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Taxonomy of the order *Bunyavirales*: update 2019

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Abstract

In February 2019, following the annual taxon ratification vote, the order *Bunyavirales* was amended by creation of two new families, four new subfamilies, 11 new genera and 77 new species, merging of two species, and deletion of one species. This article presents the updated taxonomy of the order *Bunyavirales* now accepted by the International Committee on Taxonomy of Viruses (ICTV).

Keywords

Arenaviridae; arenavirid; arenavirus; bunyavirad; *Bunyavirales*; Bunyavirid; *Bunyaviridae*; bunyavirus; emaravirus; *Feraviridae*; feravirid; feravirus; fimovirid; *Fimoviridae*; fimovirus; goukovirus; hantavirid; *Hantaviridae*; hantavirus; hartmanivirus; herbevirus; ICTV; International Committee on Taxonomy of Viruses; jonvirid; *Jonviridae*; jonvirus; leishbuvirid; *Leishbuviridae*; leishbuvirus; mammarenavirus; nairovirus; *Nairoviridae*; nairovirus; orthobunyavirus; orthoferavirus; orthohantavirus; orthojonvirus; orthonairovirus; orthophasmavirus; orthotospovirus; peribunyavirid; *Peribunyaviridae*; peribunyavirus; phasmavirid; phasivirus; *Phasmaviridae*; phasmavirus; phenuvirid; *Phenuiviridae*; phenuvirus; phlebovirus; reptarenavirus; tenuivirus; tospovirid; *Tospoviridae*; tospovirus; virus classification; virus nomenclature; virus taxonomy

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Compliance with ethical standards

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Conflict of interest

The authors declare no conflicts of interest.

Ethical approval

This article does not contain any studies with human participants or animals performed by any of the authors.

Introduction

The virus order *Bunyavirales* was established in 2017 to accommodate related viruses with segmented, linear, single-stranded, negative-sense or ambisense RNA genomes classified into nine families [19]. An amended/emended order description was published in early 2019 [20]. Here, we present the changes that were proposed via official ICTV taxonomic proposals that were accepted by the ICTV Executive Committee (EC) in February 2019. Therefore, these changes are now part of the official ICTV taxonomy.

Taxonomic changes at the order rank

The order was expanded by addition of two new families. Family *Leishbuviridae* was created to accommodate one new genus, *Shilevirus*, including one new species, *Leptomonas shilevirus*, for Leptomonas moramango leishbunyavirus (LEPMV) discovered in a trypanosomatid protist (*Leptomonas moramango*) [2]. Family *Tospoviridae* was recreated for the already established genus *Tospovirus* (now renamed *Orthotospovirus*; TaxoProp 2018.017M.A.v1.Bunyavirales_2fam5gen) and expanded by seven new species (TaxoProp 2018.025P.A.v1.Orthotospovirus_7sp):

- *Bean necrotic mosaic orthotospovirus* for bean necrotic mosaic virus (BeNMV) discovered in common beans (*Phaseolus vulgaris*) [8];
- *Calla lily chlorotic spot orthotospovirus* for calla lily chlorotic spot virus (CCSV) found in calla lilies (*Zantedeschia* sp.) [5, 18];
- *Capsicum chlorosis orthotospovirus* for capsicum chlorosis virus (CaCV) found in capsicums, chillies, and tomatoes [16, 23];
- *Chrysanthemum stem necrosis orthotospovirus* for chrysanthemum stem necrosis virus (CSNV) infecting chrysanthemums [3, 10];
- *Melon severe mosaic orthotospovirus* for melon severe mosaic virus (MSMV) infecting cucurbit crops [6, 7];
- *Melon yellow spot orthotospovirus* for melon yellow spot virus (MYSV) found in netted melon (*Cucumis melo*) [15]; and
- *Soybean vein necrosis orthotospovirus* for soybean vein necrosis virus (SVNV) discovered in soybeans (*Glycine max*) [36].

A genus unassigned to any family, *Coguvirus*, was established to include species *Citrus coguvirus* for citrus concave gum-associated virus (CCGaV) found in citrus trees [26] (TaxoProp 2018.020P.A.v1.Coguvirus).

Taxonomic changes at the family rank

Arenaviridae

The family *Arenaviridae* was expanded by one genus, *Antennavirus*, to include two new species, *Hairy antennavirus* and *Striated antennavirus*, for W nlung frogfish arenavirus 2

(WIFV-2) and W nlřing frogfish arenavirus 1 (WIFV-1), both found in striated frogfish (*Antennarius striatus*) [33] (TaxoProp 2018.005M.A.v1.Antennavirus).

Cruliviridae

No changes were made at the family rank.

Fimoviridae

No changes were made at the family rank.

Hantaviridae

The family (TaxoProp 2018.010M.A.v2.Hantaviridae_4subfam) was reorganized into four subfamilies:

- subfamily *Actantavirinae* was created for the new genus *Actinavirus* to accommodate three novel species: *Batfish actinovirus* for W nlřing minipizza batfish virus (WEMV) discovered in minipizza batfish (*Halieutaea stellata*); *Goosefish actinovirus* for W nlřing yellow goosefish virus (WEYGV) found in yellow goosefish (*Lophius litulon*); and *Spikefish actinovirus* for W nlřing red spikefish virus (WERSV) of red spikefish (*Triacanthodes anomalus*) [33];
- subfamily *Agantavirinae* was created for the new genus *Agnathovirus* to accommodate one new species, *Hagfish agnathovirus*, for W nlřing hagfish virus (WEHV) of inshore hagfish (*Eptatretus burgeri*) [33];
- subfamily *Mammantavirinae* was created to accommodate the established genera *Loanvirus*, *Mobatvirus*, and *Orthohantavirus*. Two new orthohantavirus species, *Seewis orhtohantavirus* and *Tigray orthohantavirus*, were created for Seewis virus (SWSV) of Eurasian common shrews (*Sorex araneus*) [34] and Tigray virus (TIGV) of Ethiopian white-footed mice (*Stenocephalemys albipes*) [12, 25], respectively; and
- subfamily *Repantavirinae* was created for the new genus *Reptillovirus* to accommodate one new species, *Gecko reptillovirus*, for Hainán oriental lead-toed gecko virus (HOLGV) discovered in oriental leaf-toed geckos (*Hemidactylus bowringii*) [33].

Mypoviridae

No changes were made at the family rank.

Nairoviridae

The species *Estero Real orthonairovirus* was created for Estero Real virus (ERV) (moved from genus *Orthobunyavirus*, family *Peribunyaviridae*) [1] (TaxoProp 2018.012M.A.v1.Bunyavirales_spmov).

Peribunyaviridae

The family was expanded by one new genus, *Pacuvirus*, to accommodate three new species: *Pacui pacuvirus* for Pacui virus (PACV) discovered in a rice rat (*Oryzomys* sp.); *Rio Preto da Eva pacuvirus* for Rio Preto da Eva virus discovered in a sewer gnat (Psychodidae sp.); and *Tapirape pacuvirus* for Tapirapé virus found in a hociudo (*Oxymycterus* sp.) [27] (TaxoProp 2018.017M.A.v1.Bunyavirales_2fam5gen). Genus *Tospovirus* was removed from the family and placed into the new family *Tospoviridae* as genus *Orthotospovirus* (TaxoProp 2018.017M.A.v1.Bunyavirales_2fam5gen). The genus *Orthobunyavirus* was reorganized by moving previously classified viruses into a total of 38 new species (one resulting from a merger of two previously established species) (TaxoProp 2018.008M.A.v1.Orthobunyavirus_38sp). Five additional novel species were added: *Bellavista orthobunyavirus* for Bellavista virus isolated from mosquitoes (*Culex portesi*) [14]; *Enseada orthobunyavirus* for Enseada virus isolated from *Culex* mosquitoes [4, 9]; *Maguari orthobunyavirus* for Maguari virus (MAGV) isolated from mosquitoes [13]; *Tataguine orthobunyavirus* for Tataguine virus (TATV) found in a human sample, and *Witwatersrand orthobunyavirus* for Witwatersrand virus (WITV) from mosquitoes [29] (TaxoProp 2018.017M.A.v1.Bunyavirales_2fam5gen). Species *Ester Real orthobunyavirus* was abolished, and its member, Ester Real virus (ERV), was moved into family *Nairoviridae* [1] (TaxoProp 2018.012M.A.v1.Bunyavirales_spmov).

Phasmaviridae

The family was expanded by addition of one new genus, *Sawastrivirus*, to include one new species, *Sanxia sawastrivirus*, for S nxiá water strider virus 2 (SxWSV-2) (TaxoProp 2018.017M.A.v1.Bunyavirales_2fam5gen) detected in gerrid water striders [31]. The genus *Orthophasmavirus* was expanded by the addition of five new species: *Culex orthophasmavirus* for Culex phasma-like virus (CPLV) detected in *Culex* mosquitoes [32]; *Ganda orthophasmavirus* for Ganda bee virus (GBEEV) of European orchard bees (*Osmia cornuta*) [28]; *Odonate orthophasmavirus* for Húb i odonate virus 8 (HbOV-8) [31]; *Qingling orthophasmavirus* for Húb i odonate virus 9 (HbOV-9) of odonates [31]; and *Seattle orthophasmavirus* for Seattle Precrang virus (SEPV) found in a moth (*Pasiphila rectangulata*) [21] (TaxoProp 2018.009M.A.v1.Phasmavirus_5sp).

Phenuiviridae

The family *Phenuiviridae* was expanded by addition of three new genera. Genus *Kabutovirus* was created to include two new species, *Huangpi kabutovirus* and *Kabuto mountain kabutovirus*, for Huángpí tick virus 1 (HpTV-1) of ticks (*Haemaphysalis doenitzi*) [17] and Kabuto mountain virus (KAMV) of ticks (*Haemaphysalis flava*) [11], respectively. Genus *Laulavirus* was created to include one species, *Laurel Lake laulavirus*, for Laurel Lake virus (LLV) of ticks (*Ixodes scapularis*) [35]. Genus *Wenrivirus* was created to include one species, *Shrimp wenrivirus*, for W zh u shrimp virus 1 (WzSV-1) [17] found in giant tiger prawns (*Penaeus monodon*) [17] (TaxoProp 2018.017M.A.v1.Bunyavirales_2fam5gen). The established genus *Banyangvirus* was expanded by two species, *Guertu banyangvirus* and *Heartland banyangvirus*, for Guertu virus (GTV) found in *Dermacentor nuttalli* ticks [30] and Heartland virus (HRTV), a tick-borne virus originally discovered in human samples

[24], respectively (TaxoProp 2018.013M.A.v1.Banyangvirus_sp; TaxoProp 2018.017M.A.v1.Bunyavirales_2fam5gen). Genus *Phlebovirus* was expanded by one species, *Mukawa phlebovirus*, for Mukawa virus (MKWV) of ticks (*Ixodes persulcatus*) [22] (TaxoProp 2018.014M.A.v1.Phlebovirus_sp). In genus *Phasivirus*, species *Wuhan fly phasivirus* was abolished (TaxoProp 2018.019M.A.v1.Phenuviridae_Remsp).

Wupedeviridae

No changes were made at the family rank.

Summary

A summary of the current, ICTV-accepted taxonomy of the order *Bunyavirales* is presented in Table 1.

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ICTV-accepted taxonomy of the order *Bunyavirales* as of February 2019. Listed are all bunyaviruses that are classified into species

Table 1

Genus	Species [#]	Virus (abbreviation) [¶]
Family Arenaviridae		
<i>Antennavirus</i>	<i>Hairy antennavirus</i>	W nlung frogfish arenavirus 2 (WFNAV-2)
	<i>Striated antennavirus*</i>	W nlung frogfish arenavirus 1 (WFNAV-1)
<i>Hartmannvirus</i>	<i>Hartmann hartmannivirus</i>	Hartman Institute snake virus 1 (HISV-1)
<i>Mammarenavirus</i>	<i>Alphahaya mammarenavirus</i>	Alphahuayao virus (ALLY)
	<i>Argentinian mammarenavirus</i>	Junin virus (JUNV)
	<i>Bear Canyon mammarenavirus</i>	Bear Canyon virus (BCNV)
	<i>Brazilian mammarenavirus</i>	Sabía virus (SBAV)
	<i>Cali mammarenavirus</i>	Pichindé virus (PICHV)
	<i>Chapare mammarenavirus</i>	Chapare virus (CHAPV)
	<i>Cupixi mammarenavirus</i>	Cupixi virus (CUPXV)
	<i>Flexal mammarenavirus</i>	Flexal virus (FLEV)
	<i>Cairo mammarenavirus</i>	Gato virus (GAIV)
	<i>Guanarito mammarenavirus</i>	Guanario virus (GTOV)
	<i>Ippy mammarenavirus</i>	Ippy virus (IPPYV)
	<i>Lassa mammarenavirus</i>	Lassa virus (LASV)
	<i>Latino mammarenavirus</i>	Latino virus (LATV)
	<i>Loei River mammarenavirus</i>	Loei River virus (LORV)
	<i>Lujio mammarenavirus</i>	Lujio virus (LUJV)
	<i>Luna mammarenavirus</i>	Luli virus (LULV)
	<i>Lunk mammarenavirus</i>	Luna virus (LUAV)
		Lunk virus (LNKV)
		Dandenong virus (DANV)
		lymphocytic choriomeningitis virus (LCMV)
	<i>Machupo mammarenavirus</i>	Machupo virus (MACV)
	<i>Mariental mammarenavirus</i>	Mariental virus (MRLV)
	<i>Merino Walk mammarenavirus</i>	Merino Walk virus (MRWWV)
	<i>Mobala mammarenavirus</i>	mobala virus (MOBV)

Genus	Species	Virus (abbreviation)
	<i>Mopeia mammarenavirus</i>	Mopeia virus (MPOV)
	<i>Okahandja mammarenavirus</i>	Morogoro virus (MORV)
	<i>Oliveros mammarenavirus</i>	Okahandja virus (OKAV)
	<i>Paraguayan mammarenavirus</i>	Oliveros virus (OLVV)
	<i>Pirital mammarenavirus</i>	Paraná virus (PRAV)
	<i>Ryukyu mammarenavirus</i>	Pirital virus (PIRV)
	<i>Serra do Navio mammarenavirus</i>	Ryukyu virus (RYKV)
	<i>Tacaribe mammarenavirus</i>	Amaparí virus (AMAV)
	<i>Solwezi mammarenavirus</i>	Solwezi virus (SOLV)
	<i>Souris mammarenavirus</i>	souris virus (SOLV)
	<i>Tamiami mammarenavirus</i>	Tacaribe virus (TCRV)
	<i>Wenzhou mammarenavirus</i>	Tamiami virus (TMMV)
	<i>Whitewater Arroyo mammarenavirus</i>	W nzhu virus (WENV)
		Big Brushy Tank virus (BBRTV)
		Catarina virus (CTNV)
		Skinner Tank virus (SKTV)
		Tonto Creek virus (TTCV)
		Whitewater Arroyo virus (WWAV)
		CAS virus (CASV)
<i>Reptarenavirus</i>	<i>California reperarenavirus</i>	University of Giessen virus 1 (UGV-1)
	<i>Giessen reptarenavirus</i>	University of Giessen virus 2 (UGV-2)
		University of Giessen virus 3 (UGV-3)
	<i>Golden reptarenavirus</i> *	Golden Gate virus (GOGV)
	<i>Ordinary reptarenavirus</i>	tavallinen suomalainen mies virus 2 (TSMV-2)
	<i>Rotterdam reperarenavirus</i>	ROUT virus (ROUTV)
		University of Helsinki virus 1 (UHV-1)
		Family <i>Cruliviridae</i>
	<i>Linervirus</i>	W ning crustacean virus 9 (WICV-9)
	<i>Crustacean linervirus</i> *	Family <i>Fimoviridae</i>
		<i>Actinidia chlorotic ringspot-associated emaravirus</i>
	<i>Emaravirus</i>	Actinidia chlorotic ringspot-associated virus (AcCRaV)

Genus	Species ¶	Virus (abbreviation) ¶
	<i>European mountain ash ringspot-associated emaravirus</i> *	European mountain ash ringspotassociated virus (EMARaV)
	<i>Fig mosaic emaravirus</i>	fig mosaic virus (FMV)
	<i>High Plains wheat mosaic emaravirus</i>	High Plains wheat mosaic virus (HPWMoV)
	<i>Pigeonpea sterility mosaic emaravirus 1</i>	pigeonpea sterility mosaic virus (PPSMV)
	<i>Pigeonpea sterility mosaic emaravirus 2</i>	pigeonpea sterility mosaic virus 2 (PPSMV-2)
	<i>Raspberry leaf blotch emaravirus</i>	raspberry leaf blotch virus (RLBV)
	<i>Redbud yellow ringspot-associated emaravirus</i>	redbud yellow ring-spot-associated virus (RYRaV)
	<i>Rose rosette emaravirus</i>	rose rosette virus (RRV)
		Family Hantaviridae
		Subfamily <i>Actantavirinae</i>
		W ning minipizza batfish virus (WEMBV)
		W ning yellow goosefish virus (WEYGY)
		W ning red spikefish virus (WERSV)
		Subfamily <i>Agantavirinae</i>
		W ning hagfish virus (WEHV)
		Subfamily <i>Mammantavirinae</i>
		Lóngquán virus (LQUV)
	<i>Loanivirus</i>	<i>Longquan loanivirus</i> *
	<i>Mobavirus</i>	<i>Laibin mobavirus</i>
		<i>Nova mobavirus</i> *
		<i>Quezon mobavirus</i>
	<i>Orthohantavirus</i>	<i>Andes orthohantavirus</i>
		Andes virus (ANDV)
		Castelo dos Sonhos virus (CASV)
		Lechiguanas virus (LECV = LECHV)
		Orán virus (ORNV)
		Asama virus (ASAV)
		Asikkala virus (ASIV)
		bayou virus (BAYV)
		Catacamas virus (CATV)
		Black Creek Canal virus (BCCV)
		<i>Black Creek Canal orthohantavirus</i>

Genus	Species	Virus (abbreviation)
	<i>Bowe orthohantavirus</i>	Bowé virus (BOWV)
	<i>Bruges orthohantavirus</i>	Bruges virus (BRGV)
	<i>Cano Delgadito orthohantavirus</i>	Caño Delgadito virus (CADV)
	<i>Cao Bang orthohantavirus</i>	Cao Bằng virus (CBNV)
	<i>Choclo orthohantavirus</i>	Lianghé virus (LHEV)
	<i>Dabieshan orthohantavirus</i>	Chocho virus (CHOV)
	<i>Dabieshan-Belgrade orthohantavirus</i>	Dabíeshán virus (DBSV)
	<i>Dobrava-Belgrade orthohantavirus</i>	Dobrava virus (DOBV)
	<i>Kurkino virus</i>	Kurkino virus (KURV)
	<i>Saaremaa virus</i>	Saaremaa virus (SAAV)
	<i>Sochi virus</i>	Sochi virus (SOCV)
	<i>Carizal virus</i>	Carizal virus (CARV)
	<i>El Moro Canyon orthohantavirus</i>	El Moro Canyon virus (ELMCV)
	<i>Fugong orthohantavirus</i>	Huitzilac virus (HUV)
	<i>Fusong orthohantavirus</i>	Fúgōng virus (FUGV)
	<i>Hantaan orthohantavirus</i> *	Fús ng virus (FUSV)
	<i>Khabarovsk orthohantavirus</i>	Amur virus (AMRV)
		Hantaan virus (HTNV)
		Soochong virus (SOOV)
	<i>Jeju orthohantavirus</i>	Jeju virus (JUV)
	<i>Kenkeme orthohantavirus</i>	Kenkeme virus (KKMV)
	<i>Khabarovsk orthohantavirus</i>	Khabarovsk virus (KHAV)
		Topografov virus (TOPV)
	<i>Laguna Negra orthohantavirus</i>	Laguna Negra virus (LANV)
		Maripa virus (MARV)
		Río Manore virus (RIOMV)
	<i>Luxi orthohantavirus</i>	Líx virus (LUXV)
	<i>Maporal orthohantavirus</i>	Maporal virus (MAPV)
	<i>Montano orthohantavirus</i>	Montaño virus (MTNV)
	<i>Necocli orthohantavirus</i>	Necoclí virus (NECV)
	<i>Oxbow orthohantavirus</i>	Oxbow virus (OXBV)

Genus	Species [#]	Virus (abbreviation)
	<i>Prospect Hill orthohantavirus</i>	Prospect Hill virus (PHV)
	<i>Puumala orthohantavirus</i>	Hokkaido virus (HOKV)
		Muju virus (MUJV)
		Puumala virus (PUUV)
	<i>Rockport orthohantavirus</i>	Rockport virus (RKPV)
	<i>Sangassou orthohantavirus</i>	Sangassou virus (SANGV)
	<i>Seewis orthohantavirus</i>	Seewis virus (SWSV)
	<i>Seoul orthohantavirus</i>	g u virus (GOUV)
		Seoul virus (SEOV)
	<i>Sin Nombre orthohantavirus</i>	New York virus (NYV)
		Sin Nombre virus (SNV)
	<i>Anjouzorobe virus</i>	Anjouzorobe virus (ANIZV)
		Serang virus (SERV)
	<i>Thailand orthohantavirus</i>	Thailand virus (THAIV)
	<i>Tigray orthohantavirus</i>	Tigray virus (TIGV)
	<i>Tula orthohantavirus</i>	Adler virus (ADLV)
		Tula virus (TULV)
	<i>Yakeshi orthohantavirus</i>	Yákeshí virus (YKSV)
	<i>Injin orthotimivirus</i>	Injin virus (MINV)
	<i>Thottapalayam thottamivirus</i> [*]	Thottapalayam virus (TPMV)
		Subfamily <i>Repantanivirinae</i>
	<i>Reptiliovirus</i>	<i>Gecko reptiliovirus</i> [*]
		Subfamily <i>Repantanivirinae</i>
	<i>Leptomonas shilevirus</i> [*]	Family <i>Leishbuviridae</i>
		Family <i>Mykopividae</i>
	<i>Hubavirus</i>	<i>Myriapod hubavirus</i> [*]
		Hüb i myriapoda virus 5 (HbMV-5)
	<i>Orthonairovirus</i>	Family Nairoviridae
		Artashat virus (ARTSV)
		Chim virus (CHIMV)
		Crimean-Congo hemorrhagic fever virus

Genus	Species	Virus (abbreviation)
	<i>orthonairovirus</i>	(CCHFV)
	<i>Dera Ghazi Khan orthonairovirus</i>	Abu Hammad virus (AHV)
		Abu Mina virus (AMV)
		Dera Ghazi Khan virus (DGKV)
		Sapphire II virus (SAPV)
	<i>Dugbe orthonairovirus</i> *	Dugbe virus (DUGV)
		Kupe virus (KUPEV)
		Estero Real virus (ERV)
	<i>Hazara orthonairovirus</i>	Hazara virus (HAZV)
		Tofla virus (TELV)
	<i>Hughes orthonairovirus</i>	Caspiv virus (CASV)
	<i>Hazara orthonairovirus</i>	Farallon virus (FARV)
		Great Saltee virus (GRSV)
		Hughes virus (HUGV)
		Punta Salinas virus (PSV)
		Raza virus (RAZAV)
		Soldado virus (SOLV)
		Zirqa virus (ZIRV)
	<i>Kasokero orthonairovirus</i>	Kasokero virus (KASV = KASOV)
		Leopards Hill virus (LPHV)
		Yogue virus (YOGV)
		Gossas virus (GOSV)
	<i>Keterah orthonairovirus</i>	Issyk-kul virus (ISKV)
		Keterah virus (KTRV)
		Uzun-Agach virus (UZAV)
	<i>Nairobi sheep disease orthonairovirus</i>	Nairobi sheep disease virus (NSDV)
	<i>Qalyub orthonairovirus</i>	Bandia virus (BDAV)
		Geran virus (GERV)
		Qalyub virus (QYBV)
		Avalon virus (AVAV)
	<i>Sakhalin orthonairovirus</i>	Clo Mor virus (CMV = CLMV)

Genus	Species	Virus (abbreviation)
		Sakhalin virus (SAKV)
		Taggart virus (TAGV)
		Tillamook virus (TILLV)
		Burana virus (BURV)
		Huángpí tick virus 1 (HpTV-1)
		Táchéng tick virus 1 (TcTV-1)
		Tandy virus (TAMV)
		W nzhu tick virus (WzTV)
		Ervé virus (ERVEV)
		Thiafora virus (TEAV)
		Sh yáng spider virus 1 (SySV-1)
		S nxia water strider virus 1 (SxWSV-1)
		Family <i>Peribunyaviridae</i>
		Herbert virus (HEBV)
		Kibale herbevirus
		Tai herbevirus
		Acará virus (ACAV)
		Moriche virus (MORV)
		Aino virus (AINOV)
		Akabane virus (AKAV)
		Tinaroo virus (TINV)
		Yaba-7 virus (Y7V)
		Alajuela virus (ALIV)
		San Juan virus (SJV)
		Anadyr virus (ANADY)
		Anhembi virus (AMBV)
		Anopheles A virus (ANAV)
		Arumateua virus (ARTV = ARMTV)
		Carajapé virus (CPEV = CRPV)
		Las Maloyas virus (LMV)
<i>Tandy orthonaetrovirus</i>		
<i>Thiafora orthonaïrovirus</i>		
<i>Shaspinivirus</i>	<i>Spider shaspinivirus</i> *	
<i>Strivavirus</i>	<i>Strider strivavirus</i> *	
<i>Orthobunyavirus</i>	<i>Acara orthobunyavirus</i>	
<i>Herbevirus</i>	<i>Herbert herbevirus</i> *	
	<i>Kibale herbevirus</i>	
	<i>Tai herbevirus</i>	
	<i>Acará virus</i> (ACAV)	
	<i>Aino orthobunyavirus</i>	
	<i>Akabane orthobunyavirus</i>	
	<i>Alajuela orthobunyavirus</i>	
	<i>Anadyr orthobunyavirus</i>	
	<i>Anhembi orthobunyavirus</i>	
	<i>Anopheles A orthobunyavirus</i>	

Genus	Species [#]	Virus (abbreviation) [#]
	<i>Anopheles B orthobunyavirus</i>	Lukuni virus (LUKV) Trombetas virus (TRMV) Tucuruí virus (TUCV = TUCRV)
	<i>Bakau orthobunyavirus</i>	Anopheles B virus (ANBV) Boracéia virus (BORV) Bakau virus (BAKV)
	<i>Batai orthobunyavirus</i>	Ketapang virus (KETV) Nola virus (NOLAV)
	<i>Batama orthobunyavirus</i>	Tanjong Rabok virus (TRV) Telok Forest virus (TFV)
	<i>Bellavista orthobunyavirus</i>	Batai virus (BATV) Batama virus (BMAV)
	<i>Benevides orthobunyavirus</i>	Bellavista virus (BELLV) Benefides virus (BVSV = BENV)
	<i>Bertioga orthobunyavirus</i>	Bertioga virus (BERV)
		Cananéia virus (CNAV) Guaratuba virus (GTBV)
		Itimirim virus (ITIV) Mirim virus (MIRV)
	<i>Bimini orthobunyavirus</i>	bimini virus (BIMV)
	<i>Birao orthobunyavirus</i>	Birao virus (BIRV)
	<i>Botambi orthobunyavirus</i>	Botambi virus (BOTV)
	<i>Bozo orthobunyavirus</i>	Bozo virus (BOZOV)
	<i>Bunyaamwera orthobunyavirus</i> [*]	Bunyaamwera virus (BUNV) Germiston virus (GERV)
		Lokem virus (LOKV) Mboké virus (MBOV)
		Ngari virus (NRIV)
		Northway virus (NORV) Santa Rosa virus (SARV)
		Shokwe virus (SHOV)

Genus	Species	Virus (abbreviation)
		Stanfield virus (STAV)
		Xingu virus (XINV)
		Benfica virus (BENV = BNFV)
		Bushbush virus (BSBV)
		Juan Díaz virus (JDV)
		Buttonwillow virus (BUTV)
		Bwamba virus (BWAV)
		Pongola virus (PGAV)
		Cache Valley virus (CVV)
		Cholul virus (CHLV)
		Tlacotalpan virus (TLAV)
		Cachoeira Porteira virus (CPOV)
		California encephalitis virus (CEV)
		Morro Bay virus (MBV)
		Capim virus (CAPV)
		Apeté virus (APEUV)
		Bruconha virus (BRUV)
		Caraparu virus (CARV)
		El Huayo virus (EHUAV)
		Itaya virus (ITYV)
		Ossa virus (OSSAV)
		Vinces virus (VINV)
		Cát Que virus (CQV)
		Catú virus (CATUV)
		Enseada virus (ENSV)
		Facey's paddock orthobunyavirus
		Fort Sherman orthobunyavirus
		Gamboa orthobunyavirus
		Brus Laguna virus (BLAV)
		Calchaquí virus (CQIV)
		Gamboa virus (GAMV)
<i>Bushbush orthobunyavirus</i>		
<i>Buttonwillow orthobunyavirus</i>		
<i>Bwamba orthobunyavirus</i>		
<i>Cache Valley orthobunyavirus</i>		
<i>Cachoeira Porteira orthobunyavirus</i>		
<i>California encephalitis orthobunyavirus</i>		
<i>Capim orthobunyavirus</i>		
<i>Caraparu orthobunyavirus</i>		
<i>Cat Que orthobunyavirus</i>		
<i>Catú orthobunyavirus</i>		
<i>Enseada orthobunyavirus</i>		
<i>Facey's paddock orthobunyavirus</i>		
<i>Fort Sherman orthobunyavirus</i>		
<i>Gamboa orthobunyavirus</i>		

Genus	Species	Virus (abbreviation)
	<i>Guajara orthobunyavirus</i>	Pueblo Viejo virus (PVV)
	<i>Soberania virus</i> (SOBV)	Soberanía virus (SOBV)
	<i>Guajaá virus</i> (GJAV)	Guajaá virus (GJAV)
	<i>Ananindeua virus</i> (ANUV)	Ananindeua virus (ANUV)
	<i>Guamá virus</i> (GMAY)	Guamá virus (GMAY)
	<i>Mahogany Hammock virus</i> (MHV)	Mahogany Hammock virus (MHV)
	<i>Moju virus</i> (MOJUV)	Moju virus (MOJUV)
	<i>Guaroa virus</i> (GROV)	Guaroa virus (GROV)
	<i>Iaco virus</i> (IACOV)	Iaco virus (IACOV)
	<i>Ilesha virus</i> (ILEV)	Ilesha virus (ILEV)
	<i>Ingwavuma virus</i> (INGV)	Ingwavuma virus (INGV)
	<i>Inkoo virus</i> (INKV)	Inkoo virus (INKV)
	<i>Jamestown Canyon virus</i> (JCV)	Jamestown Canyon virus (JCV)
	<i>Jerry Slough virus</i> (JSV)	Jerry Slough virus (JSV)
	<i>South River virus</i> (SORV)	South River virus (SORV)
	<i>Jatobal orthobunyavirus</i>	Jatobal virus (JATV)
	<i>Kaeng Khoi orthobunyavirus</i>	Kaeng Khoi virus (KKV)
	<i>Kaiiri orthobunyavirus</i>	Kaiiri virus (KRIV)
	<i>Keystone orthobunyavirus</i>	Keystone virus (KEYV)
	<i>Koongol orthobunyavirus</i>	koongol virus (KOOV)
	<i>wongal virus</i> (WONV)	wongal virus (WONV)
	<i>La Crosse orthobunyavirus</i>	La Crosse virus (LACV)
	<i>Leanyer orthobunyavirus</i>	Leanyer virus (LEAV)
	<i>Lumbo orthobunyavirus</i>	Lumbo virus (LUMV)
	<i>Macauá orthobunyavirus</i>	Macauá virus (MCAV)
	<i>Madrid orthobunyavirus</i>	Madrid virus (MADV)
	<i>Maguari orthobunyavirus</i>	Maguari virus (MAGV)
	<i>Playas virus</i> (PLAV)	Playas virus (PLAV)
	<i>Main Drain virus</i> (MDV)	Main Drain virus (MDV)
	<i>Manzanilla orthobunyavirus</i>	Manzanilla virus (MANV)
	<i>Inini virus</i> (INIV)	Inini virus (INIV)

Genus	Species	Virus (abbreviation) ^a
	<i>Mariuba orthobunyavirus</i>	Gumbo Limbo virus (GLV)
	<i>Mariuba virus</i> (MTBV)	Mariuba virus
	<i>Murutucú virus</i> (MURV)	Murutucú virus
	<i>Nepuyo virus</i> (NEPV)	Nepuyo virus
	<i>Restan virus</i> (RESV)	Restan virus
	<i>Zangarococha virus</i> (ZUNV)	Zangarococha virus
	<i>Melao virus</i> (MELV)	Melao virus
	<i>Mermet virus</i> (MERV)	Mermet virus
	<i>Minatitlán virus</i> (MNTV)	Minatitlán virus
	<i>Palestina virus</i> (PLSV)	Palestina virus
	<i>MPoko virus</i> (MPOV)	MPoko virus
	<i>Yaba-1 virus</i> (Y1V)	Yaba-1 virus
	<i>Eretmapodites virus</i> (ERETV)	Eretmapodites virus
	<i>Mojú dos Campos virus</i> (MDCV)	Mojú dos Campos virus
	<i>Nyando virus</i> (NDV)	Nyando virus
	<i>Dabakala virus</i> (DABV)	Dabakala virus
	<i>Bobia virus</i> (BLAV)	Bobia virus
	<i>Olfantsvlei virus</i> (OLIV)	Olfantsvlei virus
	<i>Oubi virus</i> (OUBIV)	Oubi virus
	<i>Itaquí virus</i> (ITQV)	Itaquí virus
	<i>Oriboca virus</i> (ORIV)	Oriboca virus
	<i>Iquito virus</i> (IQTV) ^d	Iquito virus
	<i>Madre de Dios virus</i> (MDDV)	Madre de Dios virus
	<i>Oropouche virus</i> (OROV)	Oropouche virus
	<i>Perdões virus</i> (PDEV)	Perdões virus
	<i>Pintupo virus</i> (PINtv)	Pintupo virus
	<i>Abras virus</i> (ABRV)	Abras virus
	<i>Bahayokee virus</i> (BABV)	Bahayokee virus
	<i>Pahayokee virus</i> (PAHV)	Pahayokee virus
	<i>Patois virus</i> (PATV)	Patois virus
	<i>Shark River virus</i> (SRV)	Shark River virus
	<i>Patois orthobunyavirus</i>	Patois orthobunyavirus

Genus	Species	Virus (abbreviation) [¶]
	<i>Peaton orthobunyavirus</i>	Peaton virus (PEAV)
	<i>Potosi orthobunyavirus</i>	Potosi virus (POTV)
	<i>Sabo orthobunyavirus</i>	Sabo virus (SABOV)
	<i>San Angelo orthobunyavirus</i>	San Angelo virus (SAV)
	<i>Sango orthobunyavirus</i>	Sango virus (SANV)
	<i>Douglas virus (DOUV)</i>	Douglas virus (DOUV)
	<i>Sathuperi virus (SATV)</i>	Sathuperi virus (SATV)
	<i>Schmallenberg virus (SBV)</i>	Schmallenberg virus (SBV)
	<i>Shamonda virus (SHAV)</i>	Shamonda virus (SHAV)
	<i>Serra do Navio virus (SDNV)</i>	Serra do Navio virus (SDNV)
	<i>Kaikulur virus (KAIV)</i>	Kaikulur virus (KAIV)
	<i>Shuni virus (SHUV)</i>	Shuni virus (SHUV)
	<i>Para virus (PARAV)</i>	Para virus (PARAV)
	<i>Simbu virus (SIMV)</i>	Simbu virus (SIMV)
	<i>Khatanga virus (KHATV)⁹</i>	Khatanga virus (KHATV) ⁹
	<i>snowshoe hare virus (SSHV)</i>	snowshoe hare virus (SSHV)
	<i>Sororoca virus (SORV)</i>	Sororoca virus (SORV)
	<i>CoAr 1071 virus (CA1071V)</i>	CoAr 1071 virus (CA1071V)
	<i>CoAr 3627 virus (CA3626V)</i>	CoAr 3627 virus (CA3626V)
	<i>Tacaiuma virus (TCMV)</i>	Tacaiuma virus (TCMV)
	<i>Virgin River virus (VRV)</i>	Virgin River virus (VRV)
	<i>ahy a virus (TAHV)</i>	ahy a virus (TAHV)
	<i>Tataguine orthobunyavirus</i>	Tataguine virus (TATV)
	<i>Tenseaw orthobunyavirus</i>	Tenseaw virus (TENV)
	<i>Tete orthobunyavirus</i>	Bahig virus (BAHV)
		Matruh virus (MTRV)
		Tete virus (TETEV)
		Tsunse virus (TSUV)
		Weldona virus (WELV)
	<i>Thimir orthobunyavirus</i>	Thimir virus (THIV)
	<i>Timboteua orthobunyavirus</i>	Timboteua virus (TBTV)

Genus	Species [#]	Virus (abbreviation)	
	<i>Trivittatus orthobunyavirus</i>	Achiote virus (ACHOV)	
	<i>Turlock orthobunyavirus</i>	Trivittatus virus (TVTV)	
	<i>Lednice virus</i> (LEDV)	Lednice virus (LEDV)	
	<i>Turlock virus</i> (TURV)	Turlock virus (TURV)	
	<i>Umbre virus</i> (UMBV)	Umbre virus (UMBV)	
	<i>Utinga virus</i> (UTIV)	Utinga virus (UTIV)	
	<i>Wiwatersrand orthobunyavirus</i>	Wiwatersrand virus (WITV)	
	<i>Wolkberg orthobunyavirus</i>	Wolkberg virus (WBV)	
	<i>Wyeomyia orthobunyavirus</i>	Rio Pracupi virus	
		Taiassui virus (TAIAV)	
		Tucunduba virus (TUCV)	
		Wyeomyia virus (WYOV)	
		Zegla virus (ZEGV)	
	<i>Pacuvirus</i>	Pacui virus (PACV)	
		Rio Preto da Eva virus (RPEV)	
		Tapirape virus (TAPV)	
		Shu ngão insect virus 1 (SgIV-1)	
		Family Phasmaviridae	
	<i>Feravirus</i>	Ferak virus (FRKV)	
	<i>Inshivirus</i>	Shu ngão insect virus 2 (SgIV-2)	
	<i>Jonvirus</i>	jonchet virus (JONV)	
	<i>Orthophasmavirus</i>	Culex orthophasmavirus (CPLV)	
		Ganda orthophasmavirus (GBEEV)	
		Kighaik phantom virus (KIGV)	
		Nome phantom virus (NOMV)	
		Odonate orthophasmavirus (HbOV-8)	
		Qingling orthophasmavirus (HbOV-9)	
		Seattle orthophasmavirus (SEPV)	
		Wuchang cockroach orthophasmavirus 1	
		Wuhan mosquito orthophasmavirus 1	
		Wuhan mosquito virus 1 (WhMV-1)	

Genus	Species	Virus (abbreviation)
<i>Sawastrivirus</i>	<i>Wuhan mosquito orthophasmavirus 2</i>	Wùhàn mosquito virus 2 (WhMV-2)
<i>Sanxia sawastrivirus</i> *		S ànxia water strider virus 2 (SxWSV-2)
<i>Wuhivirus</i>	<i>Insect wuhivirus*</i>	Wùhàn insect virus 2 (WhIV-2)
		Family Phenuiviridae
<i>Banyangvirus</i>	<i>Guertu banyangvirus</i>	Guertu virus (GTV)
	<i>Heartland banyangvirus</i>	Heartland virus (HRTV)
	<i>Huaiyangshan banyangvirus*</i>	severe fever with thrombocytopenia syndrome virus (SFTSV)
<i>Beidivirus</i>	<i>Dipteran beidivirus*</i>	Húb i diptera virus 3 (HbDV-3)
<i>Goukovirus</i>	<i>Cumuto goukovirus</i>	Cumuto virus (CUMV)
	<i>Gouleako goukovirus*</i>	Gouléako virus (GOLV)
<i>Horwuvirus</i>	<i>Yichang insect goukovirus</i>	Yich ng insect virus (YctV)
	<i>Horsefly horwavirus*</i>	Wùhàn horsefly virus (WhHV)
<i>Hudivirus</i>	<i>Dipteran huadivirus*</i>	Húb i diptera virus 4 (HbDV-4)
<i>Hudovirus</i>	<i>Lepidopteran hudovirus*</i>	Húb i lepidoptera virus 1 (HbLV-1)
<i>Kabutovirus</i>	<i>Huangpi kabutovirus*</i>	Huángpí tick virus 2 (HpTV-2)
	<i>Kabuto mountain kabutovirus</i>	Kabuto mountain virus (KAMV)
<i>Laulavirus</i>	<i>Laurel Lake laulavirus*</i>	Laurel Lake virus (LLV)
<i>Mobuvirus</i>	<i>Mothra mobuvirus*</i>	Mothra virus (MTHV)
<i>Phasivirus</i>	<i>Badu phasivirus*</i>	Badu virus (BADUV)
	<i>Phasi Charoen-like phasivirus</i>	Phasi Chaeron-like virus (PCLV)
	<i>Wutai mosquito phasivirus</i>	Wùtái mosquito virus (WTMV)
<i>Phlebovirus</i>	<i>Bijatu phlebovirus</i>	Bijatu virus (BUJV)
	<i>Candiru phlebovirus</i>	Munguba virus (MUNV)
		Arenques virus (ARQV)
		Candirú virus (CDUV)
		Itaituba virus (ITAV)
		Jacundá virus (JCNV)

Genus	Species	Virus (abbreviation)
		Maldonado virus (MLOV)
		Morumbi virus (MR(M)BV)
		Mucura virus (MCRV/MRAV)
		Nique virus (NIQV)
		Oriximiná virus (ORXV)
		Serra Norte virus (SRNV)
		Turuna virus (TUAV)
<i>Chilibe phlebovirus</i>		Cacao virus (CACV)
		Chilibre virus (CHIV)
		Frijoles virus (FRIV)
		Joá virus (JOAV)
		Mukawa virus (MKWV)
		Buenaventura virus (BUEV)
		Campana virus (CMAV)
		Capira virus (CAPIV)
		Coclé virus (CCLV)
		Leticia virus (LTCV)
		Punta Toro virus (PTV)
		Rift Valley fever virus (RVFV)*
		Salehabad phlebovirus
		Adana virus (ADAV)
		Adria virus (ADRV)
		Alcube virus
		Arbia virus (ARBV)
		Arumowot virus (AMTV)
		Bregalaka virus (BREV)
		Medjerda Valley virus (MVV)
		Odrenistou virus (ODRV)
		Olbia virus (OLBV)
		Salehabad virus (SALV)
		Zaba virus (ZABAV)
		Arrábida virus (ARRV)
		<i>Sandfly fever Naples phlebovirus</i>

Genus	Species	Virus (abbreviation)
	Balkan virus (BALKV)	
	Fermo virus (FERV)	
	Gordil virus (GORV)	
	Granada virus (GRV = GRAV)	
	Massilia virus (MASV)	
	Punique virus (PUNV)	
	Saddagui virus (SADV)	
	Saint-Floris virus (SAFV)	
	sandfly fever Naples virus (SFNV)	
	Tehran virus (THEV)	
	Toscana virus (TOSV)	
	Zerdali virus (ZERV)	
<i>Uukuniemi phlebovirus</i>		
	Chizé virus (CHZV)	
	EgAN 1825–61 virus (EGAV)	
	Fin V 707 virus (FINV)	
	Oceanside virus (OCV = OCEV)	
	Pontevès virus (PTVV)	
	St. Abbs Head virus (SAHV)	
	Uukuniemi virus (UUKV)	
	Zaliv Terpeniya virus (ZTV)	
<i>Pidcho virus</i>	<i>Pidzey pidchovirus</i> *	
<i>Tenuivirus</i>	<i>Echinochloa hoja blanca tenuivirus</i>	
	<i>Iranian wheat stripe tenuivirus</i>	
	<i>Maize stripe tenuivirus</i>	
	<i>Rice grassy stunt tenuivirus</i>	
	<i>Rice hoja blanca tenuivirus</i>	
	<i>Rice stripe tenuivirus</i> *	
	<i>Urochloa hoja blanca tenuivirus</i>	
<i>Wenivirus</i>	<i>Shrimp wenivirus</i> *	
<i>Waibivirus</i>	<i>Dipteran wibeivirus</i> *	
	Hüb i diptera virus 5 (HbdV-5)	

Genus	Species ^J	Virus (abbreviation) [¶]
	<i>Fly wubeivirus</i>	Wuhan fly virus 1 (WhhFV-1)
		Family <i>Tospoviridae</i>
<i>Orthotospovirus</i>	<i>Bean necrotic mosaic orthotospovirus</i>	bean necrotic mosaic virus (BenMV)
	<i>Calla lily chlorotic spot orthotospovirus</i>	calla lily chlorotic spot virus (CCSV)
	<i>Capsicum chlorosis orthotospovirus</i>	capsicum chlorosis virus (CaCV)
	<i>Chrysanthemum stem necrosis orthotospovirus</i>	chrysanthemum stem necrosis virus (CSNV)
	<i>Groundnut bud necrosis tospovirus^J</i>	groundnut bud necrosis virus (GBNV)
	<i>Groundnut ringspot tospovirus^J</i>	groundnut ringspot virus (GRSV)
	<i>Groundnut yellow spot tospovirus^J</i>	groundnut yellow spot virus (GYSV)
	<i>Impatiens necrotic spot tospovirus^J</i>	impatiens necrotic spot virus (INSV)
	<i>Iris yellow spot tospovirus^J</i>	iris yellow spot virus (IYSV)
	<i>Melon severe mosaic orthotospovirus</i>	melon severe mosaic virus (MSMV)
	<i>Melon yellow spot orthotospovirus</i>	melon yellow spot virus (MYSV)
	<i>Polygonum ringspot tospovirus^J</i>	polygonum ringspot virus (PolRSV)
	<i>Soybean vein necrosis orthotospovirus</i>	soybean vein necrosis virus (SYNV)
	<i>Tomato chlorotic spot tospovirus^J</i>	tomato chlorotic spot virus (TCSV)
	<i>Tomato spotted wilt tospovirus^J</i>	tomato spotted wilt virus (TSWV)
	<i>Watermelon bud necrosis tospovirus^J</i>	watermelon bud necrosis virus (WBNV)
	<i>Watermelon silver mottle tospovirus^J</i>	watermelon silver mottle virus (WSMoV)
	<i>Zucchini lethal chlorosis tospovirus^J</i>	zucchini lethal chlorosis virus (ZLCV)
		Family <i>Wupedeviridae</i>
	<i>Wamivirus</i>	Wuhan millipede virus 2 (WhmMV-2)
	<i>Millipede wamivirus*</i>	Unassigned
	<i>Coguvirus</i>	Citrus coguvirus*
		citrus concave gum-associated virus (CCCGaV)

* type species
^J Due to a formal classification mistake, this species was not correctly renamed to include the genus epithet "orthotospovirus". A proposal to ensure that all species included in the genus *Orthotospovirus* are named uniformly ending in "orthotospovirus" will be submitted prior to the next taxonomic proposal submission deadline.

[¶]Please note that viruses are real objects that are assigned to concepts that are called taxa. Species, genera, families, and orders are taxa. Taxon names are always italicized and always begin with a capital letter. Virus names, on the other hand, are not capitalized, except if the name or a name component is a proper noun. This column lists the virus names with their correct (lack of) capitalization. Lists of viruses within a given species are provisional at this point and will likely be amended in the near future.