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## Life, but not as we know it: exploring RNA viral diversity in soils through viromics

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Viruses play a crucial and underexplored role in soil microbial ecosystems, but soil viral ecology has focused exclusively on DNA viruses. The role of RNA viruses in soil ecosystems has therefore been largely overlooked, despite their significant impact on public health and food security. Here, we report the first ever study to apply viromics to survey soil RNA viral communities from five sites along an altitudinal primary productivity gradient in the UK. We identified over 3,000 viral sequences, of which over half were unclassified, and newly identified viruses were placed in a global context by the phylogenetic comparison of their RNA-dependent RNA polymerase genes. Unlike DNA viral communities, the RNA viromes were heavily dominated by viruses of eukaryotes, including pathogens of plants, fungi, vertebrates and invertebrates. Sampling sites showed minimal similarity in viral community composition, suggesting that we have just scratched the surface of soil RNA viral diversity. Wider sequencing efforts and method development are required to further explore soil RNA viromes and understand their ecological function; however, this study represents an important step towards the characterisation of soil viral communities and interactions with their microbial hosts, which will provide a more holistic view of the biology of economically and ecologically important soils.