



This form should be used for all taxonomic proposals. Please complete all those modules that are applicable (and then delete the unwanted sections). For guidance, see the notes written in blue and the separate document "Help with completing a taxonomic proposal"

Please try to keep related proposals within a single document; you can copy the modules to create more than one genus within a new family, for example.

MODULE 1: **TITLE, AUTHORS, etc**

<b>Code assigned:</b>	<b>2011.006a,bP</b>	(to be completed by ICTV officers)			
<b>Short title:</b> Remove 4 species and rename 3 species in the genus <i>Begomovirus</i> (e.g. 6 new species in the genus <i>Zetavirus</i> )					
<b>Modules attached</b> (modules 1 and 9 are required)	1 <input checked="" type="checkbox"/> 6 <input type="checkbox"/>	2 <input type="checkbox"/> 7 <input checked="" type="checkbox"/>	3 <input type="checkbox"/> 8 <input checked="" type="checkbox"/>	4 <input type="checkbox"/> 9 <input checked="" type="checkbox"/>	5 <input type="checkbox"/>

**Author(s) with e-mail address(es) of the proposer:**

Judy Brown [jbrown@ag.arizona.edu](mailto:jbrown@ag.arizona.edu) for the Geminiviridae SG

**List the ICTV study group(s) that have seen this proposal:**

A list of study groups and contacts is provided at <http://www.ictvonline.org/subcommittees.asp> . If in doubt, contact the appropriate subcommittee chair (fungal, invertebrate, plant, prokaryote or vertebrate viruses)

Geminiviridae

**ICTV-EC or Study Group comments and response of the proposer:**

---

---

Date first submitted to ICTV:

July 20, 2011

Date of this revision (if different to above):

---

MODULE 7: **REMOVE and MOVE**

Use this module whenever an existing taxon needs to be removed:

- Either to abolish a taxon entirely (when only part (a) needs to be completed)
- Or to move a taxon and re-assign it e.g. when a species is moved from one genus to another (when BOTH parts (a) and (b) should be completed)

**Part (a)** taxon/taxa to be removed or moved

Code	<b>2011.006aP</b>	(assigned by ICTV officers)
<b>To remove the following 4 species:</b>		
<i>Tomato leaf curl Indonesia virus ; Tomato leaf curl Pakistan virus ; Squash yellow mild mottle virus ; Pepper leaf curl Pakistan virus</i>		
<b>The present taxonomic position of these taxon/taxa:</b>		
Genus:	<i>Begomovirus</i>	Fill in all that apply.
Subfamily:		
Family:	<i>Geminiviridae</i>	
Order:		
If the taxon/taxa are to be abolished (i.e. not reassigned to another taxon) write "yes" in the box on the right		<b>YES</b>

**Reasons to justify the removal:**

Explain why the taxon (or taxa) should be removed

*Tomato leaf curl Indonesia virus* was listed as a species in the 8<sup>th</sup> report quoting accession AB100304. The species *Tomato leaf curl Java virus* was created by proposal 2005.002P based on the same sequence. To correct this mistake, the SG prefers the species name *Tomato leaf curl Java virus* which is the one used for this accession and closely related sequences in Genbank.

*Tomato leaf curl Pakistan virus* was created by proposal 2007.001P on the basis of sequence accession DQ116884 (wrongly listed in that proposal as AB116884). The species *Pedilanthus leaf curl virus* was also created by proposal 2007.001P on the basis of sequence AM712436. Isolates of different species in the genus *Begomovirus* are expected to have less than 89% shared sequence identity in comparisons between their complete genomes. On this basis, the currently available complete genome sequences of these two viruses are clearly isolates of a single species:

	AM712436	AM948961	DQ116884	FM164938	GU732204
AM712436 <sup>a</sup>	*	91.1	91.8	92.4	89.5
AM948961 <sup>b</sup>		*	93.8	93.3	92.7
DQ116884 <sup>b</sup>			*	96.9	93.1
FM164938 <sup>b</sup>				*	91.9
GU732204 <sup>b</sup>					*

<sup>a</sup> sequence labeled *Pedilanthus leaf curl virus* in Genbank

<sup>b</sup> sequences labeled *tomato leaf curl Pakistan virus* in Genbank

The SG has agreed to use the species name *Pedilanthus leaf curl virus* for these isolates; this was the name listed with a correct accession numbers in the original proposal. Subsequent isolates have come from a range of hosts and this name remains as appropriate as any.

*Squash yellow mild mottle virus* and *Melon chlorotic leaf curl virus* both appear as species in the 8<sup>th</sup> report with respective accession numbers for the complete DNA-A components AY064391 and AF325497. As in the previous example, it is clear that the two sequences belong to one species (90.4% nt identity). The SG prefers the species name *Melon chlorotic leaf curl virus* because it was the name given initially to the species, and inadvertently overlooked by the authors of the squash isolate. This is in adherence to ‘grandfather clause’, established by the SG to guide nomenclature discrepancies, when it became clear that different names had been proposed independently by different authors for the same species. See Brown et al., 2011.

*Pepper leaf curl Pakistan virus* was created in proposal 2007.001P on the basis of sequence DQ116878. Comparisons among related sequences show that this accession and a number of others are all isolates of the long-established species *Chilli leaf curl virus*:

Accession	Genbank name	AF336806	DQ116878	DQ629103	DQ989326	EF190217	EU939533	FM179613	GU136803
AF336806 <sup>a</sup>	Chilli leaf curl virus	*	92.7	<b>92.3</b>	92.7	95.5	96.0	99.4	92.8
<b>DQ116878</b>	<b>Pepper leaf curl Pakistan</b>		*	<b>88.1</b>	<b>88.9</b>	<b>91.4</b>	<b>92.1</b>	<b>92.8</b>	<b>89.1</b>
DQ629103	Papaya leaf curl virus			*	96.8	92.5	93.8	92.3	95.5
DQ989326	Chilli leaf curl virus				*	93.4	94.8	92.9	96.6
EF190217	Pepper leaf curl virus					*	96.3	96.2	93.2
EU939533	Chilli leaf curl virus						*	96.3	94.1
FM179613	Chilli leaf curl Multan virus							*	92.9
GU136803	Chilli leaf curl virus								*

<sup>a</sup> Sequence provided in support of the species *Chilli leaf curl virus* in the ICTV 8<sup>th</sup> Report.

MODULE 8: **NON-STANDARD**

Template for any proposal not covered by modules 2-7. This includes proposals to change the name of existing taxa (but note that stability of nomenclature is encouraged wherever possible).

non-standard proposal

Code	<b>2011.006bP</b>	(assigned by ICTV officers)
<b>Title of proposal: To rename three species in the genus <i>Begomovirus</i></b>		

**Text of proposal:**

1. Change *Corchorus yellow vein Vietnam virus* to *Corchorus yellow vein virus*.  
The name *Corchorus yellow vein Vietnam virus* was approved as the species name on the basis of proposal 2005.002P, quoting the sequence accessions AY727903-4 for the two genomic components. These are presently the only sequences for the isolates of this species, which are referred to as *Corchorus yellow vein Vietnam virus* in Genbank. The geographical reference is unnecessary as there are no other species in the form *Corchorus yellow vein xxxx virus* and the SG therefore wishes to change the species name to *Corchorus yellow vein virus* (from Viet Nam).

2. Change *Cucurbit leaf curl virus* to *Cucurbit leaf crumple virus*  
*Cucurbit leaf curl virus* was approved as a species some time before the 8<sup>th</sup> report. The 8<sup>th</sup> report entry provides two complete genome sequences for this bipartite member of the genus: Arizona isolate (AF256200; AF327559) and an unnamed (California) isolate (AF224760/1). These are the only complete genome sequences of isolates of this species. In Genbank, the Arizona A segment AF256200 is named *Cucurbit leaf crumple virus*, while the others are named *Cucurbit leaf curl virus*. The same virus was simultaneously given these two different names by independent labs unaware of the other's work. The name *Cucurbit leaf crumple virus* has been selected by the SG to be the species name with the agreement of all authors.

3. Change *Tomato mosaic leaf curl virus* to *Merremia mosaic virus*  
*Tomato mosaic leaf curl virus* was approved by the SG as a species on the basis of proposal 2005.002P, and quoting isolates and sequence accessions:  
Tomato mosaic leaf curl virus – [Puerto Rico] AF068636  
Tomato mosaic leaf curl virus – [Venezuela] AY508991-2

The current entries of the Venezuela isolate in Genbank are labeled *Tomato mosaic leaf curl virus* but the Puerto Rico isolate is one of several entries named *Merremia mosaic virus*:  
Merremia mosaic virus - Puerto Rico AF068636/AY965899  
Merremia mosaic virus - Puerto Rico:4-H6 DQ644558/9  
Merremia mosaic virus - Puerto Rico:80-H3 DQ644557/60

These sequences clearly represent isolates of a single species (A components AF068636, DQ644557 and DQ644558 are 99.8% identical to one another, while sharing 91.9% identity to AY508991). The SG wishes to change the species name to *Merremia mosaic virus* because upon complete sequencing of all isolates, it became clear that they were all strains of the same species, and not distinct species as initially thought. The name MeMV was selected based on the 'grandfather clause' (the first described name is retained).

MODULE 9: **APPENDIX**: supporting material

additional material in support of this proposal

**References:**

Brown, J.K., Mills-Lujan, K. and Idris, A.M. 2011. Phylogenetic analysis of *Melon chlorotic leaf curl virus* from Guatemala, another emergent species in the *Squash leaf curl virus* clade. *Virus Res.* **158**: 257–262. doi:10.1016/j.virusres.2011.03.002.



**Annex:**

Include as much information as necessary to support the proposal, including diagrams comparing the old and new taxonomic orders. The use of Figures and Tables is strongly recommended but direct pasting of content from publications will require permission from the copyright holder together with appropriate acknowledgement as this proposal will be placed on a public web site. For phylogenetic analysis, try to provide a tree where branch length is related to genetic distance.

