

Why did they disappear?

- Extinct Species in the World

Have you ever seen the following species (物種) around you?

a)



b)



c)



d)



e)



f)



g)



These colourful and amazing species of animals and plants, as you may have noticed and sadly to say, can only be seen in pictures, because all of them

are extinct (絕種) already.

For a species to be extinct, it means that it is completely destroyed and be gone forever. It no longer exists. Extinction happens when the death rate of a species is continually greater than its birth rate. In other words, there are more deaths than births for a particular species. There are fewer and fewer of them and, in the end, none. These species no longer live on Earth - due to different causes.

Before we look into the issue of extinction in-depth, let's take a look at some of the extinct animals as shown above.

a) Tahitian Red-billed Rail (塔希提島紅嘴秧雞)



It was last seen by J. Forster in 1768 on Tahiti, an island in Pacific Ocean, but it was said to have lived until around 1920. It was a bird which lived in the forest but could not fly. It disappeared after rats and cats were introduced onto the island. We now

can only see it in paintings as there is no specimens (標本) collected.

b. Dodo



The Dodo was a flightless bird found on the island of Mauritius. Since they had never seen human beings, they were very friendly to the Portuguese sailors who found them in 1598, and so the name "dodo", similar to the word meaning "stupid" in

Portuguese. They were grey in colour, with a hooked beak and some white feathers on its side, and weighed around 20-23 kg. The last dodo died in 1681.

c) St. Helena Olive



The St. Helena Olive was found on the island of Saint Helena at the Southern Atlantic Ocean. It was around four to seven metres tall. Its branches were dark brown to black in colour. The

long-oval-shaped dark green leaves had curved tips, and its pale underside had flat-laying hairs. The fruits were 1-2 cm long hard and woody capsules, with triangular shiny black seeds inside. By 1875, there were only 12 to 15 trees recorded to be alive. The last wild St. Helena Olive died on 11 October 1994, and St. Helena Olive was officially extinct in December 2003.

d) Lord Howe Swamphen (新不列顛紫水雞)



The Lord Howe Swamphen, or White Gallinule, (*Porphyrio albus*) was a large, flightless bird in the family Rallidae. It was found on Lord Howe Island, Australia. It was first described by John White in his *Journal of a Voyage to New South Wales*

(1790). It had white feathers on its whole body, except for some blue mottles (斑紋). It was extinct by the early 19th century.

e) Passenger Pigeon (候鴿)



Female



Male

The Passenger Pigeon, once probably the most numerous bird on the planet, made its home in the forest east of the Rocky Mountains, North America.

Population estimates from the 19th century ranged from 1 billion to close to 4 billion individuals. Total populations may have reached 5 billion individuals - up to 40% of the total number of birds in North America! When they flew together, they would darken the sky for hours and days as the flock (鳥群) passed overhead. The Passenger Pigeon had a dark blue head, scarlet eyes, dark grey back and a wine red breast. Brighter colours were found among the males. However, the number of this once so populated bird declined dramatically by 1850s, and on 1 September, 1914, the last of it died at the Cincinnati Zoo.

f) *Thylacine* (袋狼)

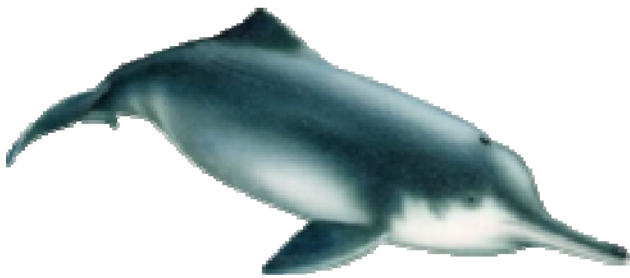


It was an animal with names like Tasmanian Tiger or Kangaroo wolf. It was found in Tasmania, Australia. It was around 4 to 6.5 feet from nose to tail, of which

the tail is about 2 feet. It was covered with short smooth dusky yellowish brown hair and had good sense of smell. It ran very fast, and usually chased its preys (e.g. kangaroos, ground birds) until the latter was exhausted. Large head, black eyes and savage (兇猛的) looking, it was in

fact not aggressive. The last wild thylacine was shot dead on 13 May 1930, and the last of this species died at Beaumaris Zoo in 1936.

g) Chinese River Dolphin (白鱘)



Chinese River Dolphin, or Baiji, was a graceful animal, with a long, narrow and slightly upturned beak and a flexible neck. It may be in the colours of bluish-grey to grey or white to ashy-white. It weighed 135 - 230 kg (300 - 510 lb) and measures as much as 2.5 m (8.2') in length. Baijis only occurred in freshwater rivers and lakes. In the Yangtze River, the baiji generally lived in the deeper sections, swimming to shallow water only to catch small fish. They also appeared in the Qiantang and Fuchun Rivers and Dongting and Poyang Lakes. Baijis generally lived in small groups of 3 - 4 animals, which might come together to make up a larger social unit of 9 - 16 dolphins. It was considered a critically endangered species since 1996, and no signs of this species had been found during an extensive search conducted in their living area in 2007, signaling a probable extinction of this species.

REASONS FOR THEIR EXTINCTION

The above information makes us wonder: how and why did these lovely creatures disappear on Earth? There are a number of causes, some are natural, some are actually caused by human activities.

1) Natural Extinction

This happens when a species declines in numbers gradually but steadily at the end of its evolutionary period on Earth. The length of the period depends largely on the success of the species as a whole and its ability to adjust to changes in climate and vegetation and the appearance of predators (掠食者) or (in the case of predators) the disappearance of prey. It is worth remembering that a species dying a natural evolutionary death is nearly always replaced by new forms or groups.

2) Direct Extinction

This occurs when humans destroy animals in such numbers that they completely disappear and so no longer exist as a species. People may be killing these species out of the following reasons:

(i) profit (and often - greed),

(ii) competition with animals for food, habitat or both, or

(iii) the sheer enjoyment of killing.

People kill animals for their meat, oil, hides, fur, feathers, shells or eggs.

People trade in live animals. In order to get the largest profit, over-fishing and over-hunting might be the practice and therefore the extinction of certain land and sea creatures. Some animals are killed because of superstitious or mysterious fear (such as in the case of Thylacines); others are killed to provide souvenirs for tourists.

3) Indirect Extinction

One of the major causes under this type of extinction is the destruction of habitat (棲息地). With the human race multiplying at the rate of one million more people every six days; the destruction of tropical rain forests at the frightening rate of 50 acres per minute; and the probable loss of approximately 800 square miles of wild habitat each day to human needs - it is hardly surprising that there are at present about 5,000 species of animals and more than 25,000 species of plants facing extinction.

Introduction of new species of animals into a place might be a cause as well.

As in the case of the extinction of dodo, it could not fly, and therefore were protection-less against dogs and wild pigs brought by sailors who

discovered them. These dogs and wild pigs destroyed and ate the eggs laid by dodo, whose nests were on the ground, unprotected.

Discussion:

1. What do you think are the causes of extinction for the 8 examples of extinct species listed above?
2. What is the significance of the extinction of a species on Earth or our ecosystem? What is its significance to us, human beings?
3. As shown above, a significant part of extinction was caused by human activities. How can we help stopping such trend?

Further Reading:

Significance of the extinction of dodo: <http://www.davidreilly.com/dodo/impact.html>
10 Most Amazing Extinct Animals: http://www.oddee.com/item_88742.aspx

References:

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