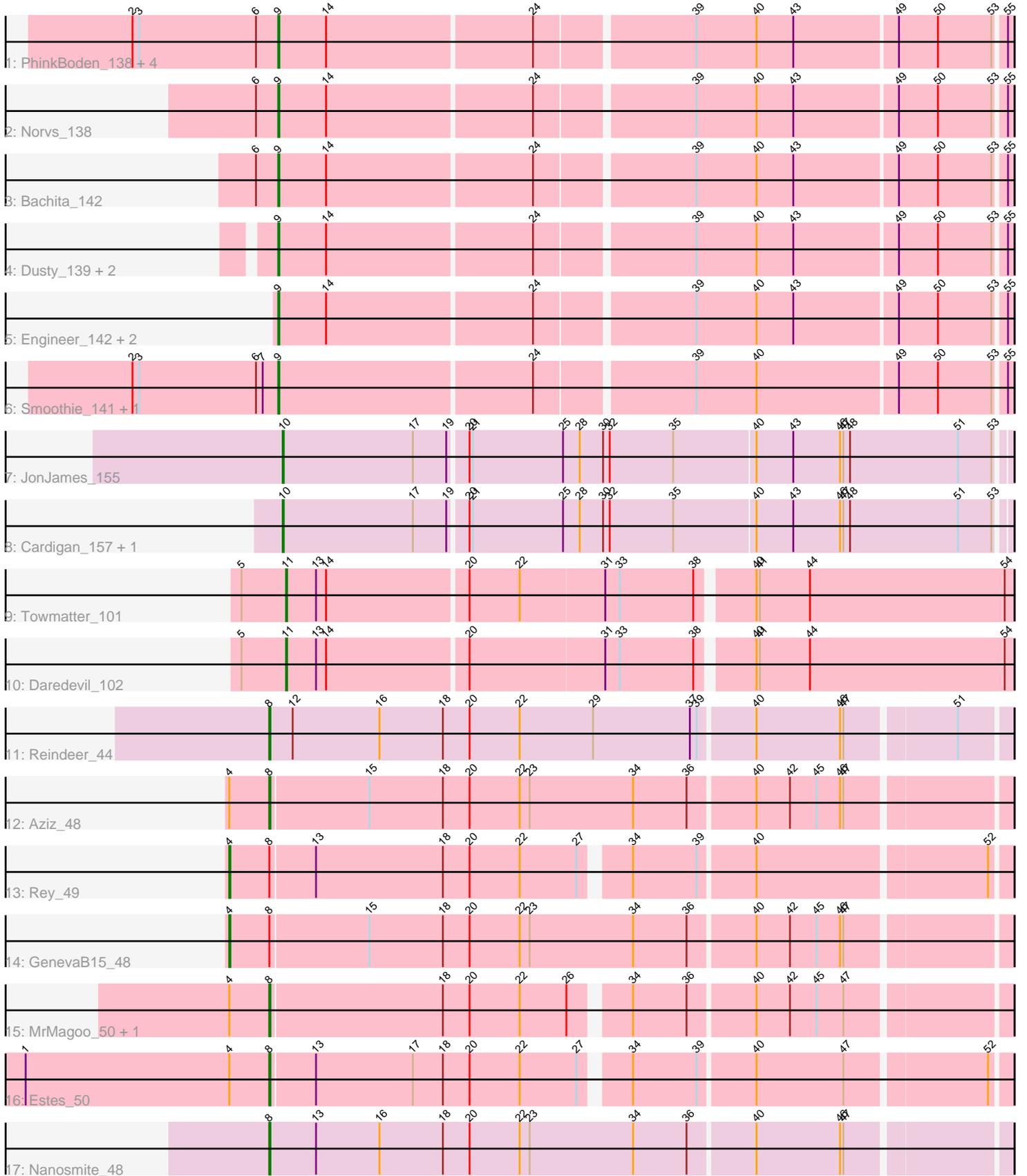


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Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. 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 284083 Report

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

Pham number 284083 has 28 members, 2 are drafts.

Phages represented in each track:

- Track 1 : PhinkBoden\_138, Toniann\_139, Miskis\_134, ClubL\_139, Cucurbita\_140
- Track 2 : Norvs\_138
- Track 3 : Bachita\_142
- Track 4 : Dusty\_139, Geeche\_141, Abscondus\_140
- Track 5 : Engineer\_142, Aphelion\_140, Culver\_140
- Track 6 : Smoothie\_141, Lozinak\_140
- Track 7 : JonJames\_155
- Track 8 : Cardigan\_157, Yvonnetastic\_150
- Track 9 : Towmatter\_101
- Track 10 : Daredevil\_102
- Track 11 : Reindeer\_44
- Track 12 : Aziz\_48
- Track 13 : Rey\_49
- Track 14 : GenevaB15\_48
- Track 15 : MrMagoo\_50, GardenSalsa\_50
- Track 16 : Estes\_50
- Track 17 : Nanosmite\_48

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

The start number called the most often in the published annotations is 9, it was called in 14 of the 26 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abscondus\_140, Aphelion\_140, Bachita\_142, ClubL\_139, Cucurbita\_140, Culver\_140, Dusty\_139, Engineer\_142, Geeche\_141, Lozinak\_140, Miskis\_134, Norvs\_138, PhinkBoden\_138, Smoothie\_141, Toniann\_139,

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

- 

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

- Aziz\_48, Cardigan\_157, Daredevil\_102, Estes\_50, GardenSalsa\_50, GenevaB15\_48, JonJames\_155, MrMagoo\_50, Nanosmite\_48, Reindeer\_44,

Rey\_49, Towmatter\_101, Yvonnetastic\_150,

### Summary by start number:

Start 4:

- Found in 6 of 28 ( 21.4% ) of genes in pham
- Manual Annotations of this start: 2 of 26
- Called 33.3% of time when present
- Phage (with cluster) where this start called: GenevaB15\_48 (M2), Rey\_49 (M2),

Start 8:

- Found in 8 of 28 ( 28.6% ) of genes in pham
- Manual Annotations of this start: 6 of 26
- Called 75.0% of time when present
- Phage (with cluster) where this start called: Aziz\_48 (M2), Estes\_50 (M2), GardenSalsa\_50 (M2), MrMagoo\_50 (M2), Nanosmite\_48 (M3), Reindeer\_44 (M1),

Start 9:

- Found in 15 of 28 ( 53.6% ) of genes in pham
- Manual Annotations of this start: 14 of 26
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abscondus\_140 (CQ1), Aphelion\_140 (CQ1), Bachita\_142 (CQ1), ClubL\_139 (CQ1), Cucurbita\_140 (CQ1), Culver\_140 (CQ1), Dusty\_139 (CQ1), Engineer\_142 (CQ1), Geeche\_141 (CQ1), Lozinak\_140 (CQ1), Miskis\_134 (CQ1), Norvs\_138 (CQ1), PhinkBoden\_138 (CQ1), Smoothie\_141 (CQ1), Toniann\_139 (CQ1),

Start 10:

- Found in 3 of 28 ( 10.7% ) of genes in pham
- Manual Annotations of this start: 2 of 26
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Cardigan\_157 (DD), JonJames\_155 (DD), Yvonnetastic\_150 (DD),

Start 11:

- Found in 2 of 28 ( 7.1% ) of genes in pham
- Manual Annotations of this start: 2 of 26
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Daredevil\_102 (DL), Towmatter\_101 (DL),

### Summary by clusters:

There are 6 clusters represented in this pham: DL, DD, M1, M3, M2, CQ1,

Info for manual annotations of cluster CQ1:

- Start number 9 was manually annotated 14 times for cluster CQ1.

Info for manual annotations of cluster DD:

- Start number 10 was manually annotated 2 times for cluster DD.

Info for manual annotations of cluster DL:

- Start number 11 was manually annotated 2 times for cluster DL.

Info for manual annotations of cluster M1:

- Start number 8 was manually annotated 1 time for cluster M1.

Info for manual annotations of cluster M2:

- Start number 4 was manually annotated 2 times for cluster M2.
- Start number 8 was manually annotated 4 times for cluster M2.

Info for manual annotations of cluster M3:

- Start number 8 was manually annotated 1 time for cluster M3.

### **Gene Information:**

Gene: Abscondus\_140 Start: 76562, Stop: 77191, Start Num: 9

Candidate Starts for Abscondus\_140:

(Start: 9 @76562 has 14 MA's), (14, 76604), (24, 76784), (39, 76919), (40, 76973), (43, 77006), (49, 77096), (50, 77129), (53, 77177), (55, 77186),

Gene: Aphelion\_140 Start: 77487, Stop: 78116, Start Num: 9

Candidate Starts for Aphelion\_140:

(Start: 9 @77487 has 14 MA's), (14, 77529), (24, 77709), (39, 77844), (40, 77898), (43, 77931), (49, 78021), (50, 78054), (53, 78102), (55, 78111),

Gene: Aziz\_48 Start: 35760, Stop: 35116, Start Num: 8

Candidate Starts for Aziz\_48:

(Start: 4 @35796 has 2 MA's), (Start: 8 @35760 has 6 MA's), (15, 35673), (18, 35607), (20, 35583), (22, 35538), (23, 35529), (34, 35436), (36, 35388), (40, 35331), (42, 35301), (45, 35277), (46, 35256), (47, 35253),

Gene: Bachita\_142 Start: 77161, Stop: 77790, Start Num: 9

Candidate Starts for Bachita\_142:

(6, 77143), (Start: 9 @77161 has 14 MA's), (14, 77203), (24, 77383), (39, 77518), (40, 77572), (43, 77605), (49, 77695), (50, 77728), (53, 77776), (55, 77785),

Gene: Cardigan\_157 Start: 84482, Stop: 85120, Start Num: 10

Candidate Starts for Cardigan\_157:

(Start: 10 @84482 has 2 MA's), (17, 84599), (19, 84629), (20, 84644), (21, 84647), (25, 84728), (28, 84743), (30, 84764), (32, 84770), (35, 84827), (40, 84899), (43, 84932), (46, 84974), (47, 84977), (48, 84983), (51, 85079), (53, 85109),

Gene: ClubL\_139 Start: 75735, Stop: 76364, Start Num: 9

Candidate Starts for ClubL\_139:

(2, 75606), (3, 75612), (6, 75717), (Start: 9 @75735 has 14 MA's), (14, 75777), (24, 75957), (39, 76092), (40, 76146), (43, 76179), (49, 76269), (50, 76302), (53, 76350), (55, 76359),

Gene: Cucurbita\_140 Start: 77474, Stop: 78103, Start Num: 9

Candidate Starts for Cucurbita\_140:

(2, 77345), (3, 77351), (6, 77456), (Start: 9 @77474 has 14 MA's), (14, 77516), (24, 77696), (39, 77831), (40, 77885), (43, 77918), (49, 78008), (50, 78041), (53, 78089), (55, 78098),

Gene: Culver\_140 Start: 75941, Stop: 76570, Start Num: 9

Candidate Starts for Culver\_140:

(Start: 9 @75941 has 14 MA's), (14, 75983), (24, 76163), (39, 76298), (40, 76352), (43, 76385), (49, 76475), (50, 76508), (53, 76556), (55, 76565),

Gene: Daredevil\_102 Start: 66210, Stop: 66842, Start Num: 11

Candidate Starts for Daredevil\_102:

(5, 66171), (Start: 11 @66210 has 2 MA's), (13, 66237), (14, 66246), (20, 66369), (31, 66489), (33, 66501), (38, 66567), (40, 66612), (41, 66615), (44, 66660), (54, 66834),

Gene: Dusty\_139 Start: 76389, Stop: 77018, Start Num: 9

Candidate Starts for Dusty\_139:

(Start: 9 @76389 has 14 MA's), (14, 76431), (24, 76611), (39, 76746), (40, 76800), (43, 76833), (49, 76923), (50, 76956), (53, 77004), (55, 77013),

Gene: Engineer\_142 Start: 77401, Stop: 78030, Start Num: 9

Candidate Starts for Engineer\_142:

(Start: 9 @77401 has 14 MA's), (14, 77443), (24, 77623), (39, 77758), (40, 77812), (43, 77845), (49, 77935), (50, 77968), (53, 78016), (55, 78025),

Gene: Estes\_50 Start: 36026, Stop: 35397, Start Num: 8

Candidate Starts for Estes\_50:

(1, 36245), (Start: 4 @36062 has 2 MA's), (Start: 8 @36026 has 6 MA's), (13, 35987), (17, 35900), (18, 35873), (20, 35849), (22, 35804), (27, 35753), (34, 35717), (39, 35660), (40, 35612), (47, 35534), (52, 35414),

Gene: GardenSalsa\_50 Start: 36124, Stop: 35495, Start Num: 8

Candidate Starts for GardenSalsa\_50:

(Start: 4 @36160 has 2 MA's), (Start: 8 @36124 has 6 MA's), (18, 35971), (20, 35947), (22, 35902), (26, 35860), (34, 35815), (36, 35767), (40, 35710), (42, 35680), (45, 35656), (47, 35632),

Gene: Geeche\_141 Start: 76612, Stop: 77241, Start Num: 9

Candidate Starts for Geeche\_141:

(Start: 9 @76612 has 14 MA's), (14, 76654), (24, 76834), (39, 76969), (40, 77023), (43, 77056), (49, 77146), (50, 77179), (53, 77227), (55, 77236),

Gene: GenevaB15\_48 Start: 35796, Stop: 35116, Start Num: 4

Candidate Starts for GenevaB15\_48:

(Start: 4 @35796 has 2 MA's), (Start: 8 @35760 has 6 MA's), (15, 35673), (18, 35607), (20, 35583), (22, 35538), (23, 35529), (34, 35436), (36, 35388), (40, 35331), (42, 35301), (45, 35277), (46, 35256), (47, 35253),

Gene: JonJames\_155 Start: 85628, Stop: 86266, Start Num: 10

Candidate Starts for JonJames\_155:

(Start: 10 @85628 has 2 MA's), (17, 85745), (19, 85775), (20, 85790), (21, 85793), (25, 85874), (28, 85889), (30, 85910), (32, 85916), (35, 85973), (40, 86045), (43, 86078), (46, 86120), (47, 86123), (48, 86129), (51, 86225), (53, 86255),

Gene: Lozinak\_140 Start: 77002, Stop: 77631, Start Num: 9

Candidate Starts for Lozinak\_140:

(2, 76873), (3, 76879), (6, 76984), (7, 76990), (Start: 9 @77002 has 14 MA's), (24, 77224), (39, 77359), (40, 77413), (49, 77536), (50, 77569), (53, 77617), (55, 77626),

Gene: Miskis\_134 Start: 76236, Stop: 76865, Start Num: 9

Candidate Starts for Miskis\_134:

(2, 76107), (3, 76113), (6, 76218), (Start: 9 @76236 has 14 MA's), (14, 76278), (24, 76458), (39, 76593), (40, 76647), (43, 76680), (49, 76770), (50, 76803), (53, 76851), (55, 76860),

Gene: MrMagoo\_50 Start: 36124, Stop: 35495, Start Num: 8

Candidate Starts for MrMagoo\_50:

(Start: 4 @36160 has 2 MA's), (Start: 8 @36124 has 6 MA's), (18, 35971), (20, 35947), (22, 35902), (26, 35860), (34, 35815), (36, 35767), (40, 35710), (42, 35680), (45, 35656), (47, 35632),

Gene: Nanosmite\_48 Start: 35552, Stop: 34905, Start Num: 8

Candidate Starts for Nanosmite\_48:

(Start: 8 @35552 has 6 MA's), (13, 35510), (16, 35453), (18, 35396), (20, 35372), (22, 35327), (23, 35318), (34, 35225), (36, 35177), (40, 35120), (46, 35045), (47, 35042),

Gene: Norvs\_138 Start: 76396, Stop: 77025, Start Num: 9

Candidate Starts for Norvs\_138:

(6, 76378), (Start: 9 @76396 has 14 MA's), (14, 76438), (24, 76618), (39, 76753), (40, 76807), (43, 76840), (49, 76930), (50, 76963), (53, 77011), (55, 77020),

Gene: PhinkBoden\_138 Start: 77064, Stop: 77693, Start Num: 9

Candidate Starts for PhinkBoden\_138:

(2, 76935), (3, 76941), (6, 77046), (Start: 9 @77064 has 14 MA's), (14, 77106), (24, 77286), (39, 77421), (40, 77475), (43, 77508), (49, 77598), (50, 77631), (53, 77679), (55, 77688),

Gene: Reindeer\_44 Start: 35219, Stop: 34572, Start Num: 8

Candidate Starts for Reindeer\_44:

(Start: 8 @35219 has 6 MA's), (12, 35198), (16, 35120), (18, 35063), (20, 35039), (22, 34994), (29, 34928), (37, 34841), (39, 34835), (40, 34787), (46, 34712), (47, 34709), (51, 34616),

Gene: Rey\_49 Start: 36096, Stop: 35431, Start Num: 4

Candidate Starts for Rey\_49:

(Start: 4 @36096 has 2 MA's), (Start: 8 @36060 has 6 MA's), (13, 36021), (18, 35907), (20, 35883), (22, 35838), (27, 35787), (34, 35751), (39, 35694), (40, 35646), (52, 35448),

Gene: Smoothie\_141 Start: 77002, Stop: 77631, Start Num: 9

Candidate Starts for Smoothie\_141:

(2, 76873), (3, 76879), (6, 76984), (7, 76990), (Start: 9 @77002 has 14 MA's), (24, 77224), (39, 77359), (40, 77413), (49, 77536), (50, 77569), (53, 77617), (55, 77626),

Gene: Toniann\_139 Start: 76334, Stop: 76963, Start Num: 9

Candidate Starts for Toniann\_139:

(2, 76205), (3, 76211), (6, 76316), (Start: 9 @76334 has 14 MA's), (14, 76376), (24, 76556), (39, 76691), (40, 76745), (43, 76778), (49, 76868), (50, 76901), (53, 76949), (55, 76958),

Gene: Towmatter\_101 Start: 66292, Stop: 66924, Start Num: 11

Candidate Starts for Towmatter\_101:

(5, 66253), (Start: 11 @66292 has 2 MA's), (13, 66319), (14, 66328), (20, 66451), (22, 66496), (31, 66571), (33, 66583), (38, 66649), (40, 66694), (41, 66697), (44, 66742), (54, 66916),

Gene: Yvonnetastic\_150 Start: 81703, Stop: 82341, Start Num: 10

Candidate Starts for Yvonnetastic\_150:

(Start: 10 @81703 has 2 MA's), (17, 81820), (19, 81850), (20, 81865), (21, 81868), (25, 81949), (28, 81964), (30, 81985), (32, 81991), (35, 82048), (40, 82120), (43, 82153), (46, 82195), (47, 82198), (48,

82204), (51, 82300), (53, 82330),