Template for Taxonomic Proposal to the ICTV Executive Committee
Creating Species in an existing genus

Code[†] 2007.003P.04 To designate the following as species in the genus:

Curtovirus

belonging to the family° : ***Geminiviridae***

Pepper curly top virus

[†] Assigned by ICTV officers
° leave blank if inappropriate or in the case of an unassigned genus

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Old Taxonomic Order

Order	
Family	***Geminiviridae***
Genus	***Curtovirus***
Type Species	***Beet curly top virus***
Species in the Genus	
Tentati ve Species in the Genus	
Unassigned Species in the family	

New Taxonomic Order

Order	
Family	***Geminiviridae***
Genus	***Curtovirus***
Type Species	***Beet curly top virus***
Species in the Genus	***Pepper curly top virus***
Tentative Species in the Genus	
Unassigned Species in the family	

ICTV-EC comments and response of the SG

Species demarcation criteria in the genus

The following criteria should be used as a guideline to establish taxonomic status:

- Nucleotide sequence identity. Full-length nt sequence identity <89% is generally indicative of a distinct species. However, decisions based on nt sequence comparisons, particularly when approaching this value, must also take into account the biological properties of the virus.
- *Trans*-replication of genomic components. The inability of Rep protein to *trans*-replicate a genomic component suggests a distinct species.
- CP characteristics. Serological differences may be indicative of a distinct species although the CP is highly conserved, suggesting that this criterion may be of limited use.
- Natural host range and symptom phenotype. These characteristics may relate to a particular species but their commonest use will be to distinguish strains.

Argument to justify the designation of new species in the genus

The proposed species show less than 89% nt sequence identity with existing species, in accordance with the demarcation criteria:

Pepper curly top virus

Pepper curly top virus - [US:New Mexico:2005] EF501977 PepCTV-[US:NM:05]

The closest virus is Beet severe curly top virus with 82.5% and therefore belongs to a different species.

Percent Similarity

	1								
		17.3	17.9	18.2	18.2	17.3	18.8	17.1	1
2			82.5	80.6	78.8	77.7	47.8	34.6	2
3				74.2	73.7	65.7	48.4	35.3	3
4					72.0	69.5	51.7	37.4	4
5						73.5	47.5	34.6	5
6							48.1	37.2	6
7								31.8	7
8									8
	1	2	3	4	5	6	7	8	

1 CAV-Cux1.M55918
2 BSCTV-[US;CFH.]U02311
3 PepCTV-[US;NM;05].EF501977
4 SpCTV-[US;Sp3;96].AY548948
5 BMCTV-[US;Wor].U56975
6 BCTV-XX[US;Cal;85].X04144
7 HrCTV-[US;Sal;88].U49907
8 TPCTV-[US;FL;94].X84735

List of created species in the genus

Pepper curly top virus

Pepper curly top virus - [US:New Mexico:2005] EF501977 PepCTV-[US:NM:05]

Annexe.

Phylogenetic tree of representative isolates of all curtovirus species. The arrow indicates that for the proposed new species