

Bailey Tingley

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Ms. Carpenter, Biology

Biomes of North America

Biomes all over North America are intriguing to the biologists of the country. In North America, the Taiga, Northern Forest, Great Plains, Tropical Dry Forest, Tropical Humid Forest, and the North American Desert dominate the surrounding. The Taiga is found in the northern part of the United States and in Canada (“Bennett”). Northern Forests are found in the Northeastern states such as New York and Maine (“Wild”). The Great Plains run through ten states including Montana, and the Dakotas’. With the Tropical Dry Forest, the biome is most commonly found in Mexico, much like the Tropical Humid Forest which are found in Mexico and Florida (“Biomes”). The North American Desert is found in multiple places because of the subdivision of the biome in to four separate deserts (“Wagner”). The North American Deserts are found on the Western Coast of the continent in multiple states including California and Nevada (“North”). With the biomes of North America, the included factors of terrain, climate, flora and fauna will be thoroughly discussed within the paper.

Within the Taiga, the physical terrain and climate are based upon many influencing factors. With a continuous belt of coniferous trees, the Taiga's physical terrain also consists of glaciated areas. Regions of sub-arctic and cold continental weather conditions with long severe winters, and short summers are key to the Taiga climate. The average precipitation amount is only twenty inches each year and with low evaporation, the taiga becomes a humid climate. There is a wide range of temperatures between the winter and the summer with up to six months of below freezing temperatures.

Predominant flora and fauna on the North American continent make up the ecosystem of the Taiga biome. Coniferous, Broadleaf Deciduous, Evergreen Spruce, Fir and Pine trees make up only six of the multiple tree species in the biome ("Woodward"). The pine trees in the continent are dominated by the Jack Pine and the Larch forests are often open with the understories of shrubs or mosses ("Woodward"). Flora species found within the Taiga biome help with water levels, as well as the absorption of heat to help begin photosynthesis ("Woodward"). Fauna in the Taiga biome consists of fur-bearing predators, birds, and omnivores ("Woodward"). The lynx and members of the weasel family such as the Mink Weasel can be found in the Taiga ("Woodward"). Snowshoe Hare, Red Squirrels, Elk, Marten, Wolverine and Beaver can be found as well ("Woodward") Bird species include Ravens, Finches and Sparrows ("Woodward").



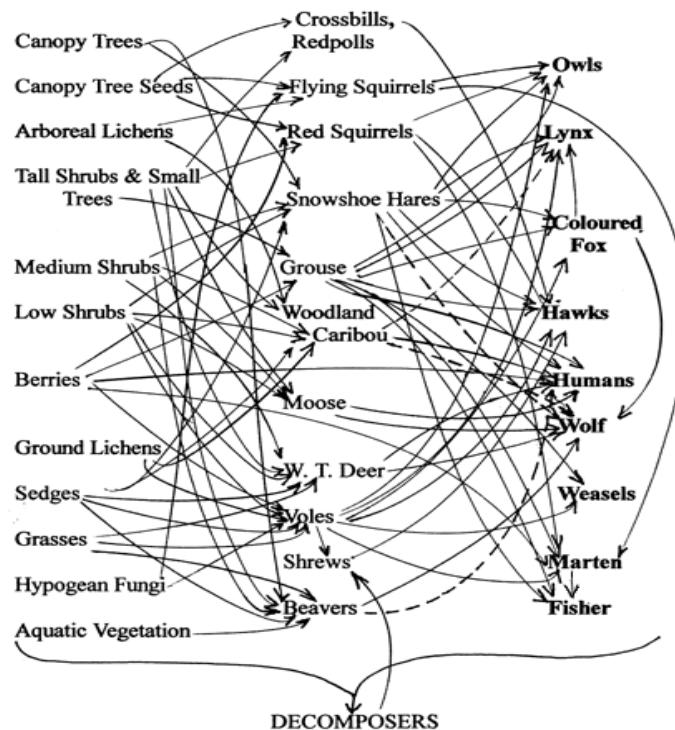
This map represents the Taiga biome and where it can be found throughout the world ("Biomes").

This is a picture of the Taiga ("Taiga").



Flora	Fauna
Coniferous Trees	Lynx
Broadleaf Deciduous Trees	Mink Weasel
Evergreen Trees	Elk
Spruce Trees	Snowshoe Hare
Fir Trees	Red Squirrel
Pine Trees	Marten
Larch Forest	Wolverine
	Beaver
	Ravens
	Finches
	Sparrows

Outline of Terrestrial Vertebrate Food Web of the Taiga Biological Station Research Area



This food web consists of the plants and animals found within the Taiga biome (“Taiga”).

The Northern Forest biome physical terrain differs from every other biome, and the climate has similar characteristics of the Northeastern states in our country. The physical terrain has intense coastlines to the side, and trees everywhere (“Northern”). The soil is fertile, and the varying species of trees make up the forest (“Northern”). Climatic differences between the Northern Forest when compared to the North American Desert biome is substantial due to the fact that the Northern Forest have long, cold winters and short, warm summers (“Northern”). Average amounts of precipitation are found in levels from four hundred millimeters to one thousand millimeters (“Northern”).

The constant flora and fauna found in the Northern Forest biome consists of different families of each species. Consistent flora that can be found in the biome are identified as White and Black Spruce, Jack Pine, and Balsam Fir trees (“Northern”). Mammals include the woodland caribou, white-tailed deer, moose, black bear, raccoon, striped skunk, lynx, bobcat, and chipmunk (“Northern”). Even great-horned owls, blue jays, and evening grosbeak can be found as well (“Northern”).

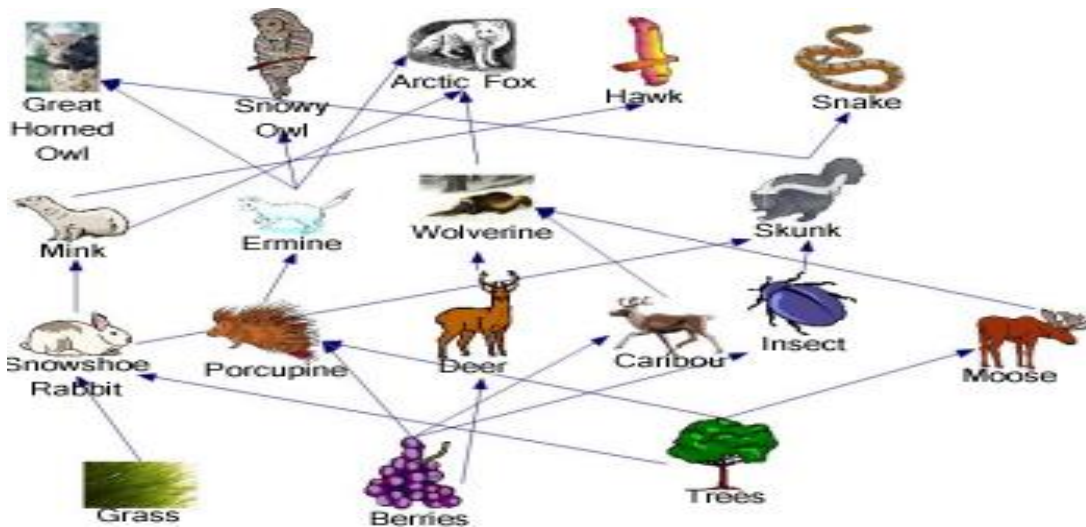


This picture is of the Northern Forest biome (“Adirondack”).



This map represents the Northern Forest within North America. The Northern Forests are the light blue (“Northern”).

Flora	Fauna
White Spruce	Woodland caribou
Black Spruce	White Tailed Deer
Jack Pine Trees	Striped Tail Skunk
Balsam Fir Trees	Wolverine
	Moose
	Black Bear
	Bobcat
	Lynx
	Chipmunk
	Great Horned Owls
	Blue Jays
	Evening Grosbeak



This picture is of a food web consistent with the biome of Northern Forest and the flora and fauna within that biome (“Glogster”).

Physical terrain and climate provide the Great Plains biome in North America with a rich, yet natural consistency. The Great Plains were once covered by a vast inland sea with sediment deposits making a horizontal rock stratum that underlies the area (“Physical”). The terrain is level or rolling with igneous rock accounted for on the higher elevated sites (“Physical”). Fertility of the land is high which help execute farming with the primarily flat land. Climate within the Great Plains is the most diverse in all of North America (“Great”). It is subject to tornadoes, hailstorms, ice storms, bitter cold, droughts, blizzards and even dust storms (“Great”). The climate is considered semi-arid with a moister climate in the eastern part, unlike the northern section (“Integrating”). The northern portions of the Great Plains have bitter cold and snowy winters with only ten or twenty days each year over ninety degrees (“Great”). When compared to the northern portions of the Great Plains, the southern portion is more likely to see at least five to seven times more sunny days over ninety degrees than the northern, which in cause consists of nearly seventy to one hundred days of ninety degree weather (“Great”).

Flora does not dominate the Great Plains, unlike fauna which is the majority of varying species with the biome. White Ash, Honey Locust, and native grasses are the only common flora within the Great Plains (“Flora”). Very few trees are spotted within the Great Plains because the fertile soil and conditions are not ideal for a tree species (“Flora”). Fauna dominates the Great Plain biomes of North America and the American Bison, Mule Deer, White-Tailed Deer, American Mink, Northern Raccoon, Western Harvest mouse, Prairie dog, cockroaches and ants can all be identified within the biome (“Flora”). Jackrabbits, antelope and coyotes can also be found within the Great Plains of North America (“Flora”).

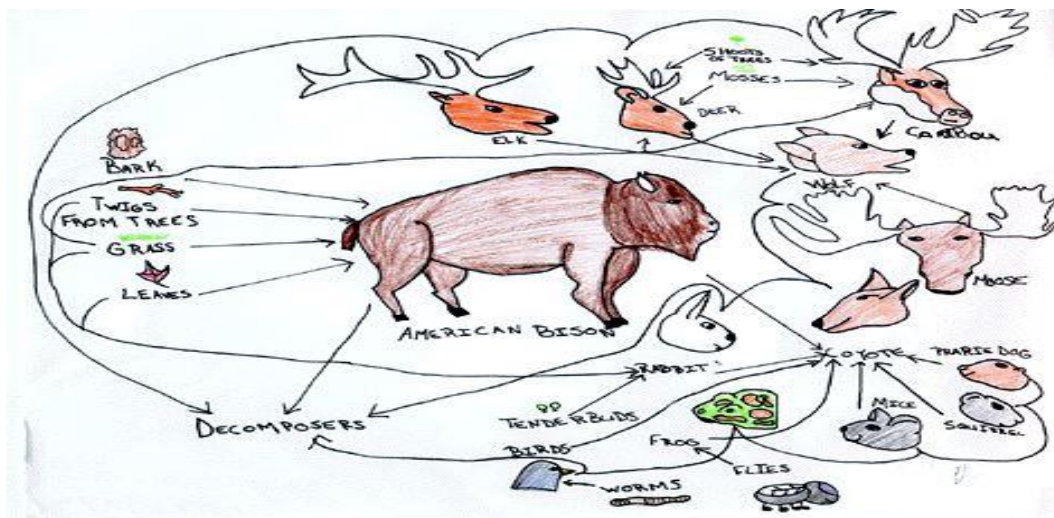


This is a picture of the Great Plains (“American”).

This map shows where the Great Plains are located with North America (“Northern”).



Flora	Fauna
White Ash	American Bison
Honey Locust	Mule Deer
Native Grasses	White-Tailed Deer
	American Mink
	Northern Raccoon
	Western Harvest Mouse
	Prairie Dog
	Cockroaches
	Ants
	Jackrabbits
	Antelopes
	Coyotes



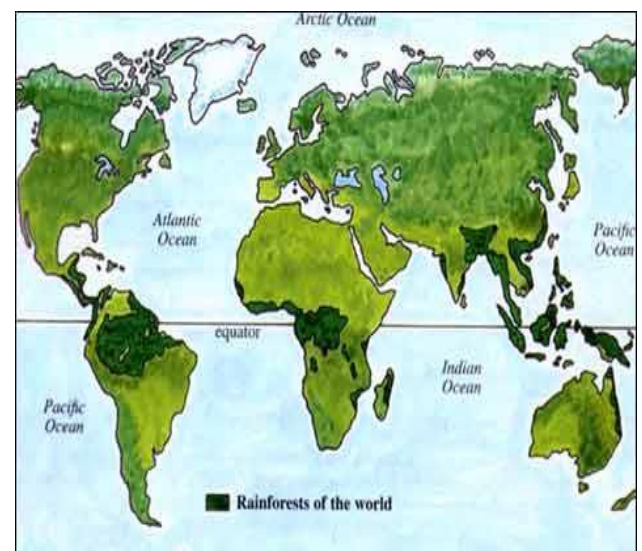
This picture is of the Great Plains biome food web (“Cava”).

The physical terrain and climate of the Tropical Dry Forest is consistent with a land of many elevations. The terrain is scattered with isolated peaks, inaccessible forest, river valleys, and mountainous territory (“Geography”). The different elevations are broken up by hills, streams, and valleys among the Tropical Dry Forest and each different section of the biome, has substantial difference in characteristics from the other (“Geography”). The south-eastern part has rugged forests which are then intersected by gorges and narrow passes (“Geography”). The east and west are filled with mountainous terrain while the plain country is to the south (“Geography”). The climate yearly is warm with alternate wet and dry seasons (“Swisher”). Humidity plays a large factor in the biome and the peak rainfall levels are during the high-sun period, or summer months, while the dry seasons are December through March (“Swisher”).

Consistency of flora and fauna throughout the Tropical Dry Forest is nearly impossible to judge due to the varying amounts of each species within all tropical type forests. The most dominant plants are considered Columnar Cacti, Deciduous trees, drought-tolerant orchids, aloes or other succulents (“Swisher”). The most predominant fauna include Tasmanian devils, alligators, kangaroo rats, coyotes, foxes, raccoons, badgers, mountain lions, parrots, and tigers (“Swisher”).

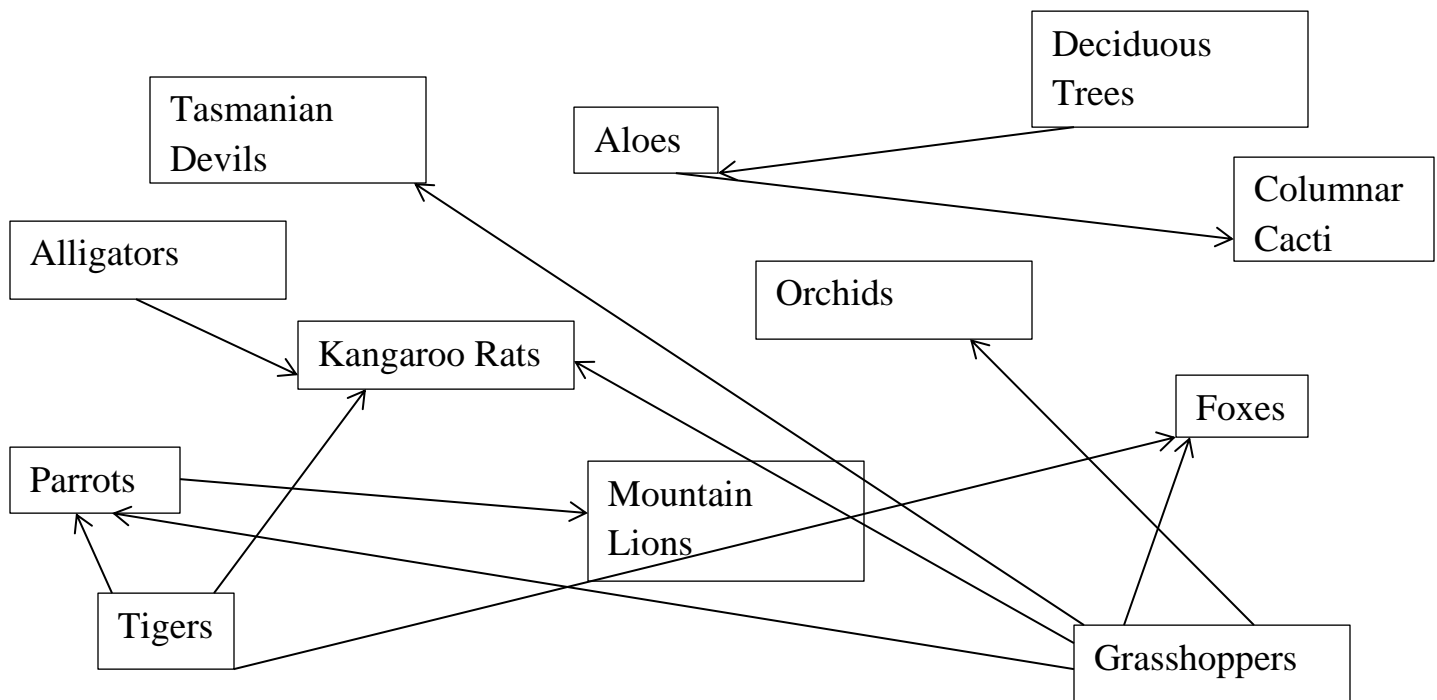


This picture is of the Tropical Dry Forest biome (“Tropical”).



This map represents the Tropical Dry Forests in North America (“Latest”).

Flora	Fauna
Deciduous Trees	Tasmanian Devils
Columnar Cacti	Alligators
Drought-Tolerant Orchids	Kangaroo Rats
Aloes	Coyotes
	Foxes
	Raccoons
	Badgers
	Mountain Lions
	Parrots
	Tigers



This picture is of a tropical dry forest biome and the representation of the food chain within it.

Tropical Humid Forest climate and physical terrain is not as similar to the climate and terrain of the Tropical Dry Forest. The physicality of the Tropical Humid forest is composed of folded and metamorphic hills, sedimentary bedrock, and soil that have formed mostly from the deposits through erosion (“Neotropical”). It consists of a tropical rain forest with year round temperatures of twenty to twenty six degrees Celsius (“Neotropical”). The average annual precipitation levels are between one thousand five hundred and three thousand millimeters, but in some areas it may even reach approximately four thousand millimeters of rain fall (“Neotropical”). Dry months within the year are generally less than three (“Neotropical”). Flooded marshes and swamps are also found in Tropical Humid Forests in the extension to Florida (“Neotropical”).

Flora and Fauna located in the Tropical Humid Forest consist of air plants and an abundance of marsupials. The most typical plant identified in this biome is the allspice tree, palm trees, and members of the pea family with mangrove vegetation found in the extension of Florida (“Neotropical”). Species living in the Tropical Humid forest include armadillos, parrots, toucans, toads, frogs, lynx and squirrels (“Neotropical”). Other animals found are crocodiles, bats, Macao, and pheasants (“Neotropical”).



This is a picture of the Tropical Humid Forest biome (“Global”).

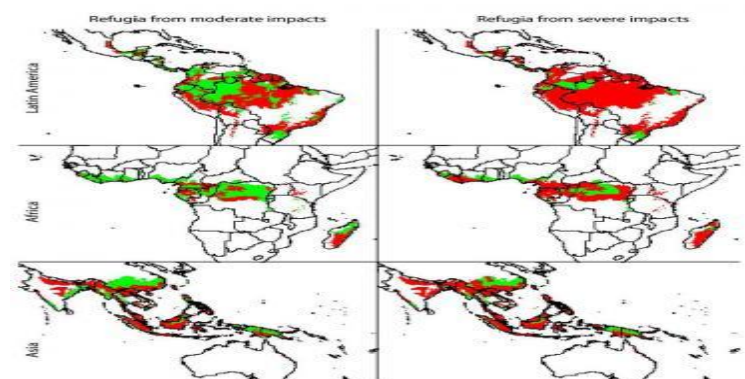
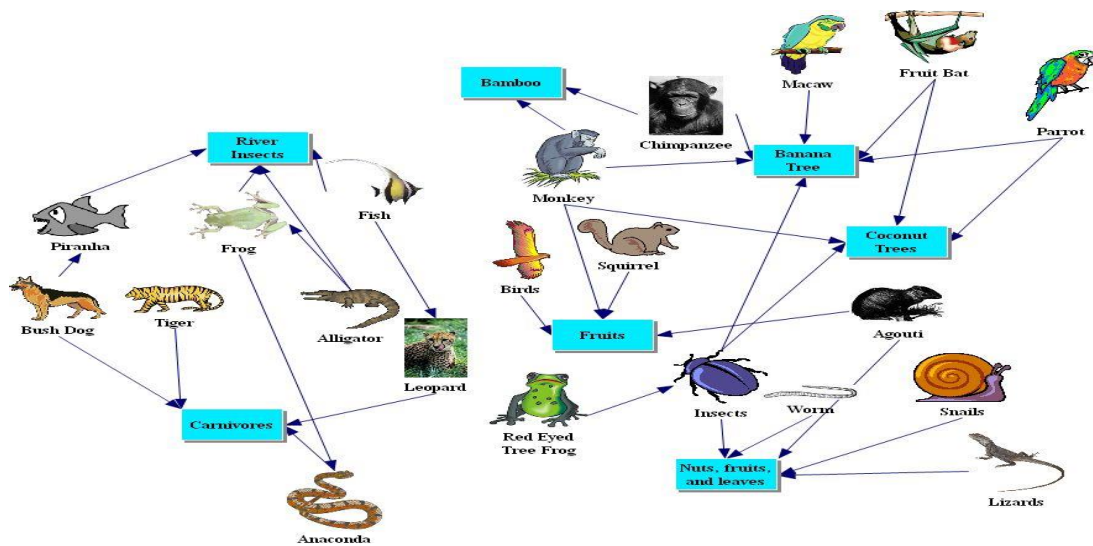


Figure 4. The distribution of refugia (green areas) from recent deforestation, logging, and projected moderate (>33% quantile, left column) and severe (>66% quantile, right column) climate impacts across the global humid tropical forest biome (red areas).

The map is of Tropical Humid forests in North America (“Global”).

Flora	Fauna
Allspice Tree	Armadillos
Palm Trees	Parrots
Members of the Pea Family	Toucans
	Toads
	Frogs
	Lynx
	Squirrels
	Crocodiles
	Bats
	Pheasants
	Macao



This is a food web for the Tropical Humid Forest (“Clifford”).

Considering that the North American Desert is subdivided into four different sections, the range in physical terrain and climate varies. The North American Desert has a high amount of cloudless days and intense sunlight, infrequent and intense storms, dusts and sand storms, and a low relative humidity (“North”). The average annual temperatures in the North American Desert range from around forty nine degrees Fahrenheit to seventy seven degrees Fahrenheit the farther out the region goes (“North”). Snowfall is only twelve to twenty four inches in some parts, and in others, the snowfall is only a trace (“North”). The winds are directional and the relative humidity levels are usually under fifty percent (North”). The physical terrain of two subdivisions of the North American Deserts, known as the Great Basin and Mojave Desert, sand dunes can be found as they merge (“North”). The other two subdivisions consist of flat lands and valleys (“North”). Plateaus, ravines and rocky surfaces are found all throughout the North American Desert biome (“North”).

Within the North American Desert, varying species of flora and fauna can be found due to the adaptations to the hot climate. Most common plants are either adapted to the climate, or deep-rooted plants that depend on a permanent water supply by tapping into the groundwater (“North”). The variety of flora within the North American Desert consists of sagebrush and saltbush, Joshua trees, thorn scrubs, and barrel cacti (“North”). In the desert biome, there is an abundance of insects, rodents, reptiles, and predators (“North”). Grasshoppers, lizards, snakes, mice, rabbits, bat and coyotes can be found in the desert biome (“North”). Also, the large predators of this biome include bobcats, and the bighorn sheep.

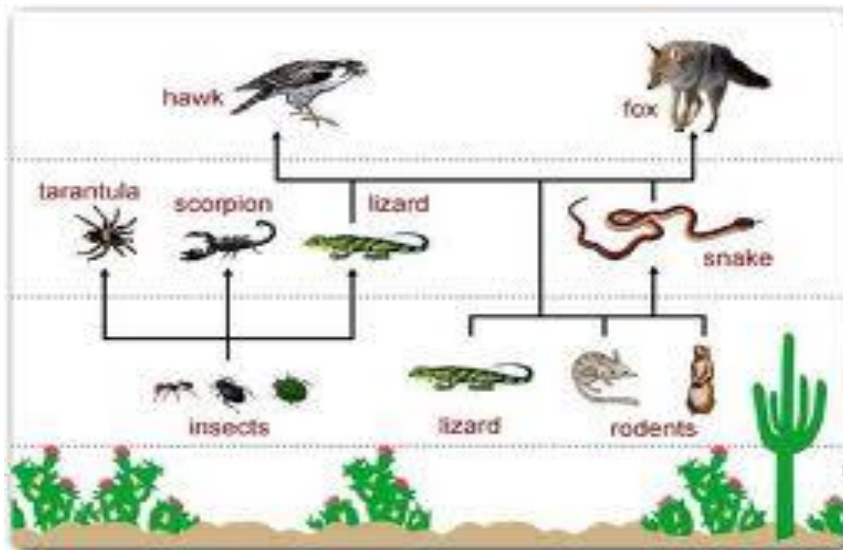


This map represents the deserts of North America (“Desert”).

This is a picture of the North American Desert (“Adaptations”).



Flora	Fauna
Sagebrush	Grasshoppers
Saltbush	Lizards
Joshua Trees	Snakes
Thorn Scrubs	Mice
Barrel Cacti	Rabbits
Lichen	Bats
	Snakes
	Bobcats
	Coyotes
	Bighorn Sheep



This is a food web of the desert biome (“Adaptations”).

In brief, the continent of North America has a Taiga, Northern Forest, Great Plains, Tropical Dry Forest, Tropical Humid Forest, and the North American Desert. The taiga is a region of coniferous trees and a sub-arctic climate (“Woodward”). The predominant flora and fauna include deciduous trees, the lynx, wolverine, beaver and snowshoe hares (“Woodward”). Within the Northern Forest, the soil is fertile and multiple species of trees make up the physical terrain (“Northern”). The biome has cold winter, and warm summers (“Northern”). Jack Pine trees, Balsam Fir trees, caribou, deer, moose, and great horned owls can be found (“Northern”). The Great Plains consist of rolling land and a diverse climate that is subject to anything (“Flora”). Very few plants can be found in the Great Plains, but the American bison, Prairie dog, and jackrabbits are common fauna (“Flora”). The terrain of the Tropical Dry Forest has multiple elevations and substantial hills and valleys (“Geography”). Columnar Cacti, drought-tolerant orchids, Tasmanian devils, and mountain lions can be found in the biome (“Swisher”). Metamorphic hills make up the physical terrain of the Tropical Humid Forest climate and there are generally less than three dry months each year (“Neotropical”). Parrots, lynx, squirrels, and crocodiles can be found in the Tropical Dry Forest (“Neotropical”). The semi-arid climate of the North American Desert is subdivided into four different sections with sagebrush, saltbush, and barrel cacti inhabiting the biome (“North”). In the desert biome, lizards, snakes, rabbits, and occasionally, the bighorn sheep can be found (“North”). In conclusion, the biomes of North America have many distinct features of terrain, climate, flora and fauna that make it unique when compared to the other biomes of the world.

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