

## Termites are 'social cockroaches'

**UK scientists have said that they have produced the strongest evidence to date that termites are actually cockroaches.**



The termites classification debate stretches back decades

They said their research showed that termites no longer merit belonging to a different order (Isoptera), but should be treated as a family of cockroaches.

The study examined the DNA sequences of five genes in the creatures, and found that termites' closest relatives were a species of wood-eating cockroaches.

The findings appear in the Royal Society's Biology Letters journal.

One of the paper's co-authors, Paul Eggleton, explained why their research had unmasked termites' "true identity".

"In the past, people thought that because termites were so different in appearance, they belonged to a different order," he said.

"It has only been recently when we have been able to look at other things than the obvious body shapes and sizes that we began to realise that they are very similar to cockroaches."

### **Differing data**

All living organisms, once they have been described, are classified in a taxonomic system, which places the organism in a unique hierarchy of categories from kingdom, through phylum, class, order, family, genus and finally species.

Dr Eggleton, from the Natural History Museum (NHM), London, said examining the insects' DNA offered much more robust data about the relationship between the insects.



The team sequenced the DNA of five genes from 107 species of Dictyoptera (termites, cockroaches and mantids) to develop a picture of the creatures' evolutionary history.

**“ What we have done is produce the strongest set of data to date that termites are actually social cockroaches ”**

Dr Paul Eggleton, NHM

The researchers concluded that termites should be classified as a family (Termitidae) within the cockroaches' order (Blattodea).

Dr Eggleton was not surprised by the results. He said the classification of termites was an ongoing debate that stretched back to the 1930s.

He added that disagreements began when researchers found some of the microbes in the guts of termites that allow them to digest wood were also found in a group of cockroaches.

"The argument has gone backwards and forwards because of differing datasets over the years," he explained.

"I think what we have done is produce the strongest set of data to date that termites are actually social cockroaches."

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