

ICZN

The International Commission on Zoological Nomenclature

What's in a name? Scientific names for animals in popular writing

Introduction

Having a name for something allows us to talk about it – but everyday names for animals can be imprecise, and vary between people and languages. This problem was solved in 1753 by Carl Linnaeus, a practical Swedish biologist.

Linnaeus gave each species a two-word name made up of a genus name and a specific name, e.g. *Homo sapiens* for modern humans. The method soon caught on and is still used by scientists today.

Standards for names

Linnaeus' system is now governed by a set of rules produced by the International Commission on Zoological Nomenclature. The rules ensure that the same scientific name can be used for the same animal by all scientists across the world. This means scientists can confidently and precisely communicate with each other about animals.

New species are described in a particular way, published in a scientific paper, with a description and illustrations. 'Type' specimens are designated by the scientist; these are the key specimens for that species, which other scientists refer to.

Names of species can be descriptive: e.g. *Elephas maximus* for the Asian elephant; or describe where the animal comes from e.g. *Alces americanus* for the Moose; or commemorate a significant person e.g. the fossil plesiosaur *Attenborosaurus conybeari*, named after David Attenborough.

Problems can be resolved, e.g. if one species is described twice by mistake, usually the first name published is valid and the other is disregarded. Similarly if two species have the same name, the species with the older name keeps the name and the other is renamed.

How to write names

Zoological names are written in a standard way so they can be easily recognised.

- The genus name is first, and must start with a capital, the specific name second,

starting with a lower-case letter. This shows the hierarchy between genus and species.

- The genus and specific name are conventionally written in *italics* (or other contrasting typeface) to distinguish the name from surrounding text.
- Only the 26 letters of the Latin alphabet are used. Gaps, accents, apostrophes, hyphens (except rare instances) and numbers are not used.
- Species names should be written in full at first, but for later mentions, the genus name can be abbreviated e.g. *Homo sapiens* can be written *H. sapiens*.
- The names of higher-ranking groups e.g. families or orders always begin with a capital but are not italicised.

For example, the honey bee is called *Apis mellifera*, shortened to *A. mellifera*. It belongs to the genus *Apis*, which also includes other species such as *Apis cerana*. Together with other genera of bees, *Apis* is included in the bee family Apidae (the Latin name for the family) or apids (the common derivation of the family name). Apidae and other related families of insect make up the order Hymenoptera (ants, bees, wasps etc.).

Other tips

Don't publish names which haven't appeared in scientific literature as this creates confusion.

Names for mythological (non-existent) creatures, e.g. the Loch Ness Monster, are not valid, and should not be used as scientific names.

To find out about recently described new species, look at the publication in which the scientist(s) first formally described them, and speak to the scientist themselves - contact details are usually given in these publications.

More information and advice

The International Commission on Zoological Nomenclature supports science writers and editors who use zoological names. Enquiries & FAQs can be found at: <http://iczn.org/>.

Some commonly used zoological names

A malaria-causing parasite	<i>Plasmodium falciparum</i>
African bush elephant	<i>Loxodonta africana</i>
Asian elephant	<i>Elephas maximus</i>
Bald eagle	<i>Haliaeetus leucocephalus</i>
Blue whale	<i>Balaenoptera musculus</i>
Colossal squid	<i>Mesonychoteuthis hamiltoni</i>
Domestic cat	<i>Felis catus</i>
Domestic dog	<i>Canis lupus familiaris</i> (a subspecies of the Wolf – <i>Canis lupus</i>)
Drugstore beetle	<i>Stegobium paniceum</i>
Edible (or Roman) snail	<i>Helix pomatia</i>
Giant panda	<i>Ailuropoda melanoleuca</i>
Great white shark	<i>Carcharodon carcharias</i>
Honey bee	<i>Apis mellifera</i>
Horse	<i>Equus caballus</i>
House sparrow	<i>Passer domesticus</i>
Humans	<i>Homo sapiens</i>
Koala	<i>Phascolarctos cinereus</i>
Lion	<i>Panthera leo</i>
Mediterranean fruitfly (Medfly)	<i>Ceratitis capitata</i>
Monarch butterfly	<i>Danaus plexippus</i>
Moose	<i>Alces americanus</i>
Mouse	<i>Mus musculus</i>
Platypus	<i>Ornithorhynchus anatinus</i>
Tiger	<i>Panthera tigris</i>
Yellow fever mosquito	<i>Aedes aegypti</i>
Zebra finch	<i>Taeniopygia guttata</i>