Ecology flashcard essay

Environment, Ecology

Ecology is the study of interactions between organisms and the living and non- living components of their environment. It involves collecting information about organisms and observing their life patterns as well. Ecology is a science that seeks to explain why patterns occur the way they do. Interdependence is a key component of biology, meaning that all the organism interact with one another in various ways. Its very crucial for organisms since they all depend on one another for survival.

Any change in the environment can spread throughout the connections between animals and even those who seem far related. If anything change occurs n one part of an environment , then the whole environment will be affected. For example if the population of plankton in a marine area goes extinct so will its consumers the zooplankton die and so will the other fish that eat the zoo plankton such as crustaceans . Marine life could not exist without plankton . Scientist often times use ecological models to help them represent parts of an ecosystem and to help them understand environmental interactions or even make predictions. Theses models are then tested by comparing them to observations from the real world.

Ecological models can help with environmental problems by providing possible elution, sometimes this cannot always work though, since its cannot be accounted for every variable in the environment. Scientist classify organisms within different levels of environments. Recognizing that each environment has different types organisms and that each are influenced by other levels as well. The Biosphere is the most capacious level of organization, with a thickness of thirteen miles. All organisms are found here.

Although not evenly distributed most organisms are found in the oceans. Ecosystems make up the Biosphere, its composed of organisms and their non living environment in a particular area. This is where organisms interact with one another. Communities live in these ecosystems, they’re all the interacting organism living in that area.

Below the level of community is a population. A population is a specific group of species that live together at the same time in the ecosystem. The most simplest level of organization is the organism , multiple organisms make up a population. Ecologist separate factors that influence organisms that live in ecosystems into Biotic and Biotic factors. Biotic factors are living things that affect an organism and biotic factors are the non-living factors, such s chemicals and physical characteristics. Biotic factors include temperature and chemicals found in ecosystems. The importance of each factor varies from ecosystem .

Both factors are not independent , organisms changes affects these factors which in return affects the organism. Also biotic factors aren’t constant since they change constantly. Each organism has a niche. Its niche is it role or way of life within its environment. The two types of niches are a generalist and a specialist. The generalist species have board niches since they can tolerate different conditions and are able to use different resources. The species with narrow niches are called specialist , theses species cannot are not as adaptable as the generalist.

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various ways. Its very crucial survival. Ray change in ere between animals and even t in one part of drip environed example it the population of consumers the zooplankton such as crustaceans Mari tallies use ecological remodels help them understand envier models are by Ecological models can help v solutions, sororities this cal tar every variable In the nevi evils of environments Erect organisms and that each are the most capacious level of are found here. A found In the oceans. Echoes and their non living environ interact with one another C’ interacting live. G A population IS a specific gar ecosystem.

The most simple: organisms make up a populism that live In echoes living things that attest an or as chemicals and physical chemicals found in ecosystem ecosystem Both factors are doctors vehicle In return taste since they change constantly) way of life within its environ specialist. The generalist SP conditions and are able to u are called specialist , theses mom cases species have more that one niche. Plants a Authors, which can also be classified as producers b make their own food , or organic molecules. Most of the plants are usually the main producers.

Most animal and protests are heatstroke’s , which means they can instead they consume other organisms or organic waste plant eaters are known as primary consumers and sec carnivores eat primary consumers. Omnivores are anima and consumers , for example a grizzly bear . Another Deteriorative, it eats the waste of an ecosystem. A waste ca animal or even fallen leaves off tree, anything that ha Deteriorative also break down the waste material into mol as decomposer.

As one organism eats another inner energy to be passed down from producer from consume simple transfer of energy from one organism to another energy is a food web, which involves energy transferring an ecosystem, its made up of many food chains with um The water cycle is a key component Tillie for ecosystem transpiration and precipitation. During the proposes of eve evaporated from the bodies of water and ground throw In transpiration plants take water through their roots an take in carbon-dioxide through their leaves. When water recess is called precipitation. A population is a group live in a certain area at the same time, its size is the nub population contains. Its density measures how crowded expressed as the number of individuals per volume. A p distribution of its individuals A population can either be together, or uniform with a fair amount of space in bet populations dynamics is always changing depending on Population growth depends on immigration and immix movement of individuals into the population and immigrate individuals moving out if the population. Population gar adding birthrate+ immigration – death rate + immigrate owe much a environment can hold over a long period oft its caring capacity the number of birthrates decreased When it reaches its capacity a populations growth and d factor that controls population size is Density-independent reduce the population , such as floods and fires. Another factors such as shortages of food or nesting areas .

This population. As humans developed from Homo Sapp grown very slowly. Human lived in nomadic groups and lifestyle. Amah population started increasing about et ago when they developed an agricultural system , food available and the population increased tremendously. Bubonic plaque our

population had decreased by teen After World War II death rates increased because of improvement is health hygiene. Developing countries are experiencing more birthrates while developed countries have a lower birthrate.

In ecosystems different types of species have to interact. One form of interaction is predation, where the predictor eats all or part of the animals of the community, called the prey. A predictors survival depends on its ability to obtain food, without adaptation a predictor would not be able to obtain its food . Its survival also depends on its ability of not being captured , natural selection favors ray in adaptation that let them escape quickly.

An animal can escape predictors by blending in with its environment or by simply running away. Since plants cannot move they have developed physical defenses such as thorns to protect themselves and avoid being attend. Competition is another form of interaction between species. Its when two or more organisms use the same resource . If the species compete against each other it might result in the decreasing in one of the species population, meaning one of the species will be able to use the resource more effectively.

Another form of interaction between species is a close long-term allegations called symbiosis. The three types of symbiosis are: parasitism, mutatis and commercialism. In parasitism one individual is harmed while the other benefit’s.

Both individuals are benefited in mutatis and in commercialism one individual benefits while the other is neither harmed or benefited. Whenever an area has undergone destruction , the sequential Rexroth of a community of species in an area is called ecological succession. One of the two types of succession is called primary succession. In this case a community is developed in an area were life had not been previously supported , the organism that appear here re called pioneer species and tend to be small organisms that grow and reproduce quickly . Secondary succession is the replacement of species following the disruption of an existing community. The growing typical begins with weeds and grass in the area.

A complete process takes many years. Different varieties of ecosystems make up biomass. These areas exist all over the world and have similar climates and temperatures, as well as inhabitants. The major biomass are the tundra, tropical forest, temperate forest, taiga, temperate grassland , savanna, chaparral and desert. The Tundra is cold and largely treeless area that former a belt around North America, Europe and Asia. It covers over one-fifth of earths land surface, the Tundra is characterized by permafrost . There are not many trees since the region’s very cold , with a growing season of about two months.

The Tundra inhabitants are artic foxes, Musk and snowshoe hares. Another boom is theoretical Forest, which is located near the equator. This boom receives plentiful rainfall and has stable temperatures. Tree tops are covered by canopy which makes competition for light intense causing small plants to live on the branches of tall trees. Many species of trees are found here.

Temperate Forest are characteristic by moderate climate and changing seasons. Coniferous and deciduous trees are common in these forests.

These trees have seeds and shed their leaves each year. Taiga is found South of tundra and is dominated by coniferous trees. Plants living here are adapted for cold long winters and short summers . Animals can stay all winter long if adaptable but others choose to migrate during the winter to warmer areas. Temperate grasslands can be found in continents interiors and have rich fertile soil. Theses areas receive little rainfall to support trees.

Since these areas have such rich soil they are used for growing crops such s wheat. The North American Vision lives in these Savannas have scattered trees and shrubs. They receive more rainfall then a areas.

Seers but less then a tropical forest. Savannas have both wet and dry seasons. Lions , Leopold and cheetahs can be found here feeding on herbivores. Chaparrals have hot day summers and rainy winters . You can find spiny shrubs and coniferous trees.

You can find this boom in primarily costal regions, such as the Mediterranean The desert boom receives less than twenty-five centimeters of rain per year Sea. ND covers large parts of North Africa and parts of Australia . As hot as the deserts may be during the night the temperature can drop down to negative fifty degrees below zero.

Plants and animals living here must conserve water. Many of earths animals live in aquatic zones. Animals living in intertribal zones are adapted to being exposed into air during low tides . Organisms living in theses zones must be

able to withstand the force of craning waves. The Energetic zone is the most productive zone In the ocean. It supports more numbers of species than another zone. Coral reefs are found here , while water is hallow enough for photosynthesis to occur.

Plankton thrive in these region and the reefs are home to many animals . The deepest part of the ocean is the oceanic zone, although it contains fewer species than the Energetic zone. About half of the photosynthesis that occurs on earth happens here .

Organism that live here have to cope with crushing pressure and near freezing temperatures. Fish found in these deeps have expanding stomachaches that can adapt to the pray they catch and large jaws to catch prey. The place were freshwater pours into the sea are called estuaries. Here you will find marshes, mangrove swamps, forests, and MD flats. Some of the fresh water zones are ponds and lakes.

Tropic areas are rich in organic materials and have lots of vegetation while oligarchic lakes contain little organic matter and are clear at the bottom. Rivers and streams are body of fresh water that flow gradient toward its mouth and organisms here are adapted to withstand powerful currents. Some of the fishes living in the rivers and streams have the strength to swim upstream .

Slow-moving rivers have more nutrients and support greater diversity of life . Plants can be found in the slow-moving areas of rivers and ashes that feed on them.