

SCIENCE NEWS – Year 12 Biology students went to the Zoo

They didn't quite stay all day (Friday April 21), but the trip was of immense educational value. Zoos can be somewhat controversial – they house animals (and plants) that are away from their normal geographical habitats. For example, what are African White Rhinos doing in Essex? But modern-day zoos perform vital functions in the areas of conservation and preservation and these were the themes of the day.



Teacher of Biology Mr Sousa and 6th Form Administrator Mrs Slater organised this trip to Colchester Zoo as part of the zoo's educational program. Arriving at 10.30am and departing at 2.30pm, the program for the day was in two parts: on arrival we were taken to the zoo's Kalahari Theatre where we were given a 60 minute talk by one of the zoo's educators, Lee, on the subject of "Conservation". We learned that this is not as simple as it sounds. According to geological fossil records there have been 5 "mass extinctions" in the history of our planet, when the majority of species on Earth have died out entirely due to natural causes – for example, volcanic activity, extreme climate change or even asteroid impact. It is now widely thought that we are in a period of the 6th mass extinction and that we are to blame!

Since the Industrial Revolution, human activity has had an increasingly profound and harmful effect on habitats worldwide – air, land and sea. Many species of plants and animals have become extinct as a result of this, the best-known historical example probably being the Dodo of Mauritius that died out in the late 17th century. However, such extinctions have continued to the present-day, one of the most recent being the Baiji – Chinese River Dolphin. Last seen in the wild in 2004, it is now thought to be extinct due to the damming of the Yangtze River to obtain hydroelectric power. When planning such large-scale projects, we must pay more attention to how we can achieve our aims while still conserving the ecosystems concerned.

Another focus was on how species are being hunted and killed to the point of extinction either for sport, or more usually, for profit – the poaching trade. The Black Rhinoceros used to roam central and southern Africa in their thousands, but now they are critically endangered. Some sub-species, such as the Western Black Rhinoceros are already classified as extinct. When, by weight, the horn of a Rhinoceros can be worth more than twice that of gold or platinum, it is easy to see how lucrative the poaching trade can be. However, we learned that eliminating poachers is not as simple as just stopping the individuals who kill the animals. There is a chain in the supply that stretches from impoverished families who can be coerced into the killing and transportation, right through to the end users who are often driven by deeply-held cultural beliefs and traditions. We must tackle the issue at every stage through education.

With the help of a range of national and international organisations, all in careful cooperation under the auspices of IUCN (International Union for the Conservation of Nature), there is hope for the future of endangered species, habitats and ecosystems; especially for the more than 100 species that are currently critically endangered. By understanding how we can balance our own needs with the need to conserve and preserve our planet's fragile ecology, we may cease and even repair the damage we are currently doing.

Following the presentation, the students were free to explore the zoo's 60 acres and get to see as many of the 160+ species on show as they had time for, both indoors and out. A veritable A-to-Z of the animal world, literally – from Aardvark to Zebra with cheetahs, elephants, hyenas, iguanas, monkeys, ostriches, tigers, wallabies, and more, along the way!

The zoo is home to many rare and endangered species and has an active breeding program. It also has its own charity, Action for the Wild, that since 2005 has been donating to a broad spectrum of conservation projects worldwide. Most notable has been the work to set up the 6,000 hectare UmPhafa Private Nature Reserve in KwaZulu Natal, South Africa. Working to rehabilitate the land which was previously managed as separate cattle farms to return it to a healthy state and to release native animal species back onto the reserve, many species have been released - these include zebra, nyala, giraffe, red hartebeest, blesbok, waterbuck, common reedbuck, blue wildebeest and ostrich.

