

BURNS FORESTRY NEWSLETTER



Timber Rattlesnakes (Part 1)

By: Lydia Rogers

Lydia Rogers is Burns Forestry’s new Timber and Wildlife Specialist. Lydia is from Kennard and is a Texas A&M graduate with a Bachelor of Science in Wildlife and Fisheries Science with an emphasis in management. This article is part one of her series on Timber Rattlesnakes which were considered a threatened species in Texas until 2020.

Timber rattlesnakes (*Corotatus horridus*) are members of the Viperidae family. They are venomous, their venom is hemolytic, meaning it breaks down red blood cells and destroys tissue. This snake also gives live birth. Their offspring are smaller versions of the adults that can defend and fully provide for themselves. Young timber rattlesnakes, although fully independent, tend to stay close to the mother for a few days after birth. They are also considered “pit vipers,” meaning they have large sensing pits between their eyes and nostrils. Pit vipers are ambush predators; they lay and wait for prey to come to them and then strike by surprise. These snakes have V or W- shaped crossbar markings on their backs that create a unique pattern. They also are a reddish-brown stripe running down the center of their backs. Their tails are dark colored and have keratinous rattles at the end, the very last rattle being called the button. These snakes, like all other rattlesnakes, shake their tails as a warning where the rattles create a rattling sound which is one of the easiest ways to recognize a rattlesnake. Timber rattlesnakes are heavy-bodied snakes that range in length from 36-54 inches with males typically being larger than females.

Many people do not think about the positive effects snakes can have and how they help our environment maintain stable ecosystems. Venomous snakes often get a bad reputation from people just because they can be harmful, yet timber rattlesnakes as well as other snakes help manage the small rodent populations and normally do not harm people or other non-prey animals unless they feel threatened. The majority of their prey is small rodents, but larger snakes can eat small rabbits and squirrels.

Timber rattlesnakes were considered a threatened species in Texas until 2020 due to the hardships their populations face from factors including, but not limited to, habitat destruction, roadway fatalities, and indiscriminate human killings. Threatened species are protected by the Endangered Species Act (ESA) but they do not have a species recovery plan set by Wildlife and Fisheries officials to help recover the population of a species. In 2020 the timber rattlesnake was removed from the list of endangered species in Texas and the population was declared recovered by the U.S. Fish and Wildlife Service (USFWS).



LYDIA ROGERS DURING A FISHERIES LAB WHILE ATTENDING TEXAS A&M UNIVERSITY



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G-P Mill Upgrades

W.T Carter Lumber Company, the first forest products mill in Camden, Texas, in the late 1800's is now one of Georgia-Pacific's largest plywood operations. Georgia-Pacific's Camden plywood facility currently employs approximately 500 people. To increase efficiency, Georgia-Pacific is now embarking on an \$18 million upgrade that will modernize the plant. The capital improvement plan will begin with rebuilding the 40+ year old dryer which is one of the most important stages of production, controlling the veneer's moisture content. This project is scheduled to be completed in July of this year.

While the dryer is being reconditioned, the stenciling and strapping operation will be automated with a robotic system. Then later this summer a robotic patch system will be installed to detect and repair wood veneer imperfections during the production process. Currently, multiple workers stationed on the line manually patch the veneer. Four robotic technicians are now being trained on the system.

Georgia-Pacific has also scheduled a \$91 million upgrade for its containerboard mill in Monticello, Arkansas. The project will greatly improve the log line.

West Fraser Timber Co.

For the first time last year, West Fraser Timber Co. Ltd., the Vancouver-based lumber company, produced more softwood in the United States than it did in Canada, keeping its position as North America's top lumber producer. The company, which acquired the Angelina sawmill in Lufkin in 2021, now has 22 lumber mills across eight states in the U.S. South. West Fraser has Texas lumber mills in New Boston, Henderson, and Lufkin and Texas OSB mills in Nacogdoches and Jefferson.

West Fraser kept its production last year as North America's top lumber producer and with a production of 3.02 billion board feet of softwood lumber in the U.S., it moved up to the second-largest producer in the United States. Weyerhaeuser Co. of Federal Way, Washington, with 3.75 billion board feet, stayed as the top U.S. producer.

Southern Lumber Production

While lumber production was down in three of the four major North American regions in 2022, the U.S. South had continued record high production, capturing almost 38% of North America's lumber production. Output in the U.S. South has increased for 13 consecutive years. Lumber output has generally remained stable in the western U.S. and Eastern Canada the past decade, but sawmill closures in British Columbia have resulted in production falling about 36% between 2013 and 2022.

More restrictions and increasing cost, along with higher risk from wildfires have promoted many companies to move their operations to the Southeast. The U.S. South indeed is becoming the new home base for U.S. lumber.

Wildfires and Water Quality

Texas had 12,400 wildfires in 2022 that burned over 650,000 acres of land. Dr. Garrett McKay, an associate professor at Texas A&M's Department of Civil and Environmental Engineering, is researching the effects of these wildfires on our drinking water. He says that the heat from wildfires causes a chemical reaction in the soil, creating pyrogenic organic matter, such as charcoal or soot. This matter, which is typically due to incomplete combustion, can negatively impact water quality and water treatment plant operations.

Higher amounts of pyrogenic organic matter in the source water can lead to spikes in disinfection by products when wildfires occur, and pyrogenic organic matter is difficult to remove from water. Chronic amounts of disinfection byproducts can increase the risk of cancer and unusually large amounts can cause liver damage or decreased nervous system activity.

Wildfires and Water Quality (continued from page 3)

Wildfires also increase the sediment levels in source water. They consume the root systems of the vegetation that helps stabilize the soil. Resulting in soil erosion which increases the sediment levels in source water and our drinking water.

Dr. McKay states that wildfires can lead to increased levels of nitrogen and carbon getting into our waterways, which is detrimental to both our water quality and our health. Since about half our nation's drinking water originates in forested watersheds, these health risks could impact a large portion of our country.

Texas Landowner Survey

The Texas Landowners Survey is conducted every five years to help the Texas A&M Natural Resources Institute (NRI) and other natural resource professionals better understand the objectives, challenges, concerns and preferences of rural landowners. In 2022, more than 5,000 private landowners responded to the survey.

Based on both 2017 and 2022 reports, fewer landowners are deriving income from their lands, especially where the ownership is less than 500 acres. While those with under 500 acres make up about 85% of the operations, they only own about 16% of the private working land.

The top three reasons for owning land were for wildlife, family and hunting. These three were closely followed by ranching and recreation. The most common recreation activities were hunting, wildlife watching and experiencing nature.

The biggest challenges cited included water ownership, increasing human population, invasive species, water conservation and habitat loss. Since private lands made up 83% of our open space in Texas, these private landowners have a great influence on our natural resources and our environmental well-being.

Ivory-Billed Woodpecker

The last generally accepted sighting of the ivory-billed woodpecker (*Campephilus principalis*) was in 1944. It has been considered to be extinct since then, though sporadic reports of sightings have raised hopes. In 2021, the U.S. Fish and Wildlife Service opened for public comment on its proposal to declare the woodpecker extinct.

The bird historically inhabited mature bottomland forest of river basins and upland pine forest in southeastern United States. There is a small, separated population in Cuba. The woodpeckers were widespread, moving among blowdowns, recent burns, hurricane destructions and other areas foraging particularly on beetle larva in dead and dying trees.

The species was negatively impacted by the vast harvesting of bottomland forest and virgin pine forest, as well as by hunters and collectors. By the late 1930s, the population was estimated at 22 individuals in Florida, South Carolina, and Louisiana.

In response to the U.S. Fish and Wildlife Service request for opinion on the woodpecker's existence, a recent article in *Ecology and Evolution* (May 18, 2023) suggested that the ivory-billed woodpecker may still be present in a bottomland hardwood forest in Louisiana. Dominant tree species were baldcypress and sweetgum.

The field research took place from 2012-2022 and was concentrated in October through May to encompass the breeding season. The observers traversed the area hoping for sightings, and also used audio detections, trail cameras and drone videos. AudioMoth acoustic recording units were used in an attempt to record the nasal "kent" calls of ivory-billed woodpeckers, as well as to record the "double-knocks"- hard raps or blows with the second knock sounding like an immediate echo of the first. Sightings, camera images, and recordings were similar to those of the woodpeckers, but not definitive.

Ivory-Billed Woodpecker (continued from page 3)

Skilled observers reported 16 visual observations, seven (7) of which were considered to be definite sightings. Nearly every observer noted unique, brilliant white plumage unlike any other bird. Based on this, and supplemental observations, the researchers concluded that the ivory-billed woodpecker continues to survive in Louisiana.



<https://www.google.com/search?>



www.theguardian.com/environment/2021/oct/01/ivory-billed-woodpecker-extinct-scientists-expertshttps://



<https://abcbirds.org/bird/ivory-billed-woodpecker/>

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WOTUS

The Supreme Court recently issued a favorable decision to Chantell and Michael Sackett in their long-running legal battle to build their home about 300 feet from the shore of Idaho’s Priest Lake. The courts decision appears to narrow the scope of the U.S. Environmental Protection Agency (EPA) authority over “waters of the United State” (WOTUS).

The court found that EPA and the Army Corps of Engineers wrongfully claimed oversight of the wetland on the Sackett’s property and that federal courts had erred in affirming the agencies jurisdiction. The court’s opinion states that waters adjacent to WOTUS must be practically indistinguishable from the WOTUS, and there must be a continuous surface connection between them. In other words, it must be hard to tell where the adjacent water ends, and the WOTUS begins.

The Supreme Court’s decision is a victory for farmers, housing developers, and the energy industry. The ruling could significantly impact EPA’s recent WOTUS definition of which wetlands and streams qualify as “waters of the U.S” subject to Clean Water Act permitting.