Pham 165145


Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. If this default region is judged to be packed too tightly with annotated starts, the track will be further scaled to only show that region of the ORF with annotated starts. This action will be indicated by adding "Zoomed" to the title. For starts, yellow indicates the location of called starts comprised solely of Glimmer/GeneMark auto-annotations, green indicates the location of called starts with at least 1 manual gene annotation.

## Pham 165145 Report

This analysis was run 07/09/24 on database version 566.
Pham number 165145 has 40 members, 1 are drafts.
Phages represented in each track:

- Track 1 : HINdeR_69
- Track 2 : Timshel-70
- Track 3 : DroogsĀrmy_68
- Track 4 : Krishelle 57
- Track 5 : Swann_57, Bradshaw_57, Phrankenstein_57, RER2_50, RexFury_56, Lillie_57, Naiad_5 $\overline{6}$, Rhodalysa_57, Espica_58, Natosaleda_56, Belenaria_5 $\overline{8}$, Erik_57, Shuman_58, Gollum_57, TWAMP_57, CosmicSans_57, UhSalsa_57, StCroix_56, Rasputin_57, AppleCloud_54
- Track $\overline{6}$ : Bryce_56, PhailMary_56, Hiro_57, Alpacados_56, Yoncess_56
- Track 7 : Bonanza_58
- Track 8 : BobbyDazzler_57
- Track 9 : Dinger_56, Partridge_56
- Track 10 : Nancinator_57
- Track 11 : Alatin 56
- Track 12 : Yogi_57
- Track 13 : AngryOrchard_54, Takoda_57
- Track 14 : Jester_56, Harlequin_56


## Summary of Final Annotations (See graph section above for start numbers):

The start number called the most often in the published annotations is 4, it was called in 25 of the 39 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Alpacados_56, AppleCloud_54, Belenaria_58, Bradshaw_57, Bryce_56,

CosmicSans_57, Erik 57, Espica_58, Gollum_57, Hiro_57, Lillie_57, Naiad_56, Natosaleda_56, PhailMary_56, Phrankenstein_57, RER2_50, Rasputin_57, RexFury_56, Rhodalysa_57, Shuman_58, StCroix_56, Swann_57, TWAMP_57, UhSalsa_57, Yogi_57, Yoncess_56,

Genes that have the "Most Annotated" start but do not call it:

- Alatin_56, BobbyDazzler_57, Bonanza_58, Krishelle_57,

Genes that do not have the "Most Annotated" start:

- AngryOrchard_54, Dinger_56, DroogsArmy_68, HINdeR_69, Harlequin_56,

Jester_56, Nancinator_57, Partridge_56, Takoda_57, Timshel_70,

## Summary by start number:

Start 1:

- Found in 1 of 40 ( $2.5 \%$ ) of genes in pham
- Manual Annotations of this start: 1 of 39
- Called $100.0 \%$ of time when present
- Phage (with cluster) where this start called: HINdeR_69 (A7),

Start 2:

- Found in 2 of 40 (5.0\% ) of genes in pham
- Manual Annotations of this start: 2 of 39
- Called 100.0\% of time when present
- Phage (with cluster) where this start called: DroogsArmy_68 (A7), Timshel_70 (A7),

Start 4:

- Found in 30 of $40(75.0 \%)$ of genes in pham
- Manual Annotations of this start: 25 of 39
- Called $86.7 \%$ of time when present
- Phage (with cluster) where this start called: Alpacados 56 (CA), AppleCloud 54
(CA), Belenaria_58(CA), Bradshaw_57 (CA), Bryce_56 (CA), CosmicSans_57 (CA),
Erik_57 (CA), Espica_58 (CA), Gollum_57 (CA), Hiro_57 (CA), Lillie_57 (CĀ),
Naiad_56 (CA), Natosaleda_56 (CA), PhailMary_56 (CA), Phrankenstein_57 (CA), RER2_50 (CA), Rasputin_57 (CA), RexFury_56 (CA), Rhodalysa_57 (CA),
Shuman_58 (CA), StCroix_56 (CA), Swann_57 (CA), TWAMP_57 (CA), UhSalsa_57 (CA), Yogi_57 (CA), Yoncess_56 (CA),

Start 5:

- Found in 6 of 40 ( $15.0 \%$ ) of genes in pham
- Manual Annotations of this start: 6 of 39
- Called $100.0 \%$ of time when present
- Phage (with cluster) where this start called: AngryOrchard_54 (CA), Dinger_56 (CA),

Harlequin_56 (CA), Jester_56 (CA), Partridge_56 (CA), Takoda_57 (CA),

## Start 6:

- Found in 36 of 40 ( $90.0 \%$ ) of genes in pham
- Manual Annotations of this start: 2 of 39
- Called 5.6\% of time when present
- Phage (with cluster) where this start called: Alatin_56 (CA), Bonanza_58 (CA),

Start 7:

- Found in 36 of 40 (90.0\%) of genes in pham
- Manual Annotations of this start: 2 of 39
- Called $5.6 \%$ of time when present
- Phage (with cluster) where this start called: BobbyDazzler_57 (CA), Krishelle_57 (CA),

Start 13:

- Found in 37 of 40 ( $92.5 \%$ ) of genes in pham
- Manual Annotations of this start: 1 of 39
- Called $2.7 \%$ of time when present
- Phage (with cluster) where this start called: Nancinator_57 (CA),


## Summary by clusters:

There are 2 clusters represented in this pham: CA, A7,
Info for manual annotations of cluster A7:

- Start number 1 was manually annotated 1 time for cluster A7.
-Start number 2 was manually annotated 2 times for cluster A7.
Info for manual annotations of cluster CA:
- Start number 4 was manually annotated 25 times for cluster CA.
- Start number 5 was manually annotated 6 times for cluster CA.
- Start number 6 was manually annotated 2 times for cluster CA.
- Start number 7 was manually annotated 2 times for cluster CA.
- Start number 13 was manually annotated 1 time for cluster CA.


## Gene Information:

Gene: Alatin_56 Start: 39664, Stop: 39422, Start Num: 6
Candidate Starts for Alatin_56:
(Start: 4 @39667 has 25 MA's), (Start: 6 @39664 has 2 MA's), (Start: 7 @39652 has 2 MA's), (9, 39634), (Start: 13 @39595 has 1 MA's), (19, 39511), (21, 39487), (23, 39472),

Gene: Alpacados_56 Start: 39560, Stop: 39315, Start Num: 4
Candidate Starts for Alpacados_56:
(Start: 4 @39560 has 25 MA's), (Start: 6 @39557 has 2 MA's), (Start: 7 @39545 has 2 MA's), (9, 39527), (Start: 13 @39488 has 1 MA's), (19, 39404), (20, 39401), (23, 39365),

Gene: AngryOrchard_54 Start: 39720, Stop: 39475, Start Num: 5
Candidate Starts for AngryOrchard_54:
(Start: 5 @39720 has 6 MA's), (Start: 6 @39717 has 2 MA's), (Start: 7 @39705 has 2 MA's), ( 9 , 39687), (Start: 13 @39648 has 1 MA's), (17, 39594), (20, 39561), (21, 39540), (23, 39525),

Gene: AppleCloud_54 Start: 39382, Stop: 39137, Start Num: 4
Candidate Starts for AppleCloud_54:
(Start: 4 @39382 has 25 MA's), (Start: 6 @39379 has 2 MA's), (Start: 7 @39367 has 2 MA's), (9, 39349), (Start: 13 @39310 has 1 MA's), (19, 39226), (21, 39202), (23, 39187),

Gene: Belenaria_58 Start: 39530, Stop: 39285, Start Num: 4
Candidate Starts for Belenaria_58:
(Start: 4 @39530 has 25 MA's), (Start: 6 @39527 has 2 MA's), (Start: 7 @39515 has 2 MA's), (9, 39497), (Start: 13 @39458 has 1 MA's), (19, 39374), (21, 39350), (23, 39335),

Gene: BobbyDazzler_57 Start: 39622, Stop: 39392, Start Num: 7
Candidate Starts for BobbyDazzler_57:
(Start: 4 @39637 has 25 MA's), (Start: 6 @39634 has 2 MA's), (Start: 7 @39622 has 2 MA's), (9, 39604), (Start: 13 @39565 has 1 MA's), (19, 39481), (20, 39478), (23, 39442),

Gene: Bonanza_58 Start: 39939, Stop: 39697, Start Num: 6
Candidate Starts for Bonanza_58:
(Start: 4 @39942 has 25 MA's), (Start: 6 @39939 has 2 MA's), (Start: 7 @39927 has 2 MA's), (9, 39909), (Start: 13 @39870 has 1 MA's), (19, 39786), (20, 39783), (23, 39747), (24, 39711),

Gene: Bradshaw_57 Start: 39600, Stop: 39355, Start Num: 4
Candidate Starts for Bradshaw_57:
(Start: 4 @39600 has 25 MA's), (Start: 6 @39597 has 2 MA's), (Start: 7 @39585 has 2 MA's), (9, 39567), (Start: 13 @39528 has 1 MA's), (19, 39444), (21, 39420), (23, 39405),

Gene: Bryce_56 Start: 39345, Stop: 39100, Start Num: 4
Candidate Starts for Bryce_56:
(Start: 4 @39345 has 25 MA's), (Start: 6 @39342 has 2 MA's), (Start: 7 @39330 has 2 MA's), (9, 39312), (Start: 13 @39273 has 1 MA's), (19, 39189), (20, 39186), (23, 39150),

Gene: CosmicSans_57 Start: 39591, Stop: 39346, Start Num: 4
Candidate Starts for CosmicSans_57:
(Start: 4 @39591 has 25 MA's), (Start: 6 @39588 has 2 MA's), (Start: 7 @39576 has 2 MA's), (9, 39558), (Start: 13 @39519 has 1 MA's), (19, 39435), (21, 39411), (23, 39396),

Gene: Dinger_56 Start: 39733, Stop: 39488, Start Num: 5
Candidate Starts for Dinger_56:
(Start: 5 @39733 has 6 MA's), (Start: 6 @39730 has 2 MA's), (Start: 7 @39718 has 2 MA's), (9, 39700), (Start: 13 @39661 has 1 MA's), (14, 39658), (19, 39577), (20, 39574), (21, 39553), (23, 39538),

Gene: DroogsArmy_68 Start: 46858, Stop: 46574, Start Num: 2 Candidate Starts for DroogsArmy_68:
(Start: 2 @46858 has 2 MA's), (3, 46840), (10, 46798), (12, 46786), (15, 46759), (16, 46735), (22, 46645), (23, 46642),

Gene: Erik_57 Start: 39523, Stop: 39278, Start Num: 4
Candidate Starts for Erik_57:
(Start: 4 @39523 has 25 MA's), (Start: 6 @39520 has 2 MA's), (Start: 7 @39508 has 2 MA's), (9, 39490), (Start: 13 @39451 has 1 MA's), (19, 39367), (21, 39343), (23, 39328),

Gene: Espica_58 Start: 39530, Stop: 39285, Start Num: 4
Candidate Starts for Espica_58:
(Start: 4 @39530 has 25 MA's), (Start: 6 @39527 has 2 MA's), (Start: 7 @39515 has 2 MA's), (9, 39497), (Start: 13 @39458 has 1 MA's), (19, 39374), (21, 39350), (23, 39335),

Gene: Gollum_57 Start: 39586, Stop: 39341, Start Num: 4
Candidate Starts for Gollum_57:
(Start: 4 @39586 has 25 MA's), (Start: 6 @39583 has 2 MA's), (Start: 7 @39571 has 2 MA's), (9, 39553), (Start: 13 @39514 has 1 MA's), (19, 39430), (21, 39406), (23, 39391),

Gene: HINdeR_69 Start: 46286, Stop: 45993, Start Num: 1
Candidate Starts for HINdeR_69:
(Start: 1 @46286 has 1 MA's), (3, 46265), (8, 46235), (15, 46181), (17, 46133), (18, 46124), (22, 46067), (23, 46064),

Gene: Harlequin_56 Start: 39375, Stop: 39130, Start Num: 5
Candidate Starts for Harlequin_56:
(Start: 5 @39375 has 6 MA's), (Start: 6 @39372 has 2 MA's), (Start: 7 @39360 has 2 MA's), (9, 39342), (Start: 13 @39303 has 1 MA's), (19, 39219), (20, 39216), (21, 39195), (23, 39180),

Gene: Hiro_57 Start: 39851, Stop: 39606, Start Num: 4
Candidate Starts for Hiro_57:
(Start: 4 @39851 has 25 MA's), (Start: 6 @39848 has 2 MA's), (Start: 7 @39836 has 2 MA's), (9, 39818), (Start: 13 @39779 has 1 MA's), (19, 39695), (20, 39692), (23, 39656),

Gene: Jester_56 Start: 39306, Stop: 39061, Start Num: 5
Candidate Starts for Jester_56:
(Start: 5 @39306 has 6 MA's), (Start: 6 @39303 has 2 MA's), (Start: 7 @39291 has 2 MA's), (9, 39273), (Start: 13 @39234 has 1 MA's), (19, 39150), (20, 39147), (21, 39126), (23, 39111),

Gene: Krishelle_57 Start: 39945, Stop: 39715, Start Num: 7
Candidate Starts for Krishelle_57:
(Start: 4 @39960 has 25 MA's), (Start: 6 @39957 has 2 MA's), (Start: 7 @39945 has 2 MA's), (9, 39927), (Start: 13 @39888 has 1 MA's), (19, 39804), (21, 39780), (23, 39765),

Gene: Lillie_57 Start: 39591, Stop: 39346, Start Num: 4
Candidate Starts for Lillie_57:
(Start: 4 @39591 has 25 MA's), (Start: 6 @39588 has 2 MA's), (Start: 7 @39576 has 2 MA's), (9, 39558), (Start: 13 @39519 has 1 MA's), (19, 39435), (21, 39411), (23, 39396),

Gene: Naiad_56 Start: 39613, Stop: 39368, Start Num: 4
Candidate Starts for Naiad_56:
(Start: 4 @39613 has 25 MA's), (Start: 6 @39610 has 2 MA's), (Start: 7 @39598 has 2 MA's), (9, 39580), (Start: 13 @39541 has 1 MA's), (19, 39457), (21, 39433), (23, 39418),

Gene: Nancinator_57 Start: 39458, Stop: 39285, Start Num: 13
Candidate Starts for Nancinator_57:
(Start: 13 @39458 has 1 MA's), (19, 39374), (21, 39350), (23, 39335),
Gene: Natosaleda_56 Start: 39529, Stop: 39284, Start Num: 4
Candidate Starts for Natosaleda_56:
(Start: 4 @39529 has 25 MA's), (Start: 6 @39526 has 2 MA's), (Start: 7 @39514 has 2 MA's), (9, 39496), (Start: 13 @39457 has 1 MA's), (19, 39373), (21, 39349), (23, 39334),

Gene: Partridge_56 Start: 39890, Stop: 39645, Start Num: 5
Candidate Starts for Partridge_56:
(Start: 5 @39890 has 6 MA's), (Start: 6 @39887 has 2 MA's), (Start: 7 @39875 has 2 MA's), ( 9 , 39857), (Start: 13 @39818 has 1 MA's), (14, 39815), (19, 39734), (20, 39731), (21, 39710), (23, 39695),

Gene: PhailMary_56 Start: 39913, Stop: 39668, Start Num: 4
Candidate Starts for PhailMary_56:
(Start: 4 @39913 has 25 MA's), (Start: 6 @39910 has 2 MA's), (Start: 7 @39898 has 2 MA's), (9, 39880), (Start: 13 @39841 has 1 MA's), (19, 39757), (20, 39754), (23, 39718),

Gene: Phrankenstein_57 Start: 39537, Stop: 39292, Start Num: 4
Candidate Starts for Phrankenstein_57:
(Start: 4 @39537 has 25 MA's), (Start: 6 @39534 has 2 MA's), (Start: 7 @39522 has 2 MA's), (9, 39504), (Start: 13 @39465 has 1 MA's), (19, 39381), (21, 39357), (23, 39342),

Gene: RER2_50 Start: 36463, Stop: 36218, Start Num: 4
Candidate Starts for RER2_50:
(Start: 4 @36463 has 25 MA's), (Start: 6 @36460 has 2 MA's), (Start: 7 @36448 has 2 MA's), (9, 36430), (Start: 13 @36391 has 1 MA's), (19, 36307), (21, 36283), (23, 36268),

Gene: Rasputin_57 Start: 39561, Stop: 39316, Start Num: 4
Candidate Starts for Rasputin_57:
(Start: 4 @39561 has 25 MA's), (Start: 6 @39558 has 2 MA's), (Start: 7 @39546 has 2 MA's), (9, 39528), (Start: 13 @39489 has 1 MA's), (19, 39405), (21, 39381), (23, 39366),

Gene: RexFury_56 Start: 39619, Stop: 39374, Start Num: 4
Candidate Starts for RexFury_56:
(Start: 4 @39619 has 25 MA's), (Start: 6 @39616 has 2 MA's), (Start: 7 @39604 has 2 MA's), (9, 39586), (Start: 13 @39547 has 1 MA's), (19, 39463), (21, 39439), (23, 39424),

Gene: Rhodalysa_57 Start: 39591, Stop: 39346, Start Num: 4
Candidate Starts for Rhodalysa_57:
(Start: 4 @39591 has 25 MA's), (Start: 6 @39588 has 2 MA's), (Start: 7 @39576 has 2 MA's), (9, 39558), (Start: 13 @39519 has 1 MA's), (19, 39435), (21, 39411), (23, 39396),

Gene: Shuman_58 Start: 39542, Stop: 39297, Start Num: 4
Candidate Starts for Shuman_58:
(Start: 4 @39542 has 25 MA's), (Start: 6 @39539 has 2 MA's), (Start: 7 @39527 has 2 MA's), (9, 39509), (Start: 13 @39470 has 1 MA's), (19, 39386), (21, 39362), (23, 39347),

Gene: StCroix_56 Start: 39613, Stop: 39368, Start Num: 4
Candidate Starts for StCroix_56:
(Start: 4 @39613 has 25 MA's), (Start: 6 @39610 has 2 MA's), (Start: 7 @39598 has 2 MA's), (9, 39580), (Start: 13 @39541 has 1 MA's), (19, 39457), (21, 39433), (23, 39418),

Gene: Swann_57 Start: 39589, Stop: 39344, Start Num: 4
Candidate Starts for Swann_57:
(Start: 4 @39589 has 25 MA's), (Start: 6 @39586 has 2 MA's), (Start: 7 @39574 has 2 MA's), (9, 39556), (Start: 13 @39517 has 1 MA's), (19, 39433), (21, 39409), (23, 39394),

Gene: TWAMP_57 Start: 39591, Stop: 39346, Start Num: 4
Candidate Starts for TWAMP_57:
(Start: 4 @39591 has 25 MA's), (Start: 6 @39588 has 2 MA's), (Start: 7 @39576 has 2 MA's), (9, 39558), (Start: 13 @39519 has 1 MA's), (19, 39435), (21, 39411), (23, 39396),

Gene: Takoda_57 Start: 39774, Stop: 39529, Start Num: 5
Candidate Starts for Takoda_57:
(Start: 5 @39774 has 6 MA's), (Start: 6 @39771 has 2 MA's), (Start: 7 @39759 has 2 MA's), (9, 39741), (Start: 13 @39702 has 1 MA's), (17, 39648), (20, 39615), (21, 39594), (23, 39579),

Gene: Timshel_70 Start: 46669, Stop: 46385, Start Num: 2
Candidate Starts for Timshel_70:
(Start: 2 @46669 has 2 MA's), (3, 46651), (10, 46609), (11, 46600), (12, 46597), (15, 46570), (16, 46546), (22, 46456), (23, 46453),

Gene: UhSalsa_57 Start: 39530, Stop: 39285, Start Num: 4
Candidate Starts for UhSalsa_57:
(Start: 4 @39530 has 25 MA's), (Start: 6 @39527 has 2 MA's), (Start: 7 @39515 has 2 MA's), (9, 39497), (Start: 13 @39458 has 1 MA's), (19, 39374), (21, 39350), (23, 39335),

Gene: Yogi_57 Start: 39942, Stop: 39697, Start Num: 4
Candidate Starts for Yogi_57:
(Start: 4 @39942 has 25 MA's), (Start: 6 @39939 has 2 MA's), (Start: 7 @39927 has 2 MA's), (9, 39909), (Start: 13 @39870 has 1 MA's), (19, 39786), (20, 39783), (23, 39747), (24, 39711),

Gene: Yoncess_56 Start: 39345, Stop: 39100, Start Num: 4
Candidate Starts for Yoncess_56:
(Start: 4 @39345 has 25 MA's), (Start: 6 @39342 has 2 MA's), (Start: 7 @39330 has 2 MA's), (9, 39312), (Start: 13 @39273 has 1 MA's), (19, 39189), (20, 39186), (23, 39150),

