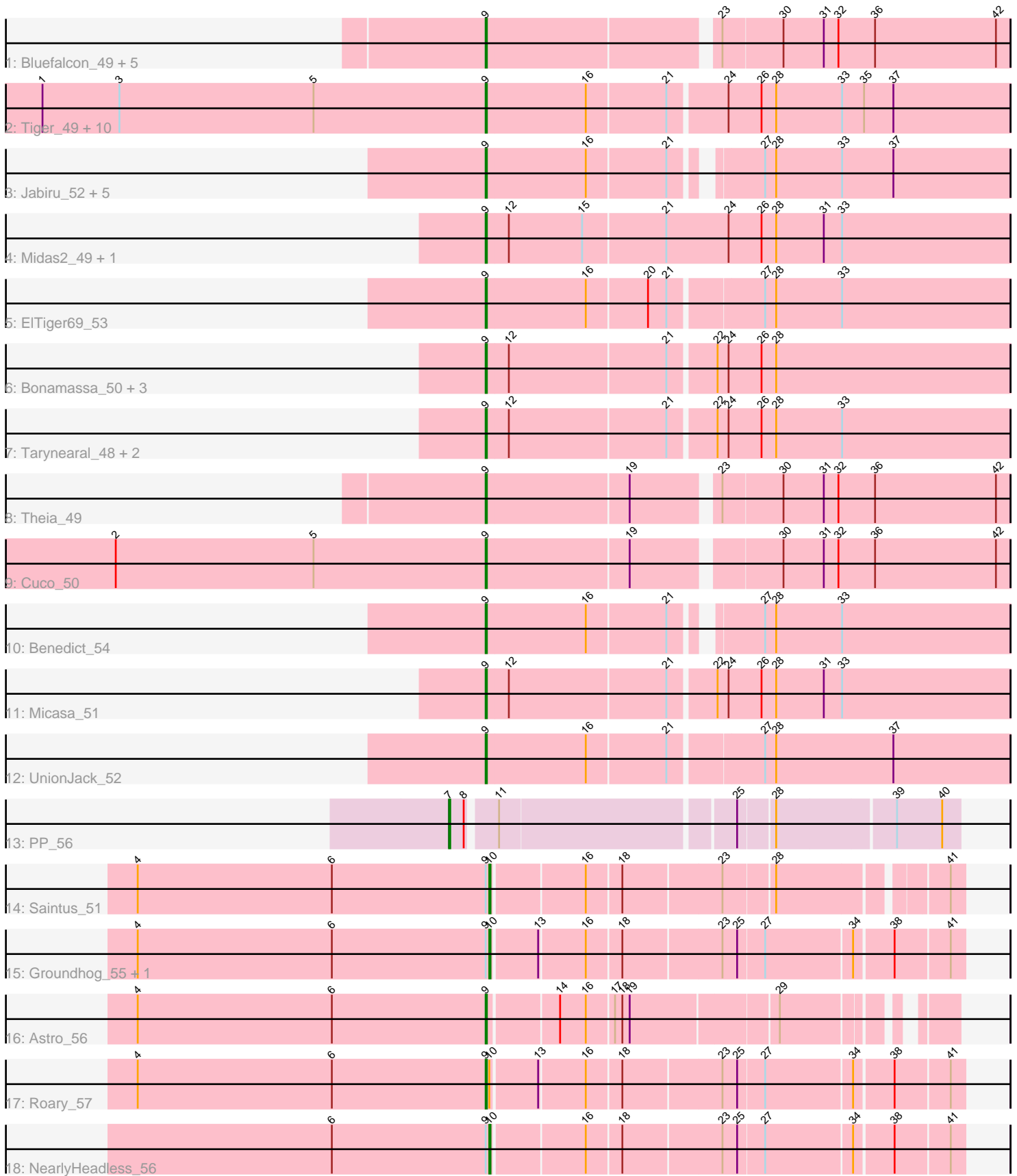


Pham 172962



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 172962 Report

This analysis was run 11/02/24 on database version 579.

Pham number 172962 has 45 members, 0 are drafts.

Phages represented in each track:

- Track 1 : Bluefalcon\_49, MarysWell\_50, Ghouboy\_53, SydNat\_53, Zolita\_52, Dublin\_50
- Track 2 : Tiger\_49, AgentM\_49, Aragog\_49, Phlorence\_48, ForGetIt\_50, Discoknowium\_48, PickleBack\_50, Jovo\_50, Lev2\_50, Conspiracy\_50, Archetta\_49
- Track 3 : Jabiru\_52, PetterN\_55, Naca\_51, Chadwick\_54, Scorpia\_55, Airmid\_51
- Track 4 : Midas2\_49, Coog\_49
- Track 5 : EITiger69\_53
- Track 6 : Bonamassa\_50, George\_48, LittleCherry\_50, HuhtaEnerson15\_50
- Track 7 : Tarynearal\_48, Milcery\_50, Swirley\_52
- Track 8 : Theia\_49
- Track 9 : Cuco\_50
- Track 10 : Benedict\_54
- Track 11 : Micasa\_51
- Track 12 : UnionJack\_52
- Track 13 : PP\_56
- Track 14 : Saintus\_51
- Track 15 : Groundhog\_55, Danforth\_56
- Track 16 : Astro\_56
- Track 17 : Roary\_57
- Track 18 : NearlyHeadless\_56

### ***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 40 of the 45 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AgentM\_49, Airmid\_51, Aragog\_49, Archetta\_49, Astro\_56, Benedict\_54, Bluefalcon\_49, Bonamassa\_50, Chadwick\_54, Conspiracy\_50, Coog\_49, Cuco\_50, Discoknowium\_48, Dublin\_50, EITiger69\_53, ForGetIt\_50, George\_48, Ghouboy\_53, HuhtaEnerson15\_50, Jabiru\_52, Jovo\_50, Lev2\_50, LittleCherry\_50, MarysWell\_50, Micasa\_51, Midas2\_49, Milcery\_50, Naca\_51, PetterN\_55, Phlorence\_48, PickleBack\_50, Roary\_57, Scorpia\_55, Swirley\_52, SydNat\_53, Tarynearal\_48, Theia\_49, Tiger\_49, UnionJack\_52, Zolita\_52,

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

- Danforth\_56, Groundhog\_55, NearlyHeadless\_56, Saintus\_51,

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

- PP\_56,

### Summary by start number:

Start 7:

- Found in 1 of 45 ( 2.2% ) of genes in pham
- Manual Annotations of this start: 1 of 45
- Called 100.0% of time when present
- Phage (with cluster) where this start called: PP\_56 (A7),

Start 9:

- Found in 44 of 45 ( 97.8% ) of genes in pham
- Manual Annotations of this start: 40 of 45
- Called 90.9% of time when present
- Phage (with cluster) where this start called: AgentM\_49 (A5), Airmid\_51 (A5), Aragog\_49 (A5), Archetta\_49 (A5), Astro\_56 (A8), Benedict\_54 (A5), Bluefalcon\_49 (A5), Bonamassa\_50 (A5), Chadwick\_54 (A5), Conspiracy\_50 (A5), Coog\_49 (A5), Cuco\_50 (A5), Discoknowium\_48 (A5), Dublin\_50 (A5), EITiger69\_53 (A5), ForGetIt\_50 (A5), George\_48 (A5), Ghoulyboy\_53 (A5), HuhtaEnerson15\_50 (A5), Jabiru\_52 (A5), Jovo\_50 (A5), Lev2\_50 (A5), LittleCherry\_50 (A5), MarysWell\_50 (A5), Micasa\_51 (A5), Midas2\_49 (A5), Milcery\_50 (A5), Naca\_51 (A5), PetterN\_55 (A5), Phlorence\_48 (A5), PickleBack\_50 (A5), Roary\_57 (A8), Scorpia\_55 (A5), Swirley\_52 (A5), SydNat\_53 (A5), Tarynearal\_48 (A5), Theia\_49 (A5), Tiger\_49 (A5), UnionJack\_52 (A5), Zolita\_52 (A5),

Start 10:

- Found in 5 of 45 ( 11.1% ) of genes in pham
- Manual Annotations of this start: 4 of 45
- Called 80.0% of time when present
- Phage (with cluster) where this start called: Danforth\_56 (A8), Groundhog\_55 (A8), NearlyHeadless\_56 (A8), Saintus\_51 (A8),

### Summary by clusters:

There are 3 clusters represented in this pham: A8, A5, A7,

Info for manual annotations of cluster A5:

- Start number 9 was manually annotated 38 times for cluster A5.

Info for manual annotations of cluster A7:

- Start number 7 was manually annotated 1 time for cluster A7.

Info for manual annotations of cluster A8:

- Start number 9 was manually annotated 2 times for cluster A8.
- Start number 10 was manually annotated 4 times for cluster A8.

**Gene Information:**

Gene: AgentM\_49 Start: 36924, Stop: 36505, Start Num: 9

Candidate Starts for AgentM\_49:

(1, 37287), (3, 37224), (5, 37065), (Start: 9 @36924 has 40 MA's), (16, 36843), (21, 36780), (24, 36735), (26, 36708), (28, 36696), (33, 36642), (35, 36624), (37, 36600),

Gene: Airmid\_51 Start: 37065, Stop: 36664, Start Num: 9

Candidate Starts for Airmid\_51:

(Start: 9 @37065 has 40 MA's), (16, 36984), (21, 36921), (27, 36864), (28, 36855), (33, 36801), (37, 36759),

Gene: Aragog\_49 Start: 36944, Stop: 36525, Start Num: 9

Candidate Starts for Aragog\_49:

(1, 37307), (3, 37244), (5, 37085), (Start: 9 @36944 has 40 MA's), (16, 36863), (21, 36800), (24, 36755), (26, 36728), (28, 36716), (33, 36662), (35, 36644), (37, 36620),

Gene: Archetta\_49 Start: 37354, Stop: 36935, Start Num: 9

Candidate Starts for Archetta\_49:

(1, 37717), (3, 37654), (5, 37495), (Start: 9 @37354 has 40 MA's), (16, 37273), (21, 37210), (24, 37165), (26, 37138), (28, 37126), (33, 37072), (35, 37054), (37, 37030),

Gene: Astro\_56 Start: 36909, Stop: 36574, Start Num: 9

Candidate Starts for Astro\_56:

(4, 37194), (6, 37035), (Start: 9 @36909 has 40 MA's), (14, 36855), (16, 36834), (17, 36813), (18, 36807), (19, 36801), (29, 36687),

Gene: Benedict\_54 Start: 37313, Stop: 36912, Start Num: 9

Candidate Starts for Benedict\_54:

(Start: 9 @37313 has 40 MA's), (16, 37232), (21, 37169), (27, 37112), (28, 37103), (33, 37049),

Gene: Bluefalcon\_49 Start: 37490, Stop: 37080, Start Num: 9

Candidate Starts for Bluefalcon\_49:

(Start: 9 @37490 has 40 MA's), (23, 37313), (30, 37265), (31, 37232), (32, 37220), (36, 37190), (42, 37091),

Gene: Bonamassa\_50 Start: 37367, Stop: 36948, Start Num: 9

Candidate Starts for Bonamassa\_50:

(Start: 9 @37367 has 40 MA's), (12, 37349), (21, 37223), (22, 37187), (24, 37178), (26, 37151), (28, 37139),

Gene: Chadwick\_54 Start: 37154, Stop: 36753, Start Num: 9

Candidate Starts for Chadwick\_54:

(Start: 9 @37154 has 40 MA's), (16, 37073), (21, 37010), (27, 36953), (28, 36944), (33, 36890), (37, 36848),

Gene: Conspiracy\_50 Start: 37166, Stop: 36747, Start Num: 9

Candidate Starts for Conspiracy\_50:

(1, 37529), (3, 37466), (5, 37307), (Start: 9 @37166 has 40 MA's), (16, 37085), (21, 37022), (24, 36977), (26, 36950), (28, 36938), (33, 36884), (35, 36866), (37, 36842),

Gene: Coog\_49 Start: 37357, Stop: 36932, Start Num: 9

Candidate Starts for Coog\_49:

(Start: 9 @37357 has 40 MA's), (12, 37339), (15, 37279), (21, 37213), (24, 37162), (26, 37135), (28, 37123), (31, 37084), (33, 37069),

Gene: Cuco\_50 Start: 37214, Stop: 36804, Start Num: 9

Candidate Starts for Cuco\_50:

(2, 37517), (5, 37355), (Start: 9 @37214 has 40 MA's), (19, 37100), (30, 36989), (31, 36956), (32, 36944), (36, 36914), (42, 36815),

Gene: Danforth\_56 Start: 36969, Stop: 36607, Start Num: 10

Candidate Starts for Danforth\_56:

(4, 37257), (6, 37098), (Start: 9 @36972 has 40 MA's), (Start: 10 @36969 has 4 MA's), (13, 36933), (16, 36897), (18, 36870), (23, 36792), (25, 36780), (27, 36759), (34, 36690), (38, 36660), (41, 36618),

Gene: Discoknowium\_48 Start: 36833, Stop: 36414, Start Num: 9

Candidate Starts for Discoknowium\_48:

(1, 37196), (3, 37133), (5, 36974), (Start: 9 @36833 has 40 MA's), (16, 36752), (21, 36689), (24, 36644), (26, 36617), (28, 36605), (33, 36551), (35, 36533), (37, 36509),

Gene: Dublin\_50 Start: 37326, Stop: 36916, Start Num: 9

Candidate Starts for Dublin\_50:

(Start: 9 @37326 has 40 MA's), (23, 37149), (30, 37101), (31, 37068), (32, 37056), (36, 37026), (42, 36927),

Gene: EITiger69\_53 Start: 37289, Stop: 36873, Start Num: 9

Candidate Starts for EITiger69\_53:

(Start: 9 @37289 has 40 MA's), (16, 37208), (20, 37160), (21, 37145), (27, 37073), (28, 37064), (33, 37010),

Gene: ForGetIt\_50 Start: 37191, Stop: 36772, Start Num: 9

Candidate Starts for ForGetIt\_50:

(1, 37554), (3, 37491), (5, 37332), (Start: 9 @37191 has 40 MA's), (16, 37110), (21, 37047), (24, 37002), (26, 36975), (28, 36963), (33, 36909), (35, 36891), (37, 36867),

Gene: George\_48 Start: 37264, Stop: 36845, Start Num: 9

Candidate Starts for George\_48:

(Start: 9 @37264 has 40 MA's), (12, 37246), (21, 37120), (22, 37084), (24, 37075), (26, 37048), (28, 37036),

Gene: Ghouboy\_53 Start: 38061, Stop: 37651, Start Num: 9

Candidate Starts for Ghouboy\_53:

(Start: 9 @38061 has 40 MA's), (23, 37884), (30, 37836), (31, 37803), (32, 37791), (36, 37761), (42, 37662),

Gene: Groundhog\_55 Start: 36884, Stop: 36522, Start Num: 10

Candidate Starts for Groundhog\_55:

(4, 37172), (6, 37013), (Start: 9 @36887 has 40 MA's), (Start: 10 @36884 has 4 MA's), (13, 36848), (16, 36812), (18, 36785), (23, 36707), (25, 36695), (27, 36674), (34, 36605), (38, 36575), (41, 36533),

Gene: HuhtaEnerson15\_50 Start: 37261, Stop: 36842, Start Num: 9

Candidate Starts for HuhtaEnerson15\_50:

(Start: 9 @37261 has 40 MA's), (12, 37243), (21, 37117), (22, 37081), (24, 37072), (26, 37045), (28, 37033),

Gene: Jabiru\_52 Start: 37168, Stop: 36767, Start Num: 9  
Candidate Starts for Jabiru\_52:  
(Start: 9 @37168 has 40 MA's), (16, 37087), (21, 37024), (27, 36967), (28, 36958), (33, 36904), (37, 36862),

Gene: Jovo\_50 Start: 37447, Stop: 37028, Start Num: 9  
Candidate Starts for Jovo\_50:  
(1, 37810), (3, 37747), (5, 37588), (Start: 9 @37447 has 40 MA's), (16, 37366), (21, 37303), (24, 37258), (26, 37231), (28, 37219), (33, 37165), (35, 37147), (37, 37123),

Gene: Lev2\_50 Start: 37079, Stop: 36660, Start Num: 9  
Candidate Starts for Lev2\_50:  
(1, 37442), (3, 37379), (5, 37220), (Start: 9 @37079 has 40 MA's), (16, 36998), (21, 36935), (24, 36890), (26, 36863), (28, 36851), (33, 36797), (35, 36779), (37, 36755),

Gene: LittleCherry\_50 Start: 37281, Stop: 36862, Start Num: 9  
Candidate Starts for LittleCherry\_50:  
(Start: 9 @37281 has 40 MA's), (12, 37263), (21, 37137), (22, 37101), (24, 37092), (26, 37065), (28, 37053),

Gene: MarysWell\_50 Start: 37569, Stop: 37159, Start Num: 9  
Candidate Starts for MarysWell\_50:  
(Start: 9 @37569 has 40 MA's), (23, 37392), (30, 37344), (31, 37311), (32, 37299), (36, 37269), (42, 37170),

Gene: Micasa\_51 Start: 37449, Stop: 37030, Start Num: 9  
Candidate Starts for Micasa\_51:  
(Start: 9 @37449 has 40 MA's), (12, 37431), (21, 37305), (22, 37269), (24, 37260), (26, 37233), (28, 37221), (31, 37182), (33, 37167),

Gene: Midas2\_49 Start: 37357, Stop: 36932, Start Num: 9  
Candidate Starts for Midas2\_49:  
(Start: 9 @37357 has 40 MA's), (12, 37339), (15, 37279), (21, 37213), (24, 37162), (26, 37135), (28, 37123), (31, 37084), (33, 37069),

Gene: Milcery\_50 Start: 37232, Stop: 36813, Start Num: 9  
Candidate Starts for Milcery\_50:  
(Start: 9 @37232 has 40 MA's), (12, 37214), (21, 37088), (22, 37052), (24, 37043), (26, 37016), (28, 37004), (33, 36950),

Gene: Naca\_51 Start: 37707, Stop: 37306, Start Num: 9  
Candidate Starts for Naca\_51:  
(Start: 9 @37707 has 40 MA's), (16, 37626), (21, 37563), (27, 37506), (28, 37497), (33, 37443), (37, 37401),

Gene: NearlyHeadless\_56 Start: 36735, Stop: 36373, Start Num: 10  
Candidate Starts for NearlyHeadless\_56:  
(6, 36864), (Start: 9 @36738 has 40 MA's), (Start: 10 @36735 has 4 MA's), (16, 36663), (18, 36636), (23, 36558), (25, 36546), (27, 36525), (34, 36456), (38, 36426), (41, 36384),

Gene: PP\_56 Start: 41604, Stop: 41218, Start Num: 7  
Candidate Starts for PP\_56:

(Start: 7 @41604 has 1 MA's), (8, 41592), (11, 41571), (25, 41388), (28, 41361), (39, 41268), (40, 41232),

Gene: PetterN\_55 Start: 37322, Stop: 36921, Start Num: 9

Candidate Starts for PetterN\_55:

(Start: 9 @37322 has 40 MA's), (16, 37241), (21, 37178), (27, 37121), (28, 37112), (33, 37058), (37, 37016),

Gene: Phlorence\_48 Start: 36824, Stop: 36405, Start Num: 9

Candidate Starts for Phlorence\_48:

(1, 37187), (3, 37124), (5, 36965), (Start: 9 @36824 has 40 MA's), (16, 36743), (21, 36680), (24, 36635), (26, 36608), (28, 36596), (33, 36542), (35, 36524), (37, 36500),

Gene: PickleBack\_50 Start: 37071, Stop: 36652, Start Num: 9

Candidate Starts for PickleBack\_50:

(1, 37434), (3, 37371), (5, 37212), (Start: 9 @37071 has 40 MA's), (16, 36990), (21, 36927), (24, 36882), (26, 36855), (28, 36843), (33, 36789), (35, 36771), (37, 36747),

Gene: Roary\_57 Start: 36957, Stop: 36592, Start Num: 9

Candidate Starts for Roary\_57:

(4, 37242), (6, 37083), (Start: 9 @36957 has 40 MA's), (Start: 10 @36954 has 4 MA's), (13, 36918), (16, 36882), (18, 36855), (23, 36777), (25, 36765), (27, 36744), (34, 36675), (38, 36645), (41, 36603),

Gene: Saintus\_51 Start: 33622, Stop: 33272, Start Num: 10

Candidate Starts for Saintus\_51:

(4, 33910), (6, 33751), (Start: 9 @33625 has 40 MA's), (Start: 10 @33622 has 4 MA's), (16, 33550), (18, 33523), (23, 33445), (28, 33406), (41, 33283),

Gene: Scorpia\_55 Start: 37381, Stop: 36980, Start Num: 9

Candidate Starts for Scorpia\_55:

(Start: 9 @37381 has 40 MA's), (16, 37300), (21, 37237), (27, 37180), (28, 37171), (33, 37117), (37, 37075),

Gene: Swirley\_52 Start: 37437, Stop: 37018, Start Num: 9

Candidate Starts for Swirley\_52:

(Start: 9 @37437 has 40 MA's), (12, 37419), (21, 37293), (22, 37257), (24, 37248), (26, 37221), (28, 37209), (33, 37155),

Gene: SydNat\_53 Start: 38070, Stop: 37660, Start Num: 9

Candidate Starts for SydNat\_53:

(Start: 9 @38070 has 40 MA's), (23, 37893), (30, 37845), (31, 37812), (32, 37800), (36, 37770), (42, 37671),

Gene: Tarynearal\_48 Start: 36879, Stop: 36460, Start Num: 9

Candidate Starts for Tarynearal\_48:

(Start: 9 @36879 has 40 MA's), (12, 36861), (21, 36735), (22, 36699), (24, 36690), (26, 36663), (28, 36651), (33, 36597),

Gene: Theia\_49 Start: 37547, Stop: 37137, Start Num: 9

Candidate Starts for Theia\_49:

(Start: 9 @37547 has 40 MA's), (19, 37433), (23, 37370), (30, 37322), (31, 37289), (32, 37277), (36, 37247), (42, 37148),

Gene: Tiger\_49 Start: 36745, Stop: 36326, Start Num: 9

Candidate Starts for Tiger\_49:

(1, 37108), (3, 37045), (5, 36886), (Start: 9 @36745 has 40 MA's), (16, 36664), (21, 36601), (24, 36556), (26, 36529), (28, 36517), (33, 36463), (35, 36445), (37, 36421),

Gene: UnionJack\_52 Start: 36886, Stop: 36470, Start Num: 9

Candidate Starts for UnionJack\_52:

(Start: 9 @36886 has 40 MA's), (16, 36805), (21, 36742), (27, 36670), (28, 36661), (37, 36565),

Gene: Zolita\_52 Start: 38074, Stop: 37664, Start Num: 9

Candidate Starts for Zolita\_52:

(Start: 9 @38074 has 40 MA's), (23, 37897), (30, 37849), (31, 37816), (32, 37804), (36, 37774), (42, 37675),