How to write virus, species, and other taxa names

Names of viruses (the physical things you work with in the lab or that make you sick) are written differently than the names of species and other taxa (logical constructs that help us categorize viruses).

A species name* is written in italics with the first word beginning with a capital letter. Other words only begin with a capital if they are proper nouns (including host genus names but not virus genus names**) or alphabetical identifiers. A species name should not be abbreviated. Examples:

- The genus *Iflavirus* includes the species *Deformed wing virus*.
- Members of the species *West Nile virus* are arboviruses.
- The species *Sandfly fever Naples phlebovirus* has many diverse member viruses.
- The etiological agents of poliomyelitis (poliovirus types 1, 2 and 3) are members of the species *Enterovirus C*.
- Anadyr virus, Batai virus, Birao virus, and many more, are members of the species *Bunyamwera orthobunyavirus*.
- A new bacteriophage, belonging to the species *Salmonella virus SP6*, has been isolated.
- *Rattus norvegicus polyomavirus 1* is a species in the family *Polyomaviridae*.

Some host genus names may also be considered common nouns in English and can be written in lower case where they are not the first word of the species name. Example:

- *Indian citrus ringspot virus*

A virus name should never be italicized, even when it includes the name of a host species or genus and should be written in lower case. This ensures that it is distinguishable from a species name, which otherwise might be identical. The first letters of words in a virus name, including the first word, should only begin with a capital when these words are proper nouns (including host genus names but not virus genus names) or start a sentence. Single letters in virus names, including alphanumerical strain designations, may be capitalized. In most texts, virus names are used much more frequently than species names and may, therefore, be abbreviated. Examples:

- Isolates of dengue virus 2 were obtained ....
- Detection of West Nile virus in human serum ....
- Salmonella phage SE1 was isolated ....
- Sida ciliaris golden mosaic virus (SCGMV) causes ....

- Aphids transmit potato virus Y (PVY).

A higher taxon name (i.e. above the rank of species) is written as a single word with a taxon-specific suffix. Examples:

realm	...*viria*
subrealm	...*vira*
kingdom	...*virae*
subkingdom	...*virites*
phylum	...*viricota*
subphylum	...*viricotina*
class	...*viricetes*
subclass	...*viricetidae*
order	...*virales*
suborder	...*virineae*
family	...*viridae*
subfamily	...*virinae*
genus	...*virus*
subgenus	...*virus*

Like a species name, a higher taxon name is written in italics and begins with a capital letter. This differs from the convention in botany and zoology, in which taxon names above the level of genus are not italicized. Taxon names are often preceded by a taxon level identifier. Examples:

- ... a new species in the genus *Fabavirus*
- ... members of the subfamily *Comovirinae*
- .... members of the family *Secoviridae*
- The order *Picornavirales* includes viruses infecting hosts of a range of species.

A collective name for a group of viruses belonging to a higher-level taxon is neither italicized nor capitalized, even if it was derived from a proper noun. The first letter of a collective name may be capitalized if it begins a sentence.

- ourmiaviruses, ourmiavirus
- Guernseyviruses are distributed worldwide.
- The guernseyviruses are distributed worldwide.
- aparaviruses
- the aparavirus polymerase

Note that if taxa have the same stem (e.g. *Flavivirus* and *Flaviviridae*), this may lead to ambiguity because both groups of viruses could be referred to as flaviviruses. Some virologists use the terms stem + virads, stem + virids, stem + virins, and stem + virus to distinguish members of orders, families, subfamilies and genera, respectively.

Complex example sentences:

- Ebola virus (species *Zaire ebolavirus*; genus *Ebolavirus*; family *Filoviridae*; order *Mononegavirales*) can cause disease in humans and nonhuman primates.
- Infection of larvae of the silkworm, *Bombyx mori* (family Bombycidae) with the baculovirus Bombyx mori nucleopolyhedrovirus (BmNPV) (species *Bombyx mori nucleopolyhedrovirus*) is often lethal.
- In the family *Podoviridae*, the subfamily *Autographivirinae* groups together all podoviruses that contain an RNA polymerase gene in their genome, including Escherichia phage T7 (species *Escherichia virus T7*; genus *Teseptimavirus*) and Klebsiella phage F19 (species *Klebsiella virus F19*; genus *Drulisvirus*).
- Artoviruses form a family in the haploviricotine order *Mononegavirales*.

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*The complete rules for naming virus taxa can be found in the ICTV Code: https://ictv.global/code

** A proper noun is a name used for an individual person, place, or organization. A common noun denotes a class of objects or a concept. Host genus names are normally considered as proper nouns because they refer to a group of unique entities but some, for example "citrus", have become common nouns because they can also describe intergeneric hybrids. Virus genus names are not considered as proper nouns when used as part of a species or virus name because they refer to a subset of the genus and not the genus as a whole.