

capitolo 3 La classificazione dei viventi: dai microrganismi ai funghi

verifica la comprensione

Leggi il brano e rispondi alle domande.



Linnaeus's scientific thought

For Linnaeus, species of organisms were real entities, which could be grouped into higher categories called *genera* (singular, *genus*). By itself, this was nothing new; since Aristotle, biologists had used the word *genus* for a group of similar organisms, and then sought to define the *differentio specifica* – the specific difference of each type of organism. But opinion varied on how genera should be grouped. Naturalists of the day often used arbitrary criteria to group organisms, placing all domestic animals or all water animals together.

Part of Linnaeus's innovation was the grouping of genera into higher taxa that were also based on shared similarities. In Linnaeus's original system, genera were grouped into orders, orders into classes, and classes into kingdoms. Thus the kingdom *Animalia* contained the class *Vertebrata*, which contained the order *Primates*, which contained the genus *Homo* with the species *sapiens* – humanity. Later biologists added additional ranks between these to express additional levels of similarity.

Before Linnaeus, species naming practices varied. Many biologists gave the species they described long,

unwieldy Latin names, which could be altered at will; a scientist comparing two descriptions of species might not be able to tell which organisms were being referred to. For instance, the common wild briar rose was referred to by different botanists as *Rosa sylvestris inodora seu canina* and as *Rosa sylvestris alba cum rubore, folio glabro*. The need for a workable naming system was made even greater by the huge number of plants and animals that were being brought back to Europe from Asia, Africa, and the Americas.

After experimenting with various alternatives, Linnaeus simplified naming immensely by designating one Latin name to indicate the genus, and one as a «shorthand» name for the species. The two names make up the *binomial* («two names») species name. For instance, in his two-volume work *Species Plantarum* (*The Species of Plants*), Linnaeus renamed the briar rose. This binomial system rapidly became the standard system for naming species.

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- How were organisms classified before Linnaeus?
- What systematic categories did Linnaeus group living things into?
- In what way did Linnaeus simplify the naming of organisms?