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Sommario/riassunto	<p>Viruses infect numerous microorganisms including, predominantly, Bacteria (bacteriophages or phages) but also Archaea, Protists, and Fungi. They are the most abundant and ubiquitous biological entities on Earth and are important drivers of ecosystem functioning. Little is known, however, about the vast majority of these viruses of microorganisms, or VoMs. Modern techniques such as metagenomics have enabled the discovery and description of more presumptive VoMs than ever before, but also have exposed gaps in our understanding of VoM ecology. Exploring the ecology of these viruses – which is how they interact with host organisms, the abiotic environment, larger organisms, and even other viruses across a variety of environments and conditions – is the next frontier. Integration of a growing molecular understanding of VoMs with ecological studies will expand our knowledge of ecosystem dynamics. Ecology can be studied at multiple levels including individual organisms, populations, communities, whole ecosystems, and the entire biosphere. Ecology additionally can consider normal, equilibrium conditions or instead perturbations. Perturbations are of particular interest because measuring the effect of disturbances on VoM-associated communities provides important windows into how</p>

VoMs contribute to ecosystem dynamics. These disturbances in turn can be studied through in vitro, in vivo, and in situ experimentation, measuring responses by VoM-associated communities to changes in nutrient availability, stress, physical disruption, seasonality, etc., and could apply to studies at all ecological levels. These are considered here across diverse systems and environments.
