

## **JStor Articles**

### *1. Effects of Relocation on Movements and Home Ranges of Eastern Box Turtles*

<http://www.jstor.org/stable/25097607?seq=1&Search=yes&searchText=box&searchText=turtles&searchText=eastern&list=hide&searchUri=%2Faction%2FdoBasicSearch%3FQuery%3Deastern%2Bbox%2Bturtles%26amp%3Bacc%3Don%26amp%3Bwc%3Don%26amp%3Bfc%3Doff&prevSearch=&resultsServiceName=null>

This article examines the effects of relocation on eastern box turtles, which is crucial to understand when dealing with moving box turtles from where they are and relocating them (specifically for research or to protect them). The study shows that box turtles that were relocated have a much larger home range and travel much more often - which is not a promising sign because that means that they do not have a source of cover, protection, or safety. Out of ten relocated turtles, 5 also experienced death or disappearance, compared to none out of the ten control turtles. Because of this article, we can conclude that removing box turtles from their home ranges is the last resource that one should do in trying to protect them.

### *2. Hibernation in the Eastern Box Turtle, *Terrapene c. carolina**

<http://www.jstor.org/stable/10.2307/1564593?Search=yes&resultItemClick=true&searchText=eastern&searchText=box&searchText=turtles&searchUri=%2Faction%2FdoBasicSearch%3FQuery%3Deastern%2Bbox%2Bturtles%26amp%3Bacc%3Don%26amp%3Bwc%3Don%26amp%3Bfc%3Doff>

This article studies the hibernation patterns and statistics of the eastern box turtle. The article found that on average, the hibernation period is approximately 142 days (studied over three years). It also found that some turtles reached -0.3 degrees celsius during the cold winters, but freezing is rare and sometimes doesn't necessarily kill the turtle. All turtles in the study survived hibernation- they did not freeze or get eaten (which surprised me).

### *3. Population Ecology of the Eastern Box Turtle in a Fragmented Landscape*

<http://www.jstor.org/stable/10.2307/25097604?Search=yes&resultItemClick=true&searchText=eastern&searchText=box&searchText=turtles&searchUri=%2Faction%2FdoBasicSearch%3FQuery%3Deastern%2Bbox%2Bturtles%26amp%3Bprq%3Dbox%2Bturtles%26amp%3Bhp%3D25%26amp%3Bacc%3Don%26amp%3Bwc%3Don%26amp%3Bfc%3Doff%26amp%3Bso%3Drel>

This article describes how a test was conducted, where turtles were placed in four different areas of a certain fragmented landscape. The purpose of the test was to see if the population of the box turtles changed after their landscape was altered. At the end of the test, it was determined that the population had declined once they became exposed to the new fragmented landscape. Therefore, by reading this article, we are able to acknowledge that altering a turtle's habitat does have great change on the turtle and it is best to just leave the turtle where it was found instead of introducing it to new habitats.

#### 4. *Effects of Temperature on Voluntary Locomotion of the Eastern Box Turtle, *Terrapene carolina carolina**

<http://www.jstor.org/stable/10.2307/1445976?Search=yes&resultItemClick=true&searchText=population&searchText=of&searchText=eastern&searchText=box&searchText=turtles&searchUri=%2Faction%2FdoBasicSearch%3FQuery%3Dpopulation%2Bof%2Beastern%2Bbox%2Bturtles%26amp%3Bprq%3Deastern%2Bbox%2Bturtles%26amp%3Bhp%3D25%26amp%3Bacc%3Don%26amp%3Bwc%3Don%26amp%3Bfc%3Doff%26amp%3Bso%3Drel>

This article describes how different temperatures can affect a box turtle's movement. The article describes a study that was conducted, where box turtles were placed into several different environments with different temperatures. At the end of the study, it was concluded that as the temperature increased, the number of strides taken in the first meter decreased. There was a 5.3% difference in movement, but this might have been because the turtles had experienced a 3.1% increase in mean body mass. Although the article did not find the existence of an 'optimal' temperature, it did conclude that box turtles do move slower when the temperature rises.

#### 5. *The Box Turtle: Room with a View on Species Decline*

<http://www.jstor.org/stable/10.2307/4450753?Search=yes&resultItemClick=true&searchText=population&searchText=of&searchText=eastern&searchText=box&searchText=turtles&searchUri=%2Faction%2FdoBasicSearch%3FQuery%3Dpopulation%2Bof%2Beastern%2Bbox%2Bturtles%26amp%3Bprq%3Deastern%2Bbox%2Bturtles%26amp%3Bhp%3D25%26amp%3Bacc%3Don%26amp%3Bwc%3Don%26amp%3Bfc%3Doff%26amp%3Bso%3Drel>

This article analyzes the reason why the box turtle species has declined. The first thing that the article wants us to take note of is that it is very important to stay educated on the box turtle, instead of ignoring it. It is also important to know that it is a "stay-at-home creature." Therefore, collecting, relocating, or destroying turtles and their habitats should be prohibited because when box turtles move to a new home range, they will always find their way back home even if they have to cross a road. Besides human population and destruction of home ranges, box turtles have also been killed by diseases. The most popular disease that box turtles die from is *Mycoplasma agassizii* - upper respiratory tract disease. By identifying the causes of box turtle species decline, we can learn how to better protect box turtles in the future.

#### 6. *Eastern Box Turtle Movements in a Fragmented Landscape*

<http://www.jstor.org/stable/10.2307/4498557?Search=yes&resultItemClick=true&searchText=eastern&searchText=box&searchText=turtles&searchUri=%2Faction%2FdoBasicResults%3FQuery%3Deastern%2Bbox%2Bturtles%26amp%3Bwc%3Don%26amp%3Bfc%3Doff%26amp%3Bacc%3Don>

This is a site written by the Department of Entomology and Wildlife Ecology at the University of Delaware. The main purpose of this article is to detail the effects of human influence on the habitats of Eastern Box Turtles. The conclusion to this article is that humans

directly affect the habitats of box turtles. Whether it be construction or agriculture, we are the most influential factor in their lives. Turtles that have an unfragmented habitat are more open to movement and interaction among other turtles. Therefore, humans should have an obligation to protect species when impacting the environment.

#### 7. Winter Behavior of the Eastern Box Turtle

<http://www.jstor.org/stable/10.2307/1442659?Search=yes&resultItemClick=true&searchText=eastern&searchText=box&searchText=turtles&searchUri=%2Faction%2FdoBasicResults%3FQuery%3Deastern%2Bbox%2Bturtles%26amp%3Bwc%3Don%26amp%3Bfc%3Doff%26amp%3Bacc%3Don>

This article is written by Richard Debeer, renowned researcher and scientist. This article details the habits of the Eastern Box Turtle during the winter season. Turtles consistently stayed underground, or hidden at the surface under leaves. To survive the cold, they would rarely move around - only to get food and water. Since winter isn't mating season, finding a mate was not a problem. Turtles burrowed to such depths in order to escape sub-freezing temperatures. Depths range from just below the surface to almost 15 cm underground.

### **Helpful Websites**

#### 1. Smithsonian National Zoological Park

<http://nationalzoo.si.edu/animals/reptilesamphibians/facts/factsheets/easternboxturtle.cfm>

This page is the official page for the box turtle on the Smithsonian National Zoological Park website. It features specific facts about genus and species, and also goes into detail about their mating, diet in the wild and in zoos, and their natural habitat. By knowing a box turtle's general facts, we are able to discuss the preliminary life of these individuals - while at the same time be able to explore the health and happiness of the box turtle specie.

#### 2. The Eastern Box Turtle (*Terrapene carolina*)- Davidson College

<http://www.bio.davidson.edu/people/midorcas/research/contribute/box%20turtle/boxinfo.htm>

This page is an educational page for the eastern box turtle and features information such as the identification and classification of the box turtle, a comparison of the species of box turtles, information on sexing box turtles, habitat, diet, and conservation concerns. It has many useful pictures of different box turtles, and even has one of a box turtle that was hit by a lawn mower. This website will benefit our research greatly because it has a good general outline of the life and health of the box turtle.

#### 3. Department of Energy and Environmental Protection- State of Connecticut

<http://www.ct.gov/deep/cwp/view.asp?a=2723&q=416520>

This page provides information regarding the description, range, habitat, diet, and life history of box turtles. It is especially significant because it shows concern that box turtles are threatened, and that turtles are threatened mostly by humans. It gives details on how one is able to help local turtle populations thrive. Therefore, this website comes helpful in reviewing the concerns of box turtles and how we can help preserve their home range.

#### *4. Welcome Wildlife.com*

<http://www.welcomewildlife.com/?folder=pages/urban%20wildlife/reptiles/turtles/box>

This website summarizes the information regarding the anatomy, characteristics, description, diet, and behavior of box turtles. By reading this page, we are more equipped to discuss the differences between turtles and we are also able to have a general sense of the habitat and life of box turtles.

#### *5. Eastern Box Turtle*

[http://www.fcps.edu/islandcreekes/ecology/eastern\\_box\\_turtle.htm](http://www.fcps.edu/islandcreekes/ecology/eastern_box_turtle.htm)

This page gives general information about Eastern box turtles. The web site talks about its physical characteristics, their typical terrestrial habitats, and its relationship with humans. It also talks about its relationship with other aspects of nature as the site gives a chart displaying the prey, predators, and shelter of the box turtles. This website gives us a general sense of how box turtles survive and what they need in order to survive.

#### *6. Box Turtle Basics - Arkansas Natural Heritage Commission*

[http://www.naturalheritage.com/citizen-science/past\\_projects/box\\_turtle/turtlebasics.aspx](http://www.naturalheritage.com/citizen-science/past_projects/box_turtle/turtlebasics.aspx)

This page gives introductory information about turtles in general, then specifically focuses on box turtles. It talks about the shell structure, its habitat, diet, average life span, and home range. Overall, the site gives what it says - basic facts about box turtles. This website can be useful for our study if we need to quickly look up basic information about box turtles.