

# Pham 196578



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 196578 Report

This analysis was run 12/09/24 on database version 580.

Pham number 196578 has 56 members, 5 are drafts.

Phages represented in each track:

- Track 1 : Mildred21\_31
- Track 2 : Bmoc\_29, Anedea\_29
- Track 3 : Larnav\_30, Lululemon\_29, Pepperwood\_30, Watermoore\_30, Sushi23\_30, Deutsch\_29, Tribute\_28, Leo04\_30, Daubenski\_32, EGole\_28, Scheme\_30, Cursive\_28, PacManQ\_29, BlueOtter\_30, HangryHippo\_30
- Track 4 : Braelyn\_30, Warpy\_33, NootNoot\_27, Samisti12\_27, Jay2Jay\_33, Paradiddles\_27, Evy\_31, Persimmon\_27, WhereRU\_27, Targaryen\_30
- Track 5 : Squillium\_30, Liandry\_30, Navo\_29, Bartholomune\_30, PinkiePie\_30
- Track 6 : LilMartin\_31, Angela\_31, MulchMansion\_31
- Track 7 : Peebs\_29
- Track 8 : Cross\_30
- Track 9 : Tomas\_34
- Track 10 : Miskis\_109
- Track 11 : Dusty\_107, Aphelion\_111, ClubL\_111, Cucurbita\_111, Norvs\_112, Bachita\_112
- Track 12 : Geeche\_109
- Track 13 : Culver\_110, Lozinak\_110, Abscondus\_109
- Track 14 : Smoothie\_111, Engineer\_111
- Track 15 : WilliamBoone\_111
- Track 16 : Toniann\_110
- Track 17 : PhinkBoden\_110
- Track 18 : BrutonGaster\_91

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

The start number called the most often in the published annotations is 3, it was called in 37 of the 51 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Anedea\_29, Angela\_31, Bartholomune\_30, BlueOtter\_30, Bmoc\_29, Braelyn\_30, Cursive\_28, Daubenski\_32, EGole\_28, Evy\_31, HangryHippo\_30, Jay2Jay\_33, Larnav\_30, Leo04\_30, Liandry\_30, LilMartin\_31, Lululemon\_29, Mildred21\_31, MulchMansion\_31, Navo\_29, NootNoot\_27, PacManQ\_29, Paradiddles\_27, Peebs\_29, Pepperwood\_30, Persimmon\_27, PinkiePie\_30, Samisti12\_27,

Scheme\_30, Squillium\_30, Sushi23\_30, Targaryen\_30, Teutsch\_29, Tomas\_34, Tribute\_28, Warpy\_33, Watermoore\_30, WhereRU\_27,

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

- Cross\_30,

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

- Abscondus\_109, Aphelion\_111, Bachita\_112, BrutonGaster\_91, ClubL\_111, Cucurbita\_111, Culver\_110, Dusty\_107, Engineer\_111, Geeche\_109, Lozinak\_110, Miskis\_109, Norvs\_112, PhinkBoden\_110, Smoothie\_111, Toniann\_110, WilliamBoone\_111,

### Summary by start number:

Start 3:

- Found in 39 of 56 ( 69.6% ) of genes in pham
- Manual Annotations of this start: 37 of 51
- Called 97.4% of time when present
- Phage (with cluster) where this start called: Anedea\_29 (BE1), Angela\_31 (BE1), Bartholomune\_30 (BE1), BlueOtter\_30 (BE1), Bmoc\_29 (BE1), Braelyn\_30 (BE1), Cursive\_28 (BE1), Daubenski\_32 (BE1), EGole\_28 (BE1), Evy\_31 (BE1), HangryHippo\_30 (BE1), Jay2Jay\_33 (BE1), Larnav\_30 (BE1), Leo04\_30 (BE1), Liandry\_30 (BE1), LilMartin\_31 (BE1), Lululemon\_29 (BE1), Mildred21\_31 (BE1), MulchMansion\_31 (BE1), Navo\_29 (BE1), NootNoot\_27 (BE1), PacManQ\_29 (BE1), Paradiddles\_27 (BE1), Peebs\_29 (BE1), Pepperwood\_30 (BE1), Persimmon\_27 (BE1), PinkiePie\_30 (BE1), Samisti12\_27 (BE1), Scheme\_30 (BE1), Squillium\_30 (BE1), Sushi23\_30 (BE1), Targaryen\_30 (BE1), Teutsch\_29 (BE1), Tomas\_34 (BE2), Tribute\_28 (BE1), Warpy\_33 (BE1), Watermoore\_30 (BE1), WhereRU\_27 (BE1),

Start 4:

- Found in 13 of 56 ( 23.2% ) of genes in pham
- Manual Annotations of this start: 1 of 51
- Called 7.7% of time when present
- Phage (with cluster) where this start called: Toniann\_110 (CQ1),

Start 5:

- Found in 38 of 56 ( 67.9% ) of genes in pham
- Manual Annotations of this start: 1 of 51
- Called 2.6% of time when present
- Phage (with cluster) where this start called: Cross\_30 (BE1),

Start 6:

- Found in 16 of 56 ( 28.6% ) of genes in pham
- Manual Annotations of this start: 7 of 51
- Called 56.2% of time when present
- Phage (with cluster) where this start called: Abscondus\_109 (CQ1), Aphelion\_111 (CQ1), Bachita\_112 (CQ1), ClubL\_111 (CQ1), Cucurbita\_111 (CQ1), Culver\_110 (CQ1), Dusty\_107 (CQ1), Lozinak\_110 (CQ1), Norvs\_112 (CQ1),

Start 7:

- Found in 1 of 56 ( 1.8% ) of genes in pham
- Manual Annotations of this start: 1 of 51
- Called 100.0% of time when present

- Phage (with cluster) where this start called: BrutonGaster\_91 (CQ2),

Start 8:

- Found in 16 of 56 ( 28.6% ) of genes in pham
- Manual Annotations of this start: 4 of 51
- Called 37.5% of time when present
- Phage (with cluster) where this start called: Engineer\_111 (CQ1), Geeche\_109 (CQ1), Miskis\_109 (CQ1), PhinkBoden\_110 (CQ1), Smoothie\_111 (CQ1), WilliamBoone\_111 (CQ1),

### **Summary by clusters:**

There are 4 clusters represented in this pham: BE2, CQ2, CQ1, BE1,

Info for manual annotations of cluster BE1:

- Start number 3 was manually annotated 36 times for cluster BE1.
- Start number 5 was manually annotated 1 time for cluster BE1.

Info for manual annotations of cluster BE2:

- Start number 3 was manually annotated 1 time for cluster BE2.

Info for manual annotations of cluster CQ1:

- Start number 4 was manually annotated 1 time for cluster CQ1.
- Start number 6 was manually annotated 7 times for cluster CQ1.
- Start number 8 was manually annotated 4 times for cluster CQ1.

Info for manual annotations of cluster CQ2:

- Start number 7 was manually annotated 1 time for cluster CQ2.

### **Gene Information:**

Gene: Abscondus\_109 Start: 64171, Stop: 64485, Start Num: 6

Candidate Starts for Abscondus\_109:

(Start: 4 @64153 has 1 MA's), (Start: 6 @64171 has 7 MA's), (Start: 8 @64180 has 4 MA's), (12, 64231), (15, 64315), (19, 64360), (23, 64402), (28, 64471),

Gene: Anedea\_29 Start: 13422, Stop: 13099, Start Num: 3

Candidate Starts for Anedea\_29:

(Start: 3 @13422 has 37 MA's), (Start: 5 @13395 has 1 MA's), (10, 13365), (12, 13341), (13, 13299), (20, 13215), (27, 13119),

Gene: Angela\_31 Start: 13843, Stop: 13538, Start Num: 3

Candidate Starts for Angela\_31:

(Start: 3 @13843 has 37 MA's), (Start: 5 @13816 has 1 MA's), (10, 13786), (12, 13762),

Gene: Aphelion\_111 Start: 65724, Stop: 66038, Start Num: 6

Candidate Starts for Aphelion\_111:

(Start: 4 @65706 has 1 MA's), (Start: 6 @65724 has 7 MA's), (Start: 8 @65733 has 4 MA's), (12, 65784), (15, 65868), (19, 65913), (23, 65955), (28, 66024), (29, 66033),

Gene: Bachita\_112 Start: 65382, Stop: 65696, Start Num: 6

Candidate Starts for Bachita\_112:

(Start: 4 @65364 has 1 MA's), (Start: 6 @65382 has 7 MA's), (Start: 8 @65391 has 4 MA's), (12, 65442), (15, 65526), (19, 65571), (23, 65613), (28, 65682), (29, 65691),

Gene: Bartholomune\_30 Start: 13236, Stop: 12916, Start Num: 3

Candidate Starts for Bartholomune\_30:

(Start: 3 @13236 has 37 MA's), (Start: 5 @13209 has 1 MA's), (10, 13179), (12, 13155), (20, 13029), (22, 12990), (24, 12984),

Gene: BlueOtter\_30 Start: 13185, Stop: 12865, Start Num: 3

Candidate Starts for BlueOtter\_30:

(Start: 3 @13185 has 37 MA's), (Start: 5 @13158 has 1 MA's), (10, 13128), (12, 13104), (24, 12933),

Gene: Bmoc\_29 Start: 13600, Stop: 13277, Start Num: 3

Candidate Starts for Bmoc\_29:

(Start: 3 @13600 has 37 MA's), (Start: 5 @13573 has 1 MA's), (10, 13543), (12, 13519), (13, 13477), (20, 13393), (27, 13297),

Gene: Braelyn\_30 Start: 13631, Stop: 13311, Start Num: 3

Candidate Starts for Braelyn\_30:

(Start: 3 @13631 has 37 MA's), (Start: 5 @13604 has 1 MA's), (10, 13574), (12, 13550), (22, 13385), (24, 13379),

Gene: BrutonGaster\_91 Start: 59582, Stop: 59902, Start Num: 7

Candidate Starts for BrutonGaster\_91:

(1, 59450), (2, 59546), (Start: 7 @59582 has 1 MA's), (16, 59738), (18, 59759), (26, 59837), (28, 59888),

Gene: ClubL\_111 Start: 64312, Stop: 64626, Start Num: 6

Candidate Starts for ClubL\_111:

(Start: 4 @64294 has 1 MA's), (Start: 6 @64312 has 7 MA's), (Start: 8 @64321 has 4 MA's), (12, 64372), (15, 64456), (19, 64501), (23, 64543), (28, 64612), (29, 64621),

Gene: Cross\_30 Start: 13159, Stop: 12866, Start Num: 5

Candidate Starts for Cross\_30:

(Start: 3 @13186 has 37 MA's), (Start: 5 @13159 has 1 MA's), (10, 13129), (12, 13105), (24, 12934),

Gene: Cucurbita\_111 Start: 65889, Stop: 66203, Start Num: 6

Candidate Starts for Cucurbita\_111:

(Start: 4 @65871 has 1 MA's), (Start: 6 @65889 has 7 MA's), (Start: 8 @65898 has 4 MA's), (12, 65949), (15, 66033), (19, 66078), (23, 66120), (28, 66189), (29, 66198),

Gene: Culver\_110 Start: 63643, Stop: 63957, Start Num: 6

Candidate Starts for Culver\_110:

(Start: 4 @63625 has 1 MA's), (Start: 6 @63643 has 7 MA's), (Start: 8 @63652 has 4 MA's), (12, 63703), (15, 63787), (19, 63832), (23, 63874), (28, 63943),

Gene: Cursive\_28 Start: 12003, Stop: 11683, Start Num: 3

Candidate Starts for Cursive\_28:

(Start: 3 @12003 has 37 MA's), (Start: 5 @11976 has 1 MA's), (10, 11946), (12, 11922), (24, 11751),

Gene: Daubenski\_32 Start: 13597, Stop: 13277, Start Num: 3

Candidate Starts for Daubenski\_32:

(Start: 3 @13597 has 37 MA's), (Start: 5 @13570 has 1 MA's), (10, 13540), (12, 13516), (24, 13345),

Gene: Dusty\_107 Start: 64230, Stop: 64544, Start Num: 6

Candidate Starts for Dusty\_107:

(Start: 4 @64212 has 1 MA's), (Start: 6 @64230 has 7 MA's), (Start: 8 @64239 has 4 MA's), (12, 64290), (15, 64374), (19, 64419), (23, 64461), (28, 64530), (29, 64539),

Gene: EGole\_28 Start: 13195, Stop: 12875, Start Num: 3

Candidate Starts for EGole\_28:

(Start: 3 @13195 has 37 MA's), (Start: 5 @13168 has 1 MA's), (10, 13138), (12, 13114), (24, 12943),

Gene: Engineer\_111 Start: 65364, Stop: 65669, Start Num: 8

Candidate Starts for Engineer\_111:

(Start: 4 @65337 has 1 MA's), (Start: 6 @65355 has 7 MA's), (Start: 8 @65364 has 4 MA's), (12, 65415), (15, 65499), (19, 65544), (23, 65586), (28, 65655),

Gene: Evy\_31 Start: 13213, Stop: 12893, Start Num: 3

Candidate Starts for Evy\_31:

(Start: 3 @13213 has 37 MA's), (Start: 5 @13186 has 1 MA's), (10, 13156), (12, 13132), (22, 12967), (24, 12961),

Gene: Geeche\_109 Start: 64462, Stop: 64767, Start Num: 8

Candidate Starts for Geeche\_109:

(Start: 4 @64435 has 1 MA's), (Start: 6 @64453 has 7 MA's), (Start: 8 @64462 has 4 MA's), (12, 64513), (15, 64597), (19, 64642), (23, 64684), (28, 64753), (29, 64762),

Gene: HangryHippo\_30 Start: 13185, Stop: 12865, Start Num: 3

Candidate Starts for HangryHippo\_30:

(Start: 3 @13185 has 37 MA's), (Start: 5 @13158 has 1 MA's), (10, 13128), (12, 13104), (24, 12933),

Gene: Jay2Jay\_33 Start: 13403, Stop: 13083, Start Num: 3

Candidate Starts for Jay2Jay\_33:

(Start: 3 @13403 has 37 MA's), (Start: 5 @13376 has 1 MA's), (10, 13346), (12, 13322), (22, 13157), (24, 13151),

Gene: Larnav\_30 Start: 13133, Stop: 12813, Start Num: 3

Candidate Starts for Larnav\_30:

(Start: 3 @13133 has 37 MA's), (Start: 5 @13106 has 1 MA's), (10, 13076), (12, 13052), (24, 12881),

Gene: Leo04\_30 Start: 13184, Stop: 12864, Start Num: 3

Candidate Starts for Leo04\_30:

(Start: 3 @13184 has 37 MA's), (Start: 5 @13157 has 1 MA's), (10, 13127), (12, 13103), (24, 12932),

Gene: Liandry\_30 Start: 13235, Stop: 12915, Start Num: 3

Candidate Starts for Liandry\_30:

(Start: 3 @13235 has 37 MA's), (Start: 5 @13208 has 1 MA's), (10, 13178), (12, 13154), (20, 13028), (22, 12989), (24, 12983),

Gene: LilMartin\_31 Start: 13790, Stop: 13485, Start Num: 3

Candidate Starts for LilMartin\_31:

(Start: 3 @13790 has 37 MA's), (Start: 5 @13763 has 1 MA's), (10, 13733), (12, 13709),

Gene: Lozinak\_110 Start: 65193, Stop: 65507, Start Num: 6

Candidate Starts for Lozinak\_110:

(Start: 4 @65175 has 1 MA's), (Start: 6 @65193 has 7 MA's), (Start: 8 @65202 has 4 MA's), (12, 65253), (15, 65337), (19, 65382), (23, 65424), (28, 65493),

Gene: Lululemon\_29 Start: 12565, Stop: 12245, Start Num: 3

Candidate Starts for Lululemon\_29:

(Start: 3 @12565 has 37 MA's), (Start: 5 @12538 has 1 MA's), (10, 12508), (12, 12484), (24, 12313),

Gene: Mildred21\_31 Start: 13507, Stop: 13187, Start Num: 3

Candidate Starts for Mildred21\_31:

(Start: 3 @13507 has 37 MA's), (Start: 5 @13480 has 1 MA's), (10, 13450), (12, 13426), (13, 13384), (22, 13261), (24, 13255), (27, 13207),

Gene: Miskis\_109 Start: 64165, Stop: 64470, Start Num: 8

Candidate Starts for Miskis\_109:

(Start: 6 @64156 has 7 MA's), (Start: 8 @64165 has 4 MA's), (12, 64216), (15, 64300), (19, 64345), (23, 64387), (28, 64456), (29, 64465),

Gene: MulchMansion\_31 Start: 13791, Stop: 13486, Start Num: 3

Candidate Starts for MulchMansion\_31:

(Start: 3 @13791 has 37 MA's), (Start: 5 @13764 has 1 MA's), (10, 13734), (12, 13710),

Gene: Navo\_29 Start: 13394, Stop: 13074, Start Num: 3

Candidate Starts for Navo\_29:

(Start: 3 @13394 has 37 MA's), (Start: 5 @13367 has 1 MA's), (10, 13337), (12, 13313), (20, 13187), (22, 13148), (24, 13142),

Gene: NootNoot\_27 Start: 12417, Stop: 12097, Start Num: 3

Candidate Starts for NootNoot\_27:

(Start: 3 @12417 has 37 MA's), (Start: 5 @12390 has 1 MA's), (10, 12360), (12, 12336), (22, 12171), (24, 12165),

Gene: Norvs\_112 Start: 65220, Stop: 65534, Start Num: 6

Candidate Starts for Norvs\_112:

(Start: 4 @65202 has 1 MA's), (Start: 6 @65220 has 7 MA's), (Start: 8 @65229 has 4 MA's), (12, 65280), (15, 65364), (19, 65409), (23, 65451), (28, 65520), (29, 65529),

Gene: PacManQ\_29 Start: 12565, Stop: 12245, Start Num: 3

Candidate Starts for PacManQ\_29:

(Start: 3 @12565 has 37 MA's), (Start: 5 @12538 has 1 MA's), (10, 12508), (12, 12484), (24, 12313),

Gene: Paradiddles\_27 Start: 12408, Stop: 12088, Start Num: 3

Candidate Starts for Paradiddles\_27:

(Start: 3 @12408 has 37 MA's), (Start: 5 @12381 has 1 MA's), (10, 12351), (12, 12327), (22, 12162), (24, 12156),

Gene: Peebs\_29 Start: 12884, Stop: 12564, Start Num: 3

Candidate Starts for Peebs\_29:

(Start: 3 @12884 has 37 MA's), (Start: 5 @12857 has 1 MA's), (10, 12827), (12, 12803), (21, 12650), (24, 12632),

Gene: Pepperwood\_30 Start: 13057, Stop: 12737, Start Num: 3

Candidate Starts for Pepperwood\_30:

(Start: 3 @13057 has 37 MA's), (Start: 5 @13030 has 1 MA's), (10, 13000), (12, 12976), (24, 12805),

Gene: Persimmon\_27 Start: 12465, Stop: 12145, Start Num: 3

Candidate Starts for Persimmon\_27:

(Start: 3 @12465 has 37 MA's), (Start: 5 @12438 has 1 MA's), (10, 12408), (12, 12384), (22, 12219), (24, 12213),

Gene: PhinkBoden\_110 Start: 65503, Stop: 65808, Start Num: 8

Candidate Starts for PhinkBoden\_110:

(Start: 6 @65494 has 7 MA's), (Start: 8 @65503 has 4 MA's), (12, 65554), (15, 65638), (23, 65725), (28, 65794), (29, 65803),

Gene: PinkiePie\_30 Start: 13236, Stop: 12916, Start Num: 3

Candidate Starts for PinkiePie\_30:

(Start: 3 @13236 has 37 MA's), (Start: 5 @13209 has 1 MA's), (10, 13179), (12, 13155), (20, 13029), (22, 12990), (24, 12984),

Gene: Samisti12\_27 Start: 12802, Stop: 12482, Start Num: 3

Candidate Starts for Samisti12\_27:

(Start: 3 @12802 has 37 MA's), (Start: 5 @12775 has 1 MA's), (10, 12745), (12, 12721), (22, 12556), (24, 12550),

Gene: Scheme\_30 Start: 13068, Stop: 12748, Start Num: 3

Candidate Starts for Scheme\_30:

(Start: 3 @13068 has 37 MA's), (Start: 5 @13041 has 1 MA's), (10, 13011), (12, 12987), (24, 12816),

Gene: Smoothie\_111 Start: 65202, Stop: 65507, Start Num: 8

Candidate Starts for Smoothie\_111:

(Start: 4 @65175 has 1 MA's), (Start: 6 @65193 has 7 MA's), (Start: 8 @65202 has 4 MA's), (12, 65253), (15, 65337), (19, 65382), (23, 65424), (28, 65493),

Gene: Squillium\_30 Start: 13235, Stop: 12915, Start Num: 3

Candidate Starts for Squillium\_30:

(Start: 3 @13235 has 37 MA's), (Start: 5 @13208 has 1 MA's), (10, 13178), (12, 13154), (20, 13028), (22, 12989), (24, 12983),

Gene: Sushi23\_30 Start: 13280, Stop: 12960, Start Num: 3

Candidate Starts for Sushi23\_30:

(Start: 3 @13280 has 37 MA's), (Start: 5 @13253 has 1 MA's), (10, 13223), (12, 13199), (24, 13028),

Gene: Targaryen\_30 Start: 13960, Stop: 13640, Start Num: 3

Candidate Starts for Targaryen\_30:

(Start: 3 @13960 has 37 MA's), (Start: 5 @13933 has 1 MA's), (10, 13903), (12, 13879), (22, 13714), (24, 13708),

Gene: Teutsch\_29 Start: 12973, Stop: 12653, Start Num: 3

Candidate Starts for Teutsch\_29:

(Start: 3 @12973 has 37 MA's), (Start: 5 @12946 has 1 MA's), (10, 12916), (12, 12892), (24, 12721),

Gene: Tomas\_34 Start: 14845, Stop: 14519, Start Num: 3

Candidate Starts for Tomas\_34:

(Start: 3 @14845 has 37 MA's), (9, 14800), (11, 14767), (14, 14686), (17, 14656), (25, 14575), (27, 14539),



Gene: Toniann\_110 Start: 64577, Stop: 64909, Start Num: 4

Candidate Starts for Toniann\_110:

(Start: 4 @64577 has 1 MA's), (Start: 6 @64595 has 7 MA's), (Start: 8 @64604 has 4 MA's), (12, 64655), (15, 64739), (19, 64784), (23, 64826), (28, 64895),

Gene: Tribute\_28 Start: 12751, Stop: 12431, Start Num: 3

Candidate Starts for Tribute\_28:

(Start: 3 @12751 has 37 MA's), (Start: 5 @12724 has 1 MA's), (10, 12694), (12, 12670), (24, 12499),

Gene: Warpy\_33 Start: 13423, Stop: 13103, Start Num: 3

Candidate Starts for Warpy\_33:

(Start: 3 @13423 has 37 MA's), (Start: 5 @13396 has 1 MA's), (10, 13366), (12, 13342), (22, 13177), (24, 13171),

Gene: Watermoore\_30 Start: 13186, Stop: 12866, Start Num: 3

Candidate Starts for Watermoore\_30:

(Start: 3 @13186 has 37 MA's), (Start: 5 @13159 has 1 MA's), (10, 13129), (12, 13105), (24, 12934),

Gene: WhereRU\_27 Start: 12465, Stop: 12145, Start Num: 3

Candidate Starts for WhereRU\_27:

(Start: 3 @12465 has 37 MA's), (Start: 5 @12438 has 1 MA's), (10, 12408), (12, 12384), (22, 12219), (24, 12213),

Gene: WilliamBoone\_111 Start: 63615, Stop: 63920, Start Num: 8

Candidate Starts for WilliamBoone\_111:

(2, 63573), (Start: 6 @63606 has 7 MA's), (Start: 8 @63615 has 4 MA's), (15, 63750), (23, 63837), (28, 63906),