

# Giant virus found in marine predatory plankton

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Researchers have identified a marine giant virus that infects *Cafeteria roenbergensis*, a widespread planktonic predator that occupies a key position in marine food webs, according to a study.

So-called giant viruses have puzzled evolutionary biologists since the discovery of *Acanthamoeba polyphaga mimivirus*, which infects freshwater amoebae and has a genome of 1.2 million base pairs that is larger than the genomes of some cellular organisms.

Curtis A. Suttle and colleagues analyzed an unknown virus infecting *C. roenbergensis* that had been isolated in Texas coastal waters in the early 1990s.

According to the authors, the pathogen's [genome](#) contains approximately 730,000 base pairs, which would make it the largest known marine virus. The virus, named CroV, possesses numerous genes that are typically used by living cells to repair [DNA damage](#) and to synthesize proteins and sugars.

CroV also has [genes](#) that encode some of the proteins that viruses need to replicate but must obtain from a host organism.

Because viruses cannot replicate independently, they are classified as "non-living," but giant viruses like CroV that possess functioning components of the replication machinery challenge this classification.

CroV, the authors report, may also represent a major group of largely unknown but ecologically important marine giant viruses.

**More information:** "A giant virus with a remarkable complement of genes infects marine zooplankton," by Matthias G. Fischer, Michael J. Allen, William H. Wilson, and Curtis A. Suttle, *Proceedings of the National Academy of Sciences*.

Source: Proceedings of the National Academy of Sciences

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