Cover Letter for Annotation of BigPhil

ORF 13 and 14: Called a Programmed Translational Frame Shift in these ORFs. Sparticus was used to guide this call. It is a +1 shift occurring at bp 8881.

ORF 15: Called this ORF earlier than previous annotations to get a 4bp overlap with the prior ORF. Did not agree with Glimmer call and did not get a 1:1 alignment with the top ten Blastp hits.

ORF 34: Added this REV ORF to capture coding potential. Has good Blastp match.

ORF 40: Deleted autoannotated ORF 40 (FWD) that would have overlapped this ORF by 120bp. The deleted ORF has less coding potential than this ORF, no Blastp matches, and all Starterator matches are draft annotations.

ORF 43: Added this FWD ORF to capture GeneMark heuristic coding potential. Has good Blastp match.

ORF 57: We called the start that agrees with Glimmer, is the suggested start in Starterator, and has Blastp 1:1 alignment. However, an earlier start at 36990 would have yielded a higher SD score and a 4bp overlap with the prior ORF.

ORF 60: Function found in HHPred, Phage Mu Gam-like protein with probability 96% but E-value of 0.0026. Did not consider this to be reportable.

ORF 74: Deleted autoannotated ORF 74 that would have overlapped this ORF by 60bp. The deleted ORF has no Blastp matches.

ORF 78: Added this ORF to capture coding potential shown in GeneMark-TB output. Has good Blastp match.

ORF 88: Called start for longest possible ORF and agreed with Glimmer call, but Blastp matches all have a later start 25bp or more downstream. Deleted autoannotated ORF 88 that was only 78bp long. The deleted ORF had no coding potential shown in any of the three GeneMark outputs (heuristic, TB and smeg).

ORF 94: Called short gene 93bp long but coding potential shown in both GeneMark heuristic and TB outputs, and Blastp match is good.