water pollution, two out of three fresh-water mussel species in the United States are at risk of extinction.

In particular, the loss of species is caused by as the growing size of human populations, and the rate at which humans consume resources and cause changing climate. Global warming is already affecting species: migration is accelerating, the timing of the seasons is changing, and animals are migrating, hatching eggs, and bearing young on average five days earlier than they did at the start of the 20 th century. In addition, some butterflies have shifted northward in Europe by thirty to sixty miles or more, species' ranges are shifting toward the poles at some four miles a decade, amphibians were spawning earlier, and plants are flowering earlier.

For many endangered species, a significant captive population exists in zoos and other facilities around the world. By breeding individuals in captivity, genetic variation of a species can be more easily sustained, even when the species' natural habitat is being destroyed. Some species exist only in captivity because the wild population became extinct.

DEFORESTATION

Rep. Kolesnik V., E-51 Supervisor Mulina N.I., As. Prof.

Deforestation is the conversion of forested areas to non-forest land use such as arable land, urban use, logged area or wasteland. Generally this removal or destruction of significant areas of forest cover has resulted in a degraded environment with reduced biodiversity. In developing countries, massive deforestation is ongoing and is shaping climate and geography.

Deforestation results from removal of trees without sufficient reforestation; however, even with reforestation, significant biodiversity loss may occur. There are many causes, ranging from slow forest degradation to sudden and catastrophic wildfires. Deforestation can be the result of the deliberate removal of forest cover for agriculture or urban development, or it can be an unintentional consequence of uncontrolled grazing (which can

prevent the natural regeneration of young trees). The combined effect of grazing and fires can be a major cause of deforestation in dry areas. In addition to the direct effects brought about by forest removal, indirect effects caused by edge effects and habitat fragmentation can greatly magnify the effects of deforestation.

While tropical rainforest deforestation has attracted most attention, tropical dry forests are being lost at a substantially higher rate, primarily as an outcome of slash-and-burn techniques used by shifting cultivators. Generally loss of biodiversity is highly correlated with deforestation.

The largest cause as of 2006 is slash-and-burn activity in tropical forests. Slash-and-burn is a method sometimes used by shifting cultivators to create short term yields from marginal soils. When practiced repeatedly, or without intervening fallow periods, the nutrient poor soils may be exhausted or eroded to an unproductive state. Slash-and-burn techniques are used by native populations of over 200 million people worldwide. While shortsighted, market-driven forestry practices are often one of the leading causes of forest degradation, the principal human-related causes of deforestation are agriculture and livestock grazing, urban sprawl, and mining and petroleum extraction. Growing worldwide demand for wood to be used for fire wood or in construction, paper and furniture - as well as clearing land for commercial and industrial development (including road construction) have combined with growing local populations and their demands for agricultural expansion and wood fuel to endanger ever larger forest areas.

Agricultural development schemes in Mexico, Brazil and Indonesia moved large populations into the rainforest zone, further increasing deforestation rates. One fifth of the world's tropical rainforest was destroyed between 1960 and 1990. Estimates of deforestation of tropical forest for the 1990s range from ca. 55,630 km² to ca. 120,000 km² each year. At this rate, all tropical forests may be gone by the year 2090.

Deforestation alters the hydrologic cycle, altering the amount of water in the soil and groundwater and the moisture in the atmosphere. Forests support considerable biodiversity, providing valuable habitat for wildlife; moreover, forests foster medicinal conservation and the recharge of aquifers.

Shrinking forest cover lessens the landscape's capacity to intercept, retain and transport precipitation. Instead of trapping precipitation, which then percolates to groundwater systems, deforested areas become sources of surface water runoff, which moves much faster than subsurface flows. That quicker transport of surface water can translate into flash flooding and more localized floods than would occur with the forest cover. Deforestation also contributes to decreased evapotranspiration, which lessens atmospheric moisture which in some cases affects precipitation levels downwind from the deforested area, as water is not recycled to downwind forests, but is lost in runoff and returns directly to the oceans.

Long-term gains can be obtained by managing forest lands sustainable to maintain both forest cover and provide a biodegradable renewable resource. Forests are also important stores of organic carbon, and forests can extract carbon dioxide and pollutants from the air, thus contributing to biosphere stability and probably relevant to the greenhouse effect. Forests are also valued for their aesthetic beauty and as a cultural resource and tourist attraction.

THE INTERNET AS A POWERFUL TOOL IN FOREIGN LANGUAGE ACQUISITION

Rep. Mulin D., ES-51 Supervisor Mulina N.I., As. Prof.

Initially the Internet appeared as the means of communication among American intelligence services, but now it has grown up to the greatest international net. It has subverted the ability of different institutions and factors to control the flow of information. Today any individual, any small group can reach millions of others directly with a message, an ad, an image, a song or a video.

The emergence of the Internet and its rapid gain in popularity has facilitated a change in the medium used in learning foreign languages. As a result, it is common now for anyone to use the