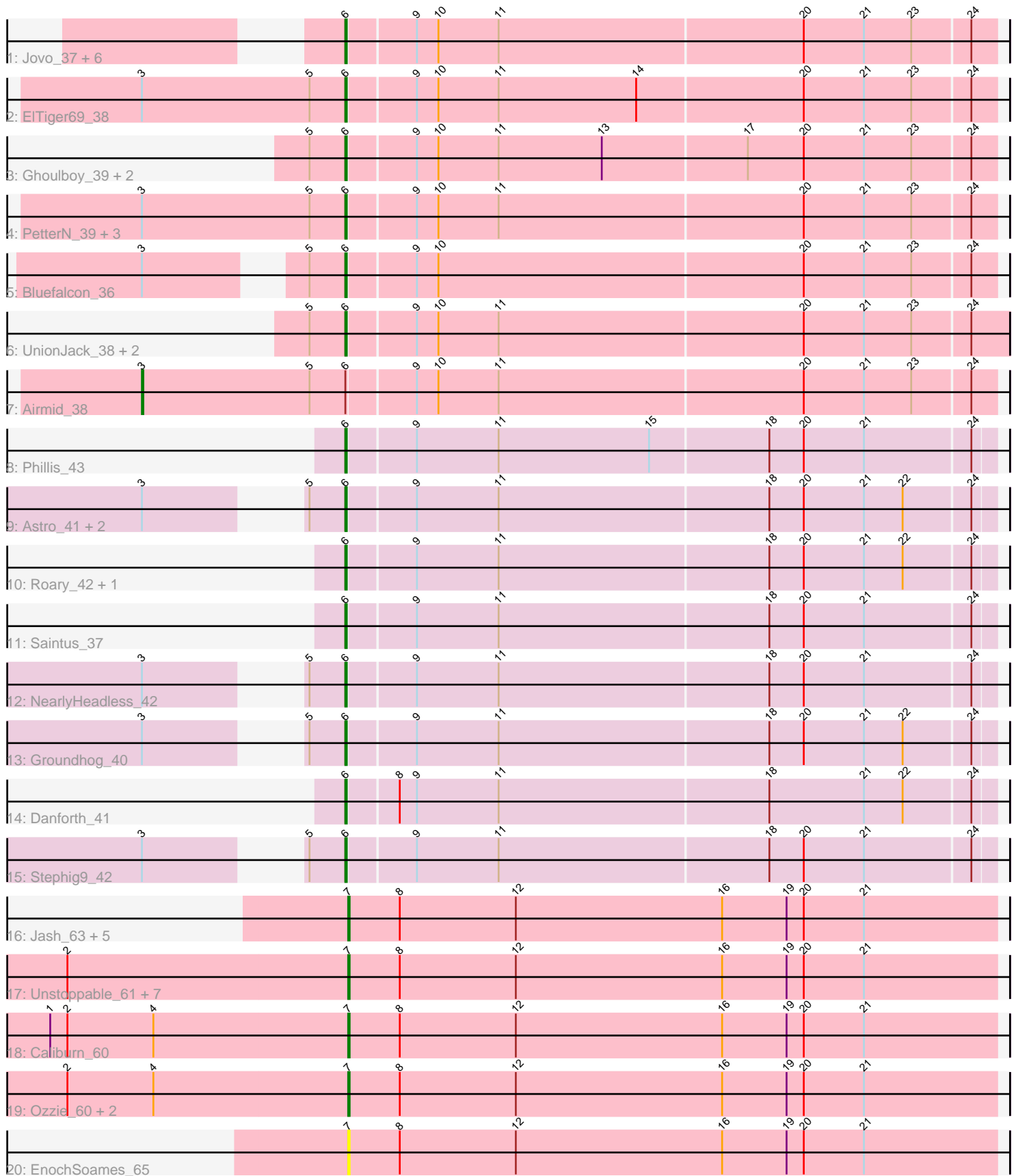


## Pham 1811



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 1811 Report

This analysis was run 04/28/24 on database version 559.

Pham number 1811 has 50 members, 1 are drafts.

Phages represented in each track:

- Track 1 : Jovo\_37, Conspiracy\_37, Archetta\_37, PickleBack\_37, Lev2\_37, ForGetIt\_37, Bonamassa\_38
- Track 2 : ElTiger69\_38
- Track 3 : Ghoulboy\_39, Zolita\_38, SydNat\_39
- Track 4 : PetterN\_39, Naca\_38, Chadwick\_39, Scorpio\_39
- Track 5 : Bluefalcon\_36
- Track 6 : UnionJack\_38, Benedict\_38, Jabiru\_38
- Track 7 : Airmid\_38
- Track 8 : Phillis\_43
- Track 9 : Astro\_41, Expelliarmus\_41, Smeadley\_42
- Track 10 : Roary\_42, Dixon\_42
- Track 11 : Saintus\_37
- Track 12 : NearlyHeadless\_42
- Track 13 : Groundhog\_40
- Track 14 : Danforth\_41
- Track 15 : Stephig9\_42
- Track 16 : Jash\_63, Eddasa\_64, Izzy\_63, Rusticus\_63, BryanRecycles\_63, Oliynyk\_63
- Track 17 : Unstoppable\_61, Esperer\_62, Phettuccine\_61, Aaronocolus\_61, Bovel\_61, Nerdos\_60, Indigo\_60, Leviticus\_62
- Track 18 : Caliburn\_60
- Track 19 : Ozzie\_60, Legacy\_60, SunsetPointe\_60
- Track 20 : EnochSoames\_65

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

The start number called the most often in the published annotations is 6, it was called in 30 of the 49 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Archetta\_37, Astro\_41, Benedict\_38, Bluefalcon\_36, Bonamassa\_38, Chadwick\_39, Conspiracy\_37, Danforth\_41, Dixon\_42, ElTiger69\_38, Expelliarmus\_41, ForGetIt\_37, Ghoulboy\_39, Groundhog\_40, Jabiru\_38, Jovo\_37, Lev2\_37, Naca\_38, NearlyHeadless\_42, PetterN\_39, Phillis\_43, PickleBack\_37, Roary\_42, Saintus\_37,

Scorpia\_39, Smeadley\_42, Stephig9\_42, SydNat\_39, UnionJack\_38, Zolita\_38,

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

- Airmid\_38,

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

- Aaronocolus\_61, Bovely\_61, BryanRecycles\_63, Caliburn\_60, Eddasa\_64, EnochSoames\_65, Esperer\_62, Indigo\_60, Izzy\_63, Jash\_63, Legacy\_60, Leviticus\_62, Nerdos\_60, Oliynyk\_63, Ozzie\_60, Phettuccine\_61, Rusticus\_63, SunsetPointe\_60, Unstoppable\_61,

### **Summary by start number:**

Start 3:

- Found in 13 of 50 ( 26.0% ) of genes in pham
- Manual Annotations of this start: 1 of 49
- Called 7.7% of time when present
- Phage (with cluster) where this start called: Airmid\_38 (A5),

Start 6:

- Found in 31 of 50 ( 62.0% ) of genes in pham
- Manual Annotations of this start: 30 of 49
- Called 96.8% of time when present
- Phage (with cluster) where this start called: Archetta\_37 (A5), Astro\_41 (A8), Benedict\_38 (A5), Bluefalcon\_36 (A5), Bonamassa\_38 (A5), Chadwick\_39 (A5), Conspiracy\_37 (A5), Danforth\_41 (A8), Dixon\_42 (A8), ElTiger69\_38 (A5), Expelliarmus\_41 (A8), ForGetIt\_37 (A5), Ghouboy\_39 (A5), Groundhog\_40 (A8), Jabiru\_38 (A5), Jovo\_37 (A5), Lev2\_37 (A5), Naca\_38 (A5), NearlyHeadless\_42 (A8), PetterN\_39 (A5), Phillis\_43 (A8), PickleBack\_37 (A5), Roary\_42 (A8), Saintus\_37 (A8), Scorpia\_39 (A5), Smeadley\_42 (A8), Stephig9\_42 (A8), SydNat\_39 (A5), UnionJack\_38 (A5), Zolita\_38 (A5),

Start 7:

- Found in 19 of 50 ( 38.0% ) of genes in pham
- Manual Annotations of this start: 18 of 49
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aaronocolus\_61 (BD1), Bovely\_61 (BD1), BryanRecycles\_63 (BD1), Caliburn\_60 (BD1), Eddasa\_64 (BD1), EnochSoames\_65 (BD1), Esperer\_62 (BD1), Indigo\_60 (BD1), Izzy\_63 (BD1), Jash\_63 (BD1), Legacy\_60 (BD1), Leviticus\_62 (BD1), Nerdos\_60 (BD1), Oliynyk\_63 (BD1), Ozzie\_60 (BD1), Phettuccine\_61 (BD1), Rusticus\_63 (BD1), SunsetPointe\_60 (BD1), Unstoppable\_61 (BD1),

### **Summary by clusters:**

There are 3 clusters represented in this pham: BD1, A5, A8,

Info for manual annotations of cluster A5:

- Start number 3 was manually annotated 1 time for cluster A5.
- Start number 6 was manually annotated 19 times for cluster A5.

Info for manual annotations of cluster A8:

- Start number 6 was manually annotated 11 times for cluster A8.

Info for manual annotations of cluster BD1:

•Start number 7 was manually annotated 18 times for cluster BD1.

**Gene Information:**

Gene: Aaronocolus\_61 Start: 43233, Stop: 42781, Start Num: 7

Candidate Starts for Aaronocolus\_61:

(2, 43428), (Start: 7 @43233 has 18 MA's), (8, 43197), (12, 43116), (16, 42972), (19, 42927), (20, 42915), (21, 42873),

Gene: Airmid\_38 Start: 28387, Stop: 27803, Start Num: 3

Candidate Starts for Airmid\_38:

(Start: 3 @28387 has 1 MA's), (5, 28270), (Start: 6 @28246 has 30 MA's), (9, 28201), (10, 28186), (11, 28144), (20, 27934), (21, 27892), (23, 27859), (24, 27820),

Gene: Archetta\_37 Start: 28800, Stop: 28357, Start Num: 6

Candidate Starts for Archetta\_37:

(Start: 6 @28800 has 30 MA's), (9, 28755), (10, 28740), (11, 28698), (20, 28488), (21, 28446), (23, 28413), (24, 28374),

Gene: Astro\_41 Start: 28677, Stop: 28237, Start Num: 6

Candidate Starts for Astro\_41:

(Start: 3 @28770 has 1 MA's), (5, 28701), (Start: 6 @28677 has 30 MA's), (9, 28632), (11, 28575), (18, 28389), (20, 28365), (21, 28323), (22, 28296), (24, 28251),

Gene: Benedict\_38 Start: 28240, Stop: 27797, Start Num: 6

Candidate Starts for Benedict\_38:

(5, 28264), (Start: 6 @28240 has 30 MA's), (9, 28195), (10, 28180), (11, 28138), (20, 27928), (21, 27886), (23, 27853), (24, 27814),

Gene: Bluefalcon\_36 Start: 28748, Stop: 28305, Start Num: 6

Candidate Starts for Bluefalcon\_36:

(Start: 3 @28856 has 1 MA's), (5, 28772), (Start: 6 @28748 has 30 MA's), (9, 28703), (10, 28688), (20, 28436), (21, 28394), (23, 28361), (24, 28322),

Gene: Bonamassa\_38 Start: 28789, Stop: 28346, Start Num: 6

Candidate Starts for Bonamassa\_38:

(Start: 6 @28789 has 30 MA's), (9, 28744), (10, 28729), (11, 28687), (20, 28477), (21, 28435), (23, 28402), (24, 28363),

Gene: Bovely\_61 Start: 43236, Stop: 42784, Start Num: 7

Candidate Starts for Bovely\_61:

(2, 43431), (Start: 7 @43236 has 18 MA's), (8, 43200), (12, 43119), (16, 42975), (19, 42930), (20, 42918), (21, 42876),

Gene: BryanRecycles\_63 Start: 43721, Stop: 43269, Start Num: 7

Candidate Starts for BryanRecycles\_63:

(Start: 7 @43721 has 18 MA's), (8, 43685), (12, 43604), (16, 43460), (19, 43415), (20, 43403), (21, 43361),

Gene: Caliburn\_60 Start: 43337, Stop: 42885, Start Num: 7

Candidate Starts for Caliburn\_60:

(1, 43544), (2, 43532), (4, 43472), (Start: 7 @43337 has 18 MA's), (8, 43301), (12, 43220), (16, 43076), (19, 43031), (20, 43019), (21, 42977),

Gene: Chadwick\_39 Start: 28143, Stop: 27700, Start Num: 6

Candidate Starts for Chadwick\_39:

(Start: 3 @28284 has 1 MA's), (5, 28167), (Start: 6 @28143 has 30 MA's), (9, 28098), (10, 28083), (11, 28041), (20, 27831), (21, 27789), (23, 27756), (24, 27717),

Gene: Conspiracy\_37 Start: 28482, Stop: 28039, Start Num: 6

Candidate Starts for Conspiracy\_37:

(Start: 6 @28482 has 30 MA's), (9, 28437), (10, 28422), (11, 28380), (20, 28170), (21, 28128), (23, 28095), (24, 28056),

Gene: Danforth\_41 Start: 28705, Stop: 28265, Start Num: 6

Candidate Starts for Danforth\_41:

(Start: 6 @28705 has 30 MA's), (8, 28672), (9, 28660), (11, 28603), (18, 28417), (21, 28351), (22, 28324), (24, 28279),

Gene: Dixon\_42 Start: 28885, Stop: 28445, Start Num: 6

Candidate Starts for Dixon\_42:

(Start: 6 @28885 has 30 MA's), (9, 28840), (11, 28783), (18, 28597), (20, 28573), (21, 28531), (22, 28504), (24, 28459),

Gene: Eddasa\_64 Start: 44260, Stop: 43808, Start Num: 7

Candidate Starts for Eddasa\_64:

(Start: 7 @44260 has 18 MA's), (8, 44224), (12, 44143), (16, 43999), (19, 43954), (20, 43942), (21, 43900),

Gene: ElTiger69\_38 Start: 28238, Stop: 27795, Start Num: 6

Candidate Starts for ElTiger69\_38:

(Start: 3 @28379 has 1 MA's), (5, 28262), (Start: 6 @28238 has 30 MA's), (9, 28193), (10, 28178), (11, 28136), (14, 28040), (20, 27926), (21, 27884), (23, 27851), (24, 27812),

Gene: EnochSoames\_65 Start: 43517, Stop: 43065, Start Num: 7

Candidate Starts for EnochSoames\_65:

(Start: 7 @43517 has 18 MA's), (8, 43481), (12, 43400), (16, 43256), (19, 43211), (20, 43199), (21, 43157),

Gene: Esperer\_62 Start: 43579, Stop: 43127, Start Num: 7

Candidate Starts for Esperer\_62:

(2, 43774), (Start: 7 @43579 has 18 MA's), (8, 43543), (12, 43462), (16, 43318), (19, 43273), (20, 43261), (21, 43219),

Gene: Expelliarmus\_41 Start: 28735, Stop: 28295, Start Num: 6

Candidate Starts for Expelliarmus\_41:

(Start: 3 @28828 has 1 MA's), (5, 28759), (Start: 6 @28735 has 30 MA's), (9, 28690), (11, 28633), (18, 28447), (20, 28423), (21, 28381), (22, 28354), (24, 28309),

Gene: ForGetIt\_37 Start: 28507, Stop: 28064, Start Num: 6

Candidate Starts for ForGetIt\_37:

(Start: 6 @28507 has 30 MA's), (9, 28462), (10, 28447), (11, 28405), (20, 28195), (21, 28153), (23, 28120), (24, 28081),

Gene: Ghoulboy\_39 Start: 29194, Stop: 28751, Start Num: 6

Candidate Starts for Ghoulboy\_39:

(5, 29218), (Start: 6 @29194 has 30 MA's), (9, 29149), (10, 29134), (11, 29092), (13, 29020), (17, 28921), (20, 28882), (21, 28840), (23, 28807), (24, 28768),

Gene: Groundhog\_40 Start: 28642, Stop: 28202, Start Num: 6

Candidate Starts for Groundhog\_40:

(Start: 3 @28735 has 1 MA's), (5, 28666), (Start: 6 @28642 has 30 MA's), (9, 28597), (11, 28540), (18, 28354), (20, 28330), (21, 28288), (22, 28261), (24, 28216),

Gene: Indigo\_60 Start: 43229, Stop: 42777, Start Num: 7

Candidate Starts for Indigo\_60:

(2, 43424), (Start: 7 @43229 has 18 MA's), (8, 43193), (12, 43112), (16, 42968), (19, 42923), (20, 42911), (21, 42869),

Gene: Izzy\_63 Start: 43768, Stop: 43316, Start Num: 7

Candidate Starts for Izzy\_63:

(Start: 7 @43768 has 18 MA's), (8, 43732), (12, 43651), (16, 43507), (19, 43462), (20, 43450), (21, 43408),

Gene: Jabiru\_38 Start: 28287, Stop: 27844, Start Num: 6

Candidate Starts for Jabiru\_38:

(5, 28311), (Start: 6 @28287 has 30 MA's), (9, 28242), (10, 28227), (11, 28185), (20, 27975), (21, 27933), (23, 27900), (24, 27861),

Gene: Jash\_63 Start: 43721, Stop: 43269, Start Num: 7

Candidate Starts for Jash\_63:

(Start: 7 @43721 has 18 MA's), (8, 43685), (12, 43604), (16, 43460), (19, 43415), (20, 43403), (21, 43361),

Gene: Jovo\_37 Start: 28763, Stop: 28320, Start Num: 6

Candidate Starts for Jovo\_37:

(Start: 6 @28763 has 30 MA's), (9, 28718), (10, 28703), (11, 28661), (20, 28451), (21, 28409), (23, 28376), (24, 28337),

Gene: Legacy\_60 Start: 43328, Stop: 42876, Start Num: 7

Candidate Starts for Legacy\_60:

(2, 43523), (4, 43463), (Start: 7 @43328 has 18 MA's), (8, 43292), (12, 43211), (16, 43067), (19, 43022), (20, 43010), (21, 42968),

Gene: Lev2\_37 Start: 28395, Stop: 27952, Start Num: 6

Candidate Starts for Lev2\_37:

(Start: 6 @28395 has 30 MA's), (9, 28350), (10, 28335), (11, 28293), (20, 28083), (21, 28041), (23, 28008), (24, 27969),

Gene: Leviticus\_62 Start: 43766, Stop: 43314, Start Num: 7

Candidate Starts for Leviticus\_62:

(2, 43961), (Start: 7 @43766 has 18 MA's), (8, 43730), (12, 43649), (16, 43505), (19, 43460), (20, 43448), (21, 43406),

Gene: Naca\_38 Start: 28780, Stop: 28337, Start Num: 6

Candidate Starts for Naca\_38:

(Start: 3 @28921 has 1 MA's), (5, 28804), (Start: 6 @28780 has 30 MA's), (9, 28735), (10, 28720), (11, 28678), (20, 28468), (21, 28426), (23, 28393), (24, 28354),

Gene: NearlyHeadless\_42 Start: 28788, Stop: 28348, Start Num: 6

Candidate Starts for NearlyHeadless\_42:

(Start: 3 @28881 has 1 MA's), (5, 28812), (Start: 6 @28788 has 30 MA's), (9, 28743), (11, 28686), (18, 28500), (20, 28476), (21, 28434), (24, 28362),

Gene: Nerdos\_60 Start: 43228, Stop: 42776, Start Num: 7

Candidate Starts for Nerdos\_60:

(2, 43423), (Start: 7 @43228 has 18 MA's), (8, 43192), (12, 43111), (16, 42967), (19, 42922), (20, 42910), (21, 42868),

Gene: Oliynyk\_63 Start: 43721, Stop: 43269, Start Num: 7

Candidate Starts for Oliynyk\_63:

(Start: 7 @43721 has 18 MA's), (8, 43685), (12, 43604), (16, 43460), (19, 43415), (20, 43403), (21, 43361),

Gene: Ozzie\_60 Start: 43337, Stop: 42885, Start Num: 7

Candidate Starts for Ozzie\_60:

(2, 43532), (4, 43472), (Start: 7 @43337 has 18 MA's), (8, 43301), (12, 43220), (16, 43076), (19, 43031), (20, 43019), (21, 42977),

Gene: PetterN\_39 Start: 28143, Stop: 27700, Start Num: 6

Candidate Starts for PetterN\_39:

(Start: 3 @28284 has 1 MA's), (5, 28167), (Start: 6 @28143 has 30 MA's), (9, 28098), (10, 28083), (11, 28041), (20, 27831), (21, 27789), (23, 27756), (24, 27717),

Gene: Phettuccine\_61 Start: 43229, Stop: 42777, Start Num: 7

Candidate Starts for Phettuccine\_61:

(2, 43424), (Start: 7 @43229 has 18 MA's), (8, 43193), (12, 43112), (16, 42968), (19, 42923), (20, 42911), (21, 42869),

Gene: Phillis\_43 Start: 29059, Stop: 28619, Start Num: 6

Candidate Starts for Phillis\_43:

(Start: 6 @29059 has 30 MA's), (9, 29014), (11, 28957), (15, 28852), (18, 28771), (20, 28747), (21, 28705), (24, 28633),

Gene: PickleBack\_37 Start: 28396, Stop: 27953, Start Num: 6

Candidate Starts for PickleBack\_37:

(Start: 6 @28396 has 30 MA's), (9, 28351), (10, 28336), (11, 28294), (20, 28084), (21, 28042), (23, 28009), (24, 27970),

Gene: Roary\_42 Start: 28690, Stop: 28250, Start Num: 6

Candidate Starts for Roary\_42:

(Start: 6 @28690 has 30 MA's), (9, 28645), (11, 28588), (18, 28402), (20, 28378), (21, 28336), (22, 28309), (24, 28264),

Gene: Rusticus\_63 Start: 43721, Stop: 43269, Start Num: 7

Candidate Starts for Rusticus\_63:

(Start: 7 @43721 has 18 MA's), (8, 43685), (12, 43604), (16, 43460), (19, 43415), (20, 43403), (21, 43361),

Gene: Saintus\_37 Start: 25718, Stop: 25278, Start Num: 6

Candidate Starts for Saintus\_37:

(Start: 6 @25718 has 30 MA's), (9, 25673), (11, 25616), (18, 25430), (20, 25406), (21, 25364), (24, 25292),

Gene: Scorpia\_39 Start: 28220, Stop: 27777, Start Num: 6

Candidate Starts for Scorpia\_39:

(Start: 3 @28361 has 1 MA's), (5, 28244), (Start: 6 @28220 has 30 MA's), (9, 28175), (10, 28160), (11, 28118), (20, 27908), (21, 27866), (23, 27833), (24, 27794),

Gene: Smeadley\_42 Start: 28857, Stop: 28417, Start Num: 6

Candidate Starts for Smeadley\_42:

(Start: 3 @28950 has 1 MA's), (5, 28881), (Start: 6 @28857 has 30 MA's), (9, 28812), (11, 28755), (18, 28569), (20, 28545), (21, 28503), (22, 28476), (24, 28431),

Gene: Stephig9\_42 Start: 28716, Stop: 28276, Start Num: 6

Candidate Starts for Stephig9\_42:

(Start: 3 @28809 has 1 MA's), (5, 28740), (Start: 6 @28716 has 30 MA's), (9, 28671), (11, 28614), (18, 28428), (20, 28404), (21, 28362), (24, 28290),

Gene: SunsetPointe\_60 Start: 43344, Stop: 42892, Start Num: 7

Candidate Starts for SunsetPointe\_60:

(2, 43539), (4, 43479), (Start: 7 @43344 has 18 MA's), (8, 43308), (12, 43227), (16, 43083), (19, 43038), (20, 43026), (21, 42984),

Gene: SydNat\_39 Start: 29203, Stop: 28760, Start Num: 6

Candidate Starts for SydNat\_39:

(5, 29227), (Start: 6 @29203 has 30 MA's), (9, 29158), (10, 29143), (11, 29101), (13, 29029), (17, 28930), (20, 28891), (21, 28849), (23, 28816), (24, 28777),

Gene: UnionJack\_38 Start: 27975, Stop: 27523, Start Num: 6

Candidate Starts for UnionJack\_38:

(5, 27999), (Start: 6 @27975 has 30 MA's), (9, 27930), (10, 27915), (11, 27873), (20, 27663), (21, 27621), (23, 27588), (24, 27549),

Gene: Unstoppable\_61 Start: 43227, Stop: 42775, Start Num: 7

Candidate Starts for Unstoppable\_61:

(2, 43422), (Start: 7 @43227 has 18 MA's), (8, 43191), (12, 43110), (16, 42966), (19, 42921), (20, 42909), (21, 42867),

Gene: Zolita\_38 Start: 29207, Stop: 28764, Start Num: 6

Candidate Starts for Zolita\_38:

(5, 29231), (Start: 6 @29207 has 30 MA's), (9, 29162), (10, 29147), (11, 29105), (13, 29033), (17, 28934), (20, 28895), (21, 28853), (23, 28820), (24, 28781),