wildlife Habitats through the National Wildlife Federation. Even though there are many animals that cannot be saved because they have already gone extinct, small steps such as these help to protect native species in America and other countries. (RK)

[http://dictionary.reference.com/browse/endangered species](http://dictionary.reference.com/browse/endangered%20species)

Youtube Link: <http://www.youtube.com/watch?v=5waXVydBbKA>

Introduction

(MM) A vast number of plants and animals currently inhabit the Earth. To put a number to it, there are approximately over 1.7 million different species. As the years progress, as can be expected, new species are born and old species die off in a classic survival of the fittest fashion. To scientists this is an everyday thing that is sad but unavoidable. To the general population watching an animal die off is a rather sad occurrence and many pose the question as to why.

According to Dr. Mark J. Perry of the University of Michigan since life first began on Earth 99.9% of the species that have existed on Earth have gone extinct. One journalist estimates that approximately one in every one million species goes extinct each year. However in more recent years the rate of animals becoming threatened or going extinct has become much higher. In fact in just ten years from 1996 to 2006 the number of threatened animals in the world rose

from just over 10,000 to over 16,000 species. These numbers are skyrocketing and if not kept in check the number of species going extinct will exceed the natural amount caused by evolution.

<http://www.guardian.co.uk/environment/2010/mar/07/extinction-species-evolve>
<http://mjperry.blogspot.com/2007/09/999-of-all-species-have-gone-extinct.html>

Reasons for endangerment

(RK) Evolution progresses at a relatively slow pace; extinction is part of the natural and changing world we live in. However, the world we live in today is very different than it was thousands, and even hundreds of years ago; many claim that technology has artificially increased the pace at which evolution happens. With life moving at a rapid pace, it is easy to miss things like the quick disappearance of animals and plants. Most of the causes for wildlife endangerment that exist today can be attributed to human activity. These include habitat destruction, commercial exploitation, introduction of exotic species, disease, pollution, and limited distribution.

(MM) Humans are directly responsible for the destruction of many of the world's forests, rainforests, lakes, and more. The human race pollutes, deforests, and ultimately helps to change the climate. Trees are lost animals die off and evolution can't pick up the slack. Simon Stuart, chair of the Species Survival Commission claims, "Measuring the rate at which new species evolve is difficult, but there's no question that the current extinction rates are faster than that; I think it's inevitable". The evidence is stacking up that if something isn't done the rates will continue to rise and the Earth will be facing a "great extinction" whether by natural causes or by the carelessness of human beings.

<http://www.guardian.co.uk/environment/2010/mar/07/extinction-species-evolve>

Habitat destruction

(RK) Destruction of habitat is by far the number one reason for endangerment of certain species. By cutting down forests to build commercial or residential areas, human activity has destroyed millions of habitats worldwide; this destruction is very rapid compared to the natural evolution of nature, not allowing the animals enough time to adapt to all these changes and reducing their carrying capacity, which is the maximum population of a species an environment can sustain indefinitely. Habitat loss can cause the loss of microbes in soils that used to support the plants and trees that grew on top of them.⁷ These plants were once a food source for the herbivores and insects that consumed them. Without their food source, these animals can die out unless they find another habitat to live in; consequently, the predators that prey on these animals would also have to go far in search of food. A further problem with this is that humans have inhabited almost every corner of the globe and even areas that are not inhabited have still been affected by human activity. For example, the dumping of toxic waste materials into rivers can affect an ecosystem many miles from the initial dump site, inadvertently affecting the native animal and plant species that reside there. While some groups have tried to move species from a

newly uninhabitable environment to a more habitable one, these attempts have not always been successful in saving a species, as the species might not be well adapted to the new environment.

For millions of years habitats have been destroyed or altered by nature, through volcanic eruptions, hurricanes, and physical separation. Occurrences such as these can only be ascribed to natural causes, and often happened over long periods of time. However, human destruction of habitats is the result of our rapidly growing population, and the need for more land. Usually the changes are caused not by natural global phenomena but activities motivated by monetary gain that only benefits a small portion of a population. Harvesting natural resources and urbanization are just two examples. Even though habitat destruction is occurring at a greater rate today, it has been on the rise for centuries. Farmers would spend years tilling their lands, but eventually the soil would not be ideal anymore for growing crops, and the farmers would move elsewhere, leaving the soil to replenish itself, which could take a very long time. It takes about a thousand years for one inch of soil to form, so it can take a while for the microbes and insects to be able to live off of it. Today we may have better fertilizers, but the damage has already been done.

Endemic species are most in danger of extinction, because they occupy a very specific habitat, or have specific requirements that can only be found in a particular environment. One example is the koala, which is native to Australia and eats only eucalyptus leaves. Though not officially an endangered species, its population is in great decline due to habitat destruction.⁸ Another problem with habitat destruction is the cause to the loss of genetic diversity. With a smaller range to roam, animal species are more likely to mate with genetically similar organisms within their population, which can result in infertile offspring, thus leading to a decline in their number. This is also known as limited distribution of the species.

Wikipedia: Carrying Capacity

http://www.galeschools.com/environment/endangered/endangerment_causes.htm

<http://soilscience.info/faqs/31-about-soil/44-soil-formation>

<http://www.amnh.org/nationalcenter/Endangered/causes.html>

Wikipedia: Endemic species

Introduction of Exotic Species

Whether purposely or by accident, exotic species are sometimes brought over to different habitats through human activity. Sometimes these exotic species assimilate well into their new habitat, causing no problems to the native species in the area, and eventually end up fitting naturally into their new environment. In other cases, these exotic species can disrupt the ecosystem by outcompeting the native species for the same food source, or preying on the native species.

The intentional introduction of a new species to a habitat may be to purposefully establish it in the wild, mostly due to human desires. Sometimes, species are transported to another area intentionally, but they may escape and end up occupying a different habitat from the one intended. One example is the Cane Toad, which was at first intentionally introduced from South America in the 1930's to Australia to eat beetles that were destroying the sugar cane crops; however, the toad escaped, and is considered a pest as it is a prolific breeder and releases a bufotoxin that kills native animals.

Usually, the reason for introducing an exotic species to a new place is for commercial gain through agriculture, aquaculture, and other activities. Intentional introductions are mainly used to benefit the area in some way, and if properly introduced with the correct knowledge, new exotic species can become part of the natural environment. For conservation purposes, animals can be reintroduced to their native habitats which they may have not occupied for many years, such as the reintroduction of wolves to Yellowstone National Park.

Unintentional introductions of exotic species usually have the most cost to an environment. These accidents usually result from human migration and transport. Years ago, when people traveled by sea, the Black, Norway, and Polynesian rat populations spread to many parts of the world by being passengers on their ships. The problem with rats is that they start breeding at an early age and have multiple babies several times a year. This means that in a very short time there is an overabundance of rats. Rats are not just pests, but they also eat eggs and chicks, and the berries and seeds that these birds subsist on. This can cause a disruption in the environment, such as in the 1960s when the Black rat caused the extinction of two bird species and a bat species in New Zealand. These days humans can travel all over the world by air, and sometimes manage to bring other stowaways, either unknowingly or illegally for their own purposes. Many species have been introduced this way and have had negative effects on the native species of the environment.

Wikipedia: Introduced species

Wikipedia: cane toad

<http://el.erdc.usace.army.mil/ansrp/ANSIS/html/introduction.htm>

<http://www.amnh.org/nationalcenter/Endangered/causes.html>

<http://christchurchcitylibraries.com/Kids/NZBirdsAnimals/Rats/>

http://www.galeschools.com/environment/endangered/endangerment_causes.htm

Commercial Exploitation

Overexploitation of a species for commercial use has been occurring for thousands of years. This is when humans kill too many animals or plants of a species in order to use a certain part of them for trade, such as whales for their baleen and oil and rhinoceros for their horns. Other species affected by exploitation include the chinchilla and giant otter for fur trade, tigers and bears for their bones (used for medicine in China), and tropical fish, which are used to fill aquariums.

http://www.galeschools.com/environment/endangered/endangerment_causes.htm

Wikipedia: Overexploitation of Endangered Species

Disease

Diseases that are introduced to other countries and environments, either through travel or introduction of exotic species, have a negative effect on the native species of the habitat. Some species lack natural genetic protection against certain pathogens, and are therefore unable to fight off the disease, which could lead to endangerment. Domestic animals are usually the reservoirs for diseases that enter wild populations, especially diseases like rabies and canine distemper.

<http://www.amnh.org/nationalcenter/Endangered/causes.html>

Pollution

Pollution adversely destroys habitats by contaminating the air and water that animals and fish breathe. Pollution of lakes and streams, for example, has caused a decline in the salmon population, not to mention the extinction of many other species that we may not even be aware of. The American Peregrine Falcon has been affected by human use of the pesticide DDT for killing insect pests. Eating birds or other animals that ingested an insect or plant which was affected by DDT causes it to build up in the falcon's body. The DDT lowers the amount of calcium in the egg shells of the eggs the falcon lays; the egg shells crack and break before the chicks are ready to hatch, thus decreasing the falcon's reproductive success and threatening the species. Another species that has been affected by pollution has been the Peppered Moth. They are either light or dark colored, and during the time in England when there was a lot of soot produced from the factories, the number of dark colored moths greatly exceeded the number of light colored moths. This was due to the fact that the light colored trees became darker from the smog, and subsequently predation on lighter colored moths increased since they were easier to see against a dark background. Although pollution and pesticides are still a prevalent issue today, the advent of the Clean Air Act and organic farming has helped in reducing greenhouse gas emission and smog, and keeping the soil safe for the animals and plants thriving off of it.

<http://www.amnh.org/nationalcenter/Endangered/falcon/falcon.html>

Why and How to Protect Endangered Species

(MM) As previously mentioned, animals are beginning to go extinct faster and faster every year. However, it has also been proven that it is a natural and unavoidable occurrence for many species to die off due to evolution. If nature is working against its own creatures then why should humans make an effort to save endangered species? The answer is simple, extinction due to evolution *is* natural, but extinction due to deforestation and climate change from human influence is not.

A clear example of how humans influence the downfall of species can be seen in the case of the Cape Gannet of South Africa. One writer explains that there is overfishing around the Namibia Islands and South Africa, the only two known habitats of the bird. As humans deplete the reserves of baitfish the ecosystem slowly deteriorates. Other animals such as seals, and pelicans or other sea birds have run out of their natural prey and have begun to look for alternatives. The easiest target for these hungry animals is the juvenile and hatchling Cape Gannets. According to the article in *Science Daily*, only six colonies of the birds are known to exist today and the numbers are steadily falling.

The story of the Cape Gannet shows that humans are clearly to blame for certain species going extinct. Action needs to be taken to put a limit on the fishing in the area of these birds to allow the collapsing ecosystem to recover. Nature is in a delicate balance, everything works off of everything else. If one ecosystem fails a drastic chain reaction could take place. For instance, using the previous example, the baitfish are depleted, the seals and pelicans have begun to feed

on a weaker species. From here there are a few possible outcomes. The Gannet could die off leaving the pelicans and seals to migrate and become invasive species elsewhere; they could be assimilated into the ecosystem or simply destroy it. Secondly, the pelicans and seals could also die off leaving their natural predators with nothing to eat, and the chain reaction continues down the line.

This is why the animals need to be protected. If we allow ecosystems to start dropping off the map then the “great extinction” that Juliette Jowit spoke of in her article may be closer to us than we think. Certain laws are already in effect to protect endangered species, but it may not be those specific species that need protecting. Again, going back to the Cape Gannet, the anchovies and other bait fish at the bottom of the food chain are what politicians need to focus on. Just telling someone that they will be fined for killing an endangered species is not going to make them any less endangered. Politicians need to work on fixing the problem not just concealing it. As the article on the Gannet explained, fishing quotas are a simple and easy way to allow the bait fish to maintain a good enough population to feed its natural predators and human beings. Regardless of how it is done, humans need to start protecting these species before our own actions make their way up the food chain to us and the great extinction becomes a reality.

<http://www.sciencedaily.com/releases/2009/04/090424114309.htm>

<http://www.guardian.co.uk/environment/2010/mar/07/extinction-species-evolve>

Laws Protecting Animals

As previously mentioned, if politicians don't take action in protecting the endangered species of the world, then the endangered species may very well become the extinct animals of tomorrow. Fortunately for some, laws have been put into place to protect the animals from harm caused by human beings, for example anti-hunting laws. With laws such as these the animals might stand a fighting chance in today's harsh environment.

In 1973 through the Environmental Protection Agency the Endangered Species Act was put into effect in the United States of America. The basic principle of the act was to put the pressure on other organizations such as the U.S. Fish and Wildlife Service to protect the endangered animals. Put simply:

The law requires federal agencies, in consultation with the U.S. Fish and Wildlife Service and/or the NOAA Fisheries Service, to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of designated critical habitat of such species.

There are also several other acts that have been put into affect over the years set on protecting endangered species. To name just a few there is the Bald and Golden Eagle Act making it illegal to buy sell or trade anything that comes from one of these rare birds including eggs, nests, and even feathers. The Lacey Act puts strict regulations on the importation of rare animals into the country and it ensures their humane treatment. On top of this it prohibits the ownership of fish and other animals held illegally against federal or state laws.¹⁸ Along with all

of these acts there are several more that protect marine animals, birds, and exotics hopefully giving these animals a chance to thrive.

The laws are used to protect the animals at the source of their endangerment. They work to prevent overfishing and loss of habitat.

Other ways animals are protected by the government is through direct and consequential forbidding someone to harm a member of the species. The endangered species act, on top of protecting animal food supplies puts harsh penalties to anyone convicted of bringing harm or death to an endangered animal. Fines can include up to \$100,000, jail time, and seizure of equipment (i.e. a boat used in fishing for great white sharks). The consequences are great and typically prove effective in protecting the animals from humans.

Clearly the government has begun to show compassion for the animals that we have single handedly killed to near extinction. The Endangered Species Act is a great start and in upcoming years will hopefully work to lower the number of endangered species.

<http://www.epa.gov/lawsregs/laws/esa.html>

http://www.ehow.com/facts_5840190_consequences-killing-endangered-animals_.html

Endangered Species in New Jersey

(DP) As the endangerment of species is pandemic, there are quite a number of endangered species in New Jersey. According to the New Jersey government webpage, endangered species as those whose prospects for survival in New Jersey are in immediate danger because of a loss or change in habitat, over-exploitation, predation, competition, disease, disturbance or contamination. The webpage also describes threatened species as those who may become endangered if conditions surrounding them begin to or continue to deteriorate. The question is, what conditions in the state of New Jersey make it difficult for certain species to thrive?

Least Tern, *Sterna antillarum*

The least tern is a bird endangered in New Jersey but not listed on the federal list of endangered species. Compared to other terns, the least tern is the smallest. Their white forehead and a black eye-line that connects to the back of their head, a feature that retreats in the fall, distinguish these birds. These birds nest and breed along the Jersey coast, a habitat that is constantly threatened by a variety of factors. Coastal development, increased recreational use, and coastal flooding all contribute to the declining population of these coastal birds.

Henslow's Sparrow, *Ammodramus henslowii*

Henslow's sparrows are labeled as globally stable, but are considered endangered in New Jersey due to their rare sightings and loss of habitat. These birds tend to hide in their habitats,

which consists of dense vegetation and generous ground litter. Large, open fields are viable sites for breeding individuals of the species. The vast amount of land Henslow's sparrows need for breeding purposes have been drastically diminished throughout history, contributing to their threatened status in 1979 in New Jersey. This status was then changed in 1984 to endangered due to concern their population was on the verge of collapse.

Arogos Skipper, *Atrytone arogos*

Arogos skipper are endangered in the state of New Jersey, with habitats that vary throughout the state. Northern region habitats are dominated by the host plant little bluestem. Interestingly, these plants inhabit abandoned agricultural fields, parking lots, and gravel pits. Arogos skippers in the south inhabit areas dominated by Pine Barren reed grass. Although the population of the species is diminishing, the populations that can be found are substantial for the species as a whole.

Blue-spotted Salamander, *Ambystoma laterale*

The blue-spotted salamander is considered to be a stable species worldwide, but endangered in the state of New Jersey. This is due to its limited habitat range. In 1974, the combination of habitat destruction and pesticide use landed the species a spot on the endangered list. Ponds and crevices filled with water provide breeding grounds for the species, usually within hardwood forests. Hardwood forests can furnish an environment with moist areas, an aspect essential for the survival of salamanders. The balance between the living and breeding grounds is critical, as the water levels cannot be too low at the risk of drying up prior to the offspring being developed, nor can it be too high for other species, especially predators to inhabit.

Bobcat, *Lynx rufus*

Bobcats are unique in that their pelt varies in color depending on the habitat they live in throughout the US. Populations that are found in the area have a tawny to grayish-brown fur with various spots and streaks. The multitude of colors these felines have corresponded to the adaptability they exhibit to a multitude of environments. In the state of New Jersey, bobcats can be found in the northern areas where large forests still remain as well as the southern range of briars and conifers. Both environments provide an area for resting and cover for escape or hunting. These mammals do not thrive well in areas that have been agriculturally developed or those that have been cleared. Coupling reduction of habitat and legal hunting, the bobcat was not fully protected by law until 1972. 5 years later, the government attempted to rebuild the population numbers with animals brought in from Maine. However, in 1991, the bobcat was listed as endangered. Since then, there have been sightings of these creatures in various counties, bringing hope to the efforts of increasing their numbers. Researchers are now trying to understand the extent of the bobcat's habitat in hopes of turning the prospect of these mammals around.

Timber Rattlesnake, *Crotalus horridus*

Timber rattlesnakes are one of the only two venomous reptiles found in New Jersey, according to the NJ Department of Environmental Protection. Populations can be found throughout the state, with their environments varying depending on the region they reside in. Northern populations can be found residing in forests, making their dens within rocky terrain. Southern populations reside in the pinelands, with their physical status (pregnant or not) dictating the amount of vegetation they need to be around. In 1979, the loss of habitats combined with killings landed the timber rattlesnake on New Jersey's endangered list. Since then, only few researchers have been studying the reptiles in the efforts of understanding their habitat use, breeding activities, and range of activity. Their goals are to help save these snakes through educating the public and reducing the amount of human impact/interaction as much as possible.

Upland Sandpiper, *Bartramia longicauda*

The Upland Sandpiper is a bird that appears on the list both for the state of New Jersey as endangered (1984) and federally on the Migratory Nongame Species of Management Concern (1982). As inhabitants of vast fields and grasslands, small scale agricultural farms provide a fair foundation for breeding and feeding grounds. However, these birds are quite particular to the specificity of their habitats. The height of the vegetation has a large impact on whether or not the bird will use the area. Another important factor is the extent of their territory, as these birds require an expansive home turf. Excessive hunting in the 1800's pushed the population's number to the brink of being wiped out. The Migratory Bird Conservation Act of 1916 helped the species repopulate by a fair margin, but their numbers never reached where they used to be. A combination of the specificity of the animal, low population count, and decline in agriculture resulted in the wary state of the species. According to government documents, the number of known active breeding sites in New Jersey fell from twenty-six to four in the span of seventeen years between 1970 and 1987. Rapidly growing numbers of people and housing development has eliminated most of the habitats these birds can inhabit and consequently the possibility of reproduction.

Peregrine Falcon, *Falco peregrinus*

Peregrine falcons traditionally nest atop cliffs and rock overhangs. However, the encroachment of humans has led these birds to take nest atop man-made structures. The maintenance of these nests is the one guaranteed way of maintaining the current numbers of these falcons. Previously, these falcons were considered vermin and were hunted. Increases in human presence near their original nesting sites pushed the falcons to abandon their nests. In addition to these actions, the use of DDT severely reduced the population, along with the bald eagle and other birds of prey. An effort to save the species was made in the late 1970's through the process of hacking. Despite the goal of returning the species back to their original habitat, predation from the great horned owl lead to high mortality rates, pushing biologists to create

nests along the coastal marshes. The move was a success, as the population increased to 10 pairs within the state in 1986. Nowadays, the population sits at around 15 pairs, with a healthy reproductive percentage. In 1999, the peregrine falcon was removed from the federal endangered species list as its numbers had reached the national goal. New Jersey still maintains the falcons on its endangered species list as the environment specific to the area continue to threaten their numbers.

<http://www.nj.gov/dep/fgw/tandespp.htm>

Conclusion

Prominent evidence has illustrated the extent of human impact on the survival of other species. Accepting responsibility is the first step to solving a problem. The alarming statistics are just cause for implementing laws and actions that need to be taken in order to help preserve those that are left. Wildlife is usually viewed as an inferior concern, yet it would be worthwhile for society to learn as much as they can to help preserve not only a species of animals, but the environment in which they thrive in as well. Rapidly declining numbers or those already teetering on the edge of extinction are great concerns on the outlook of the habitat itself and subsequently, the future of the ecosystem. By protecting what already exists and learning its ways, the population can help reestablish areas that are already severely compromised. Through changed ways, the human population can not only prepare for a more biodiverse future, but a far more sustainable one for himself as well.

Community Service Project

(RK, MM, DP) For our community service project, we made presentations at our township meetings about starting a program of some sort in order to certify our townships as National Wildlife Habitats. The point of this is to educate the town council about how not only this would affect the view of our towns from an outsider perspective as a greener and wildlife friendly community, but how it would also educate the community members about how to make our towns a more friendly place for plants and animals.

The towns we focused on were South Brunswick, East Brunswick, and Woolwich. We first found out when each of our meetings were. Each of us presented at our own town, at Woolwich's township meeting, and at East Brunswick and South Brunswick's Environmental Commission meetings. We found out that all of our towns have environmental commissions, and these can possibly be good resources for carrying out the project.

We first presented in East Brunswick on October 27th. The Commission was very receptive to the idea and process of certification. They were however concerned about how much time and resources would be needed, and said that they would need to discuss this further at their next meeting. Considering the fact that they deal with a lot of conservation efforts, such as Butterfly Park and Salamander crossing (closing off a section of a road during the salamander's migration season so they can cross without danger), we believe that this can be a project that they can undertake, if not now, then in the future.

We then presented to the Woolwich Township meeting. We explained to them our intentions of trying to get our individual townships certified as a national wildlife preservation. The mayor Sam Macarone in particular seemed really enthused and inviting to the ideas. In fact he explained to me that the township has formed an Environmental council and that he had intentions of bringing up our idea at that meeting. Furthermore, our presentation seemed to strike a nerve with the other people at the meeting, as they were also there to bring up environmental issues.

The last town we presented to was South Brunswick on November 17th. Everyone in the Environmental Commission was enthusiastic about the proposed plan. They asked different questions in regards to cost, labor, and what needed to be done in order to achieve points. Since the town consists of many organizations that have already accomplished some of the activities, the board was confident that the certification would be a feasible project.

In addition to getting the environmental commission involved, we also contacted Warnsdorfer Elementary School to see if they would be interested in building a schoolyard habitat. We were contacted by a third grade teacher there who is also the advisor for their SAVE club and she mentioned that they were already in the process of building a schoolyard habitat. We provided her with the environmental commission's information so she could contact them and let them know they would be interested in East Brunswick's certification as a National Wildlife Habitat and that they were already in the process of building their own habitat.

Letter sent to towns

To the Environmental Commission:

We are writing to you about certifying [your town] as a National Wildlife Habitat, as we previously presented at the [date] meeting of the commission. Certifying [your town] as a National Wildlife Habitat may not only provide food and shelter for wildlife, but also bring the community together in an effort to make this happen, and may also increase real estate values in the area, as a certified National Wildlife Habitat title may sound appealing to potential new residents. The process of certifying [your town] begins with registration. In order to register, a form must be filled out (<http://www.nwf.org/~media/Content/Specialty%20Programs/Garden%20for%20Wildlife/Registrar%20Your%20Community.ashx>), 40 points must be accumulated out of the list on the second page of the registration form, and \$25 needs to be paid. Many of these initial points involve administrative tasks, such as creating a team and a budget.

After [your town] has successfully registered, we would need to accumulate a total of [points]--a fairly large amount, which is due to the township's large population--to get certified. These points can be earned through educational, community, and administrative activities. In addition, for [your town's] population size, we would need to certify [#] backyards, [#] common/park areas, and [#] schoolyards as wildlife habitats. While this would require extra work from the community, it will be ultimately rewarding.

Throughout the certification process time the [town's] team would have to be in contact with the National Wildlife Federation. Their website lists ways in which to earn points, but it does not outline all the possible things that can be done. This is why it is important to be in

contact with the NWF, as they can help in pointing the team in the right direction. It may even be possible to get past events to be counted to obtain points, though we are not certain of this. Overall this project will hopefully bring the community closer together as they set out to accomplish this one long term goal. This is a long term project, and we believe that as the commission already plans a lot of community events, it will require only a little extra effort from the commission to accomplish other tasks necessary to earn points.

Website link: <http://www.nwf.org/Get-Outside/Outdoor-Activities/Garden-for-Wildlife/Community-Habitats/Register-Your-Community.aspx>

The website also has a link to the list of communities either certified as or registered to become a National Wildlife Habitat. Montclair was certified last year; Highland Park registered in 2007 but has not become certified yet. The Environmental Commission of High Bridge is helping to lead that township's project, which was registered in 2006.

Thank you for your consideration!

Sincerely,
Rita Kupershteyn
Dorothy Pee
Matthew Marquis

Sent to bsullivan@sbtnj.net at South Brunswick and steve.gottlieb@eastbrunswick.com at East Brunswick



TOWNSHIP OF WOOLWICH
120 Village Green Drive
Woolwich Township, NJ 08085
856-467-2666 fax: 856-467-3545

October 25, 2011

Matthew Marquis
76 Belfiore Drive
Woolwich Township, NJ 08085

Dear Mr. Marquis,

Thank you for your inquiry to appear before the Woolwich Township Committee to discuss getting Woolwich Township registered as a Certified Wildlife Habitat. I am sure that your presentation would be of great interest to the Governing Body.

Please be advised that the Township Committee meets on the first and third Monday of each month beginning at 7:00 p.m. in the Woolwich Township Municipal Building, 120 Village Green Drive, Woolwich Township. There is a public portion in the beginning of the meeting at which time any interested party may speak to the Committee regarding any issue. This would provide an opportunity for you to make a presentation to the Committee at this time, as opposed to being placed on the agenda.

Our upcoming meeting dates are November 7th and 21st, and December 5th and 19th. There is no need to confirm your presence. Please attend whatever meeting fits your schedule. I look forward to seeing you soon.

Very truly yours,

A handwritten signature in cursive script, appearing to read "Jane DiBella".

Jane DiBella
Township Administrator/Clerk

Letter sent to Elementary Schools

Dear [name of principal or teacher],

We are a group of college students from Rutgers University We are currently working on a project that involves getting various towns -- including [your town] -- certified as a National Wildlife Habitat. We gave a presentation to the [town's] Environmental Commission on [date] on this subject, and they will be discussing it at their next meeting, [date]. We hope that a representative from the school can be in attendance.

I am writing to inform you of our hopes to certify [your town] and ask you for help. We think it would be much easier to get the entire township involved if we could get the local elementary schools in on the project. With your help the commission may feel that it can better handle the enormity of this project.

Working together to help make the town a certified habitat would be good for the students. They would learn about their environment and about teamwork while getting some exercise and fresh air. If you have any questions or concerns we can be reached best by e-mail at [email] or phone at [phone] if necessary. Thank you for your time, and we look forward to hearing from you.

Rita Kupershteyn

Dorothy Pee

Matthew Marquis

The link below is directed to the National Wildlife Presentation's website, specifically to the portion about building a schoolyard habitat.

<http://www.nwf.org/Get-Outside/Outdoor-Activities/Garden-for-Wildlife/Schoolyard-Habitats/Certify-Your-Schoolyard.aspx>

Sent to Principal Joseph Csatri at Warnsdorfer Elementary School, 9 Hardenburg Lane, East Brunswick, NJ 08816

Sent to Principal Neel.Desai@sbschools.org at Brunswick Acres Elementary School

December 7, 2011

Dr. Victor Valeski

Swedesboro Woolwich District Superintendent

15 Frederick Blvd.

Woolwich Twp., NJ 08085

Dear Dr. Valeski

We are a group of college students from Rutgers University. We are currently working on a project which involves getting various towns including yours certified to be a Certified National

Wildlife Habitat. We have given a presentation on this subject at one of the recent town hall meetings, it is in the townships best interest that someone follows up with our project and we believe that getting this done through the school system and children is the best possibility.

I am writing to inform you of our hopes to certify your town and ask you for help. We think it would be much easier to get the entire township involved if we could get the local elementary schools in on the project. We can only plant the idea in the heads of our peers, we need someone to carry out the projects necessary to accomplish our goal.

Working together to help make the town a certified habitat would be good for the students. They would learn about their environment, teamwork, and get some exercise in while they are at it. If you have any questions or concerns we can be reached best by at mmarquis@eden.rutgers.edu or by phone (609)230-9653 if necessary. Thank you for your time, and we look forward to hearing from you.

Sincerely:
Dorothy Pee
Rita Kupershteyn

Matthew Marquis

The link below is directed to the National Wildlife Presentation's website, specifically to the portion about building a schoolyard habitat.

<http://www.nwf.org/Get-Outside/Outdoor-Activities/Garden-for-Wildlife/Schoolyard-Habitats/Certify-Your-Schoolyard.aspx>

Letters to the Editor

(RK)

Journal: Wildlife Research
Csiro Publishing

I came across your publication as I was doing research on endangered species for one of my classes at school. I just wanted to say that it's great that you publish all these research articles that will hopefully have some sort of outcome on wildlife management practices in order to minimize endangerment. I was particularly interested in your article on the relationship between the lynx and snowshoe hare, and how it's affected by climate (vol 38 (5), p. 419-425). Although there was no significant correlation between the amount of lynx tracks and weather conditions, thus signifying that climate does not affect their numbers, I do believe that eventually this will

catch up with not only these animals but others as well. The number one reason for endangered species is habitat destruction, but not all habitats are intentionally destroyed by us. We also inadvertently destroy them through pollution, which of course is the main reason for climate change. Although I did not know previously that animals like the lynx and hare are innately affected by climate, I did know that birds migrate based on the weather and other minor changes unseen by us humans.

In addition to climate change, I appreciate that you addressed the issue of invasive species in some of your articles (Feral pigs p. 370-379, Cane toads p. 380-385). This is something that most people do not think about when it comes to causes of endangerment; they may not only prey on native species but also possibly destroy their habitats. Publications such as yours will make a great impact by getting the word out as to why and how native species are being affected by human activity and invasive species; I hope that sometime in the near future we can implement better policies to live by so that we can continue enjoying the animals and plants that still exist today.

(DP)

Courier News

Today's generation is heavily dependent upon technology. There is constantly a new electronic to accomplish more and simplify things in one's life one never knew they needed. Consequently, new technology drastically aids population growth and extends life expectancy. It is with this mentality at the core of society that has pushed the importance of environmental stability to the sidelines. The rapid growth of the population has pushed the limits of what the environment can handle, as well as the creatures that inhabited the areas prior to humans. Whether one accepts the facts or not, it is clear that wildlife habitat is rapidly declining. It is the responsibility of the general public to help solve the problems they have caused, for the future of wildlife and themselves.

Accepting responsibility is the first step to solving a problem. Although there have been laws put in place to help protect wildlife, the public should acknowledge the adverse impacts their actions cause and set out to seek remedies. Although wildlife is usually viewed as an inferior concern, it would be worthwhile for society to learn as much as they can to help preserve not only a species of animals, but the environment in which they thrive in as well. By protecting what already exists and learning its ways, the population can help reestablish areas that are already severely compromised. The ultimate goal should then be to educate others and encourage them to change their ways for the better. One possibility for spreading the word would be to establish one's township as a wildlife habitat. By doing so, the project would promote community unity as well as increase the appeal of the town for others. In the end, however, the real goal is to instill the importance of environmental stability into future generations so that they may learn from the current generation's mistakes and carry out a more conscientious lifestyle.

(MM)

The Daily Targum

I am part of a group of students currently taking a Jr./Sr. colloquium on Cook/Douglass campus. We are currently working on a project which involves getting various towns accredited as a Certified National Wildlife Habitat. This process is completed through the NWF website and involves a series of projects that gain points for a township that will be put towards an ultimate goal to obtain accreditation.

I am writing to inform you of our hopes to certify the local town of South Brunswick and ask you for help. We brought up this idea at the most recent township meeting, however the easiest way to get the more people aware of our plans is through the press. If more people were to get on board with us the government would have no choice but to follow along as well. Furthermore, with more people involved the projects will get done and the points towards certification will come easily. We, being only three people, can only plant the idea in the heads of our peers, we need someone to carry out the projects necessary to accomplish our goal. By making this project known through the Daily Targum thousands of students will hear of this and be motivated to take part in the projects or to get their own townships certified.

Working together to help make the town a certified habitat would help people would learn about their environment, teamwork, and get some exercise in while they are at it.

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