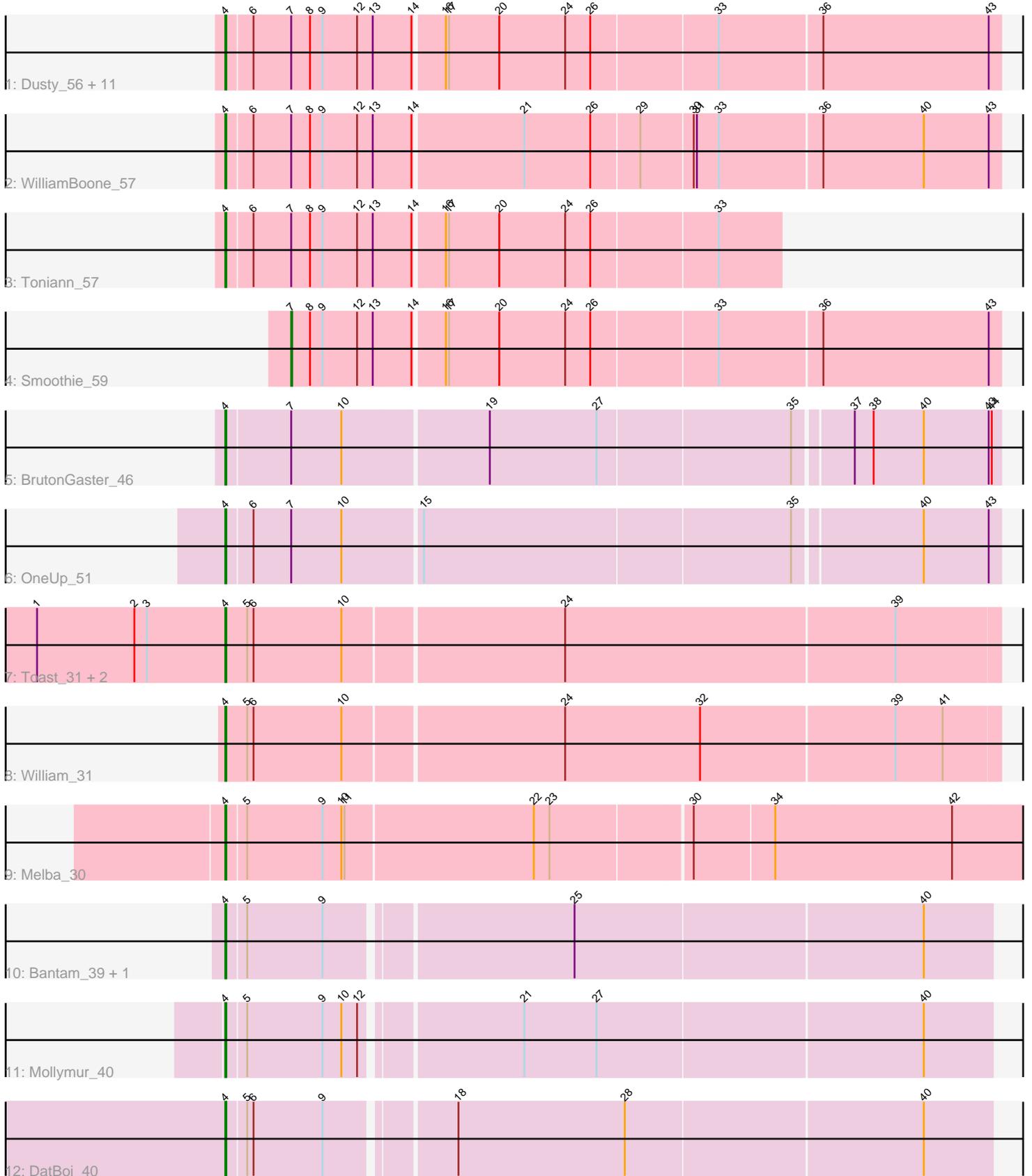# Pham 282413

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 282413 Report

This analysis was run 02/23/26 on database version 636.

Pham number 282413 has 26 members, 1 are drafts.

Phages represented in each track:
• Track 1 : Dusty_56, Cucurbita_59, Geeche_56, Aphelion_57, Bachita_59, Miskis_55, Abscondus_56, Norvs_58, PhinkBoden_57, Engineer_59, Lozinak_58, ClubL_57
• Track 2 : WilliamBoone_57
• Track 3 : Toniann_57
• Track 4 : Smoothie_59
• Track 5 : BrutonGaster_46
• Track 6 : OneUp_51
• Track 7 : Toast_31, PCoral7_31, Fairfaxidum_30
• Track 8 : William_31
• Track 9 : Melba_30
• Track 10 : Bantam_39, SpeedDemon_410
• Track 11 : Mollymur_40
• Track 12 : DatBoi_40

***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 24 of the 25 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Abscondus_56, Aphelion_57, Bachita_59, Bantam_39, BrutonGaster_46, ClubL_57, Cucurbita_59, DatBoi_40, Dusty_56, Engineer_59, Fairfaxidum_30, Geeche_56, Lozinak_58, Melba_30, Miskis_55, Mollymur_40, Norvs_58, OneUp_51, PCoral7_31, PhinkBoden_57, SpeedDemon_410, Toast_31, Toniann_57, WilliamBoone_57, William_31,

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

Genes that do not have the "Most Annotated" start:
• Smoothie_59,

**Summary by start number:**

Start 4:
• Found in 25 of 26 ( 96.2% ) of genes in pham
• Manual Annotations of this start: 24 of 25
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Abscondus_56 (CQ1), Aphelion_57 (CQ1), Bachita_59 (CQ1), Bantam_39 (DL), BrutonGaster_46 (CQ2), ClubL_57 (CQ1), Cucurbita_59 (CQ1), DatBoi_40 (DL), Dusty_56 (CQ1), Engineer_59 (CQ1), Fairfaxidum_30 (CV), Geeche_56 (CQ1), Lozinak_58 (CQ1), Melba_30 (CV), Miskis_55 (CQ1), Mollymur_40 (DL), Norvs_58 (CQ1), OneUp_51 (CQ2), PCoral7_31 (CV), PhinkBoden_57 (CQ1), SpeedDemon_410 (DL), Toast_31 (CV), Toniann_57 (CQ1), WilliamBoone_57 (CQ1), William_31 (CV),

Start 7:
• Found in 17 of 26 ( 65.4% ) of genes in pham
• Manual Annotations of this start: 1 of 25
• Called 5.9% of time when present
• Phage (with cluster) where this start called: Smoothie_59 (CQ1),

**Summary by clusters:**

There are 4 clusters represented in this pham: CQ2, DL, CQ1, CV,

Info for manual annotations of cluster CQ1:
•Start number 4 was manually annotated 13 times for cluster CQ1.
•Start number 7 was manually annotated 1 time for cluster CQ1.

Info for manual annotations of cluster CQ2:
•Start number 4 was manually annotated 2 times for cluster CQ2.

Info for manual annotations of cluster CV:
•Start number 4 was manually annotated 5 times for cluster CV.

Info for manual annotations of cluster DL:
•Start number 4 was manually annotated 4 times for cluster DL.

*Gene Information:*
Gene: Abscondus_56 Start: 36969, Stop: 37688, Start Num: 4
Candidate Starts for Abscondus_56:
(Start: 4 @36969 has 24 MA's), (6, 36993), (Start: 7 @37029 has 1 MA's), (8, 37047), (9, 37059), (12, 37092), (13, 37107), (14, 37143), (16, 37170), (17, 37173), (20, 37221), (24, 37284), (26, 37308), (33, 37425), (36, 37521), (43, 37677),

Gene: Aphelion_57 Start: 37238, Stop: 37957, Start Num: 4
Candidate Starts for Aphelion_57:
(Start: 4 @37238 has 24 MA's), (6, 37262), (Start: 7 @37298 has 1 MA's), (8, 37316), (9, 37328), (12, 37361), (13, 37376), (14, 37412), (16, 37439), (17, 37442), (20, 37490), (24, 37553), (26, 37577), (33, 37694), (36, 37790), (43, 37946),

Gene: Bachita_59 Start: 37671, Stop: 38390, Start Num: 4

Candidate Starts for Bachita_59:
(Start: 4 @37671 has 24 MA's), (6, 37695), (Start: 7 @37731 has 1 MA's), (8, 37749), (9, 37761), (12, 37794), (13, 37809), (14, 37845), (16, 37872), (17, 37875), (20, 37923), (24, 37986), (26, 38010), (33, 38127), (36, 38223), (43, 38379),

Gene: Bantam_39 Start: 34863, Stop: 35567, Start Num: 4
Candidate Starts for Bantam_39:
(Start: 4 @34863 has 24 MA's), (5, 34881), (9, 34953), (25, 35175), (40, 35502),

Gene: BrutonGaster_46 Start: 34284, Stop: 34997, Start Num: 4
Candidate Starts for BrutonGaster_46:
(Start: 4 @34284 has 24 MA's), (Start: 7 @34344 has 1 MA's), (10, 34392), (19, 34527), (27, 34629), (35, 34809), (37, 34860), (38, 34878), (40, 34926), (43, 34986), (44, 34989),

Gene: ClubL_57 Start: 37160, Stop: 37879, Start Num: 4
Candidate Starts for ClubL_57:
(Start: 4 @37160 has 24 MA's), (6, 37184), (Start: 7 @37220 has 1 MA's), (8, 37238), (9, 37250), (12, 37283), (13, 37298), (14, 37334), (16, 37361), (17, 37364), (20, 37412), (24, 37475), (26, 37499), (33, 37616), (36, 37712), (43, 37868),

Gene: Cucurbita_59 Start: 38530, Stop: 39249, Start Num: 4
Candidate Starts for Cucurbita_59:
(Start: 4 @38530 has 24 MA's), (6, 38554), (Start: 7 @38590 has 1 MA's), (8, 38608), (9, 38620), (12, 38653), (13, 38668), (14, 38704), (16, 38731), (17, 38734), (20, 38782), (24, 38845), (26, 38869), (33, 38986), (36, 39082), (43, 39238),

Gene: DatBoi_40 Start: 35520, Stop: 36224, Start Num: 4
Candidate Starts for DatBoi_40:
(Start: 4 @35520 has 24 MA's), (5, 35538), (6, 35544), (9, 35610), (18, 35721), (28, 35880), (40, 36159),

Gene: Dusty_56 Start: 36969, Stop: 37688, Start Num: 4
Candidate Starts for Dusty_56:
(Start: 4 @36969 has 24 MA's), (6, 36993), (Start: 7 @37029 has 1 MA's), (8, 37047), (9, 37059), (12, 37092), (13, 37107), (14, 37143), (16, 37170), (17, 37173), (20, 37221), (24, 37284), (26, 37308), (33, 37425), (36, 37521), (43, 37677),

Gene: Engineer_59 Start: 37644, Stop: 38363, Start Num: 4
Candidate Starts for Engineer_59:
(Start: 4 @37644 has 24 MA's), (6, 37668), (Start: 7 @37704 has 1 MA's), (8, 37722), (9, 37734), (12, 37767), (13, 37782), (14, 37818), (16, 37845), (17, 37848), (20, 37896), (24, 37959), (26, 37983), (33, 38100), (36, 38196), (43, 38352),

Gene: Fairfaxidum_30 Start: 24917, Stop: 25642, Start Num: 4
Candidate Starts for Fairfaxidum_30:
(1, 24737), (2, 24830), (3, 24842), (Start: 4 @24917 has 24 MA's), (5, 24938), (6, 24944), (10, 25028), (24, 25232), (39, 25544),

Gene: Geeche_56 Start: 37060, Stop: 37779, Start Num: 4
Candidate Starts for Geeche_56:
(Start: 4 @37060 has 24 MA's), (6, 37084), (Start: 7 @37120 has 1 MA's), (8, 37138), (9, 37150), (12, 37183), (13, 37198), (14, 37234), (16, 37261), (17, 37264), (20, 37312), (24, 37375), (26, 37399), (33, 37516), (36, 37612), (43, 37768),

Gene: Lozinak_58 Start: 37699, Stop: 38418, Start Num: 4
Candidate Starts for Lozinak_58:
(Start: 4 @37699 has 24 MA's), (6, 37723), (Start: 7 @37759 has 1 MA's), (8, 37777), (9, 37789), (12, 37822), (13, 37837), (14, 37873), (16, 37900), (17, 37903), (20, 37951), (24, 38014), (26, 38038), (33, 38155), (36, 38251), (43, 38407),

Gene: Melba_30 Start: 25225, Stop: 25989, Start Num: 4
Candidate Starts for Melba_30:
(Start: 4 @25225 has 24 MA's), (5, 25243), (9, 25315), (10, 25333), (11, 25336), (22, 25513), (23, 25528), (30, 25657), (34, 25732), (42, 25900),

Gene: Miskis_55 Start: 37004, Stop: 37723, Start Num: 4
Candidate Starts for Miskis_55:
(Start: 4 @37004 has 24 MA's), (6, 37028), (Start: 7 @37064 has 1 MA's), (8, 37082), (9, 37094), (12, 37127), (13, 37142), (14, 37178), (16, 37205), (17, 37208), (20, 37256), (24, 37319), (26, 37343), (33, 37460), (36, 37556), (43, 37712),

Gene: Mollymur_40 Start: 36053, Stop: 36757, Start Num: 4
Candidate Starts for Mollymur_40:
(Start: 4 @36053 has 24 MA's), (5, 36071), (9, 36143), (10, 36161), (12, 36176), (21, 36317), (27, 36386), (40, 36692),

Gene: Norvs_58 Start: 37243, Stop: 37962, Start Num: 4
Candidate Starts for Norvs_58:
(Start: 4 @37243 has 24 MA's), (6, 37267), (Start: 7 @37303 has 1 MA's), (8, 37321), (9, 37333), (12, 37366), (13, 37381), (14, 37417), (16, 37444), (17, 37447), (20, 37495), (24, 37558), (26, 37582), (33, 37699), (36, 37795), (43, 37951),

Gene: OneUp_51 Start: 34604, Stop: 35317, Start Num: 4
Candidate Starts for OneUp_51:
(Start: 4 @34604 has 24 MA's), (6, 34628), (Start: 7 @34664 has 1 MA's), (10, 34712), (15, 34784), (35, 35129), (40, 35246), (43, 35306),

Gene: PCoral7_31 Start: 24834, Stop: 25559, Start Num: 4
Candidate Starts for PCoral7_31:
(1, 24654), (2, 24747), (3, 24759), (Start: 4 @24834 has 24 MA's), (5, 24855), (6, 24861), (10, 24945), (24, 25149), (39, 25461),

Gene: PhinkBoden_57 Start: 37624, Stop: 38343, Start Num: 4
Candidate Starts for PhinkBoden_57:
(Start: 4 @37624 has 24 MA's), (6, 37648), (Start: 7 @37684 has 1 MA's), (8, 37702), (9, 37714), (12, 37747), (13, 37762), (14, 37798), (16, 37825), (17, 37828), (20, 37876), (24, 37939), (26, 37963), (33, 38080), (36, 38176), (43, 38332),

Gene: Smoothie_59 Start: 37759, Stop: 38418, Start Num: 7
Candidate Starts for Smoothie_59:
(Start: 7 @37759 has 1 MA's), (8, 37777), (9, 37789), (12, 37822), (13, 37837), (14, 37873), (16, 37900), (17, 37903), (20, 37951), (24, 38014), (26, 38038), (33, 38155), (36, 38251), (43, 38407),

Gene: SpeedDemon_410 Start: 36640, Stop: 37344, Start Num: 4
Candidate Starts for SpeedDemon_410:
(Start: 4 @36640 has 24 MA's), (5, 36658), (9, 36730), (25, 36952), (40, 37279),

Gene: Toast_31 Start: 24834, Stop: 25559, Start Num: 4
Candidate Starts for Toast_31:
(1, 24654), (2, 24747), (3, 24759), (Start: 4 @24834 has 24 MA's), (5, 24855), (6, 24861), (10, 24945), (24, 25149), (39, 25461),

Gene: Toniann_57 Start: 37186, Stop: 37701, Start Num: 4
Candidate Starts for Toniann_57:
(Start: 4 @37186 has 24 MA's), (6, 37210), (Start: 7 @37246 has 1 MA's), (8, 37264), (9, 37276), (12, 37309), (13, 37324), (14, 37360), (16, 37387), (17, 37390), (20, 37438), (24, 37501), (26, 37525), (33, 37642),

Gene: William_31 Start: 24660, Stop: 25385, Start Num: 4
Candidate Starts for William_31:
(Start: 4 @24660 has 24 MA's), (5, 24681), (6, 24687), (10, 24771), (24, 24975), (32, 25104), (39, 25287), (41, 25332),

Gene: WilliamBoone_57 Start: 36532, Stop: 37251, Start Num: 4
Candidate Starts for WilliamBoone_57:
(Start: 4 @36532 has 24 MA's), (6, 36556), (Start: 7 @36592 has 1 MA's), (8, 36610), (9, 36622), (12, 36655), (13, 36670), (14, 36706), (21, 36808), (26, 36871), (29, 36916), (30, 36964), (31, 36967), (33, 36988), (36, 37084), (40, 37180), (43, 37240),