

Scientists develop resource to study animal aging

February 17 2009

A database detailing the life history of more than 4,000 animal species has been developed by scientists at the University of Liverpool for study in areas such as ageing, evolution and conservation.

The online resource, which is the most extensive and complete record of animal longevity, details the maximum and average lifespan of an animal, its weight, age of sexual maturity, litter size and other life history traits. It can be used to examine why different species age at different rates in order to further understanding of the mechanisms of ageing. The database will also be a reference for scientists investigating whether populations of particular animals could survive after their numbers have been depleted by human activities.

The resource, which can be accessed by both members of the public and researchers, will help experts study how the lifespan of a species can be influenced by the way in which it adapts to its environment. It features some of the world's most unusual creatures, such as the naked mole-rat - a small burrowing rodent, native to parts of East Africa, that has been subject to many biological studies due to its ability to survive for as long as 30 years in harsh environmental conditions.

Dr Joao Pedro Magalhaes, from the University's School of Biological Sciences, explains: "The naked mole-rat is a good example of how complex the mechanisms of ageing are. The assumption is that the bigger an animal is, the longer it lives, yet the mole-rat is about the size of a mouse and can live for almost three decades.

"Our resource can help supply a rounded picture of an animal's life so that we can consider all aspects of how an animal survives, from its environment to its litter size, when investigating the ageing process and how it is shaped by evolution.

"A good example of how our resource can help us maintain animal populations is the issue of over-fishing, whereby fish stocks are being depleted beyond recovery. Researchers will be able to use the resource to identify the age at which an animal matures and their expected lifespan to determine which populations are not producing enough newborns to replace those that have died."

More information: Details of the resource, called AnAge, are published in *Aging Cell*. The database can be found at: genomics.senescence.info/species/index.html

Source: University of Liverpool

Citation: Scientists develop resource to study animal aging (2009, February 17) retrieved 16 July 2024 from <https://phys.org/news/2009-02-scientists-resource-animal-aging.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.