



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 283760 Report

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

Pham number 283760 has 73 members, 5 are drafts.

Phages represented in each track:

- Track 1 : Drake94\_35, Poompha\_36, Trike\_34, PeaceMeal1\_35
- Track 2 : Severus\_35
- Track 3 : DontArgue\_37
- Track 4 : KittenMittens\_34
- Track 5 : Pharaoh\_64
- Track 6 : Luchador\_69
- Track 7 : LilTurb\_68, Buggy\_69, Leviathan\_69, Dignity\_69
- Track 8 : DudeLittle\_66, Dalmatian\_68
- Track 9 : Drake55\_69, Piro94\_67, MiculUcigas\_67, WideWale\_68, Equemioh13\_67, Baehexic\_66, Sknot\_67, NaSiaTalie\_67, Updawg\_68, Gratitude\_65, Flare16\_67, HarryHoudini\_68
- Track 10 : Centaur\_68, Terrific\_68
- Track 11 : AbbyPaige\_69, Agape74\_69
- Track 12 : Turbido\_68
- Track 13 : JoshKayV\_68
- Track 14 : Power\_66, Crucio\_67
- Track 15 : QueenBeesly\_67, SweetiePie\_67, Georgie2\_68, SemperFi\_68, SnapTap\_67, FiringLine\_67
- Track 16 : Echild\_67
- Track 17 : XianYue\_64
- Track 18 : Jerm\_69
- Track 19 : EvilGenius\_68, ChipMunk\_69, KingCyrus\_68
- Track 20 : Colin\_65, Trixie\_65
- Track 21 : Smeagan\_70, Whabigail7\_68
- Track 22 : WeiHuaDA\_68
- Track 23 : Benvolio\_64
- Track 24 : Kalpine\_66
- Track 25 : Larenn\_65, Malec\_66
- Track 26 : TarsusIV\_64
- Track 27 : Cappuccino\_50, Donkey\_50, Gambol\_51, Sabourin\_50
- Track 28 : Halsey\_50, Stuu\_50, SpecialK\_50, Moss\_50
- Track 29 : Kalimba\_50, Sooty\_50
- Track 30 : RockScotty\_49, Ashes\_50, Giorgio\_49, Gumpizza\_49, Beaupre\_49
- Track 31 : Mysterium\_49

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

The start number called the most often in the published annotations is 19, it was called in 52 of the 68 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AbbyPaige\_69, Agape74\_69, Baehexic\_66, Benvolio\_64, Buggy\_69, Centaur\_68, ChipMunk\_69, Colin\_65, Crucio\_67, Dalmatian\_68, Dignity\_69, DontArgue\_37, Drake55\_69, Drake94\_35, DudeLittle\_66, Echild\_67, Equemioh13\_67, EvilGenius\_68, FiringLine\_67, Flare16\_67, Georgie2\_68, Gratitude\_65, HarryHoudini\_68, Jerm\_69, JoshKayV\_68, Kalpine\_66, KingCyrus\_68, KittenMittens\_34, Larenn\_65, Leviathan\_69, LilTurb\_68, Luchador\_69, Malec\_66, MiculUcigas\_67, NaSiaTalie\_67, PeaceMeal1\_35, Pharaoh\_64, Piro94\_67, Poompha\_36, Power\_66, QueenBeesly\_67, SemperFi\_68, Severus\_35, Sknot\_67, Smeagan\_70, SnapTap\_67, SweetiePie\_67, TarsusIV\_64, Terrific\_68, Trike\_34, Trixie\_65, Turbido\_68, Updawg\_68, WeiHuaDA\_68, Whabigail7\_68, WideWale\_68, XianYue\_64,

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

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

- Ashes\_50, Beaupre\_49, Cappuccino\_50, Donkey\_50, Gambol\_51, Giorgio\_49, Gumpizza\_49, Halsey\_50, Kalimba\_50, Moss\_50, Mysterium\_49, RockScotty\_49, Sabourin\_50, Sooty\_50, SpecialK\_50, Stuu\_50,

## **Summary by start number:**

Start 18:

- Found in 16 of 73 ( 21.9% ) of genes in pham
- Manual Annotations of this start: 16 of 68
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ashes\_50 (AZ5), Beaupre\_49 (AZ5), Cappuccino\_50 (AZ5), Donkey\_50 (AZ5), Gambol\_51 (AZ5), Giorgio\_49 (AZ5), Gumpizza\_49 (AZ5), Halsey\_50 (AZ5), Kalimba\_50 (AZ5), Moss\_50 (AZ5), Mysterium\_49 (AZ5), RockScotty\_49 (AZ5), Sabourin\_50 (AZ5), Sooty\_50 (AZ5), SpecialK\_50 (AZ5), Stuu\_50 (AZ5),

Start 19:

- Found in 57 of 73 ( 78.1% ) of genes in pham
- Manual Annotations of this start: 52 of 68
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AbbyPaige\_69 (A2), Agape74\_69 (A2), Baehexic\_66 (A2), Benvolio\_64 (A2), Buggy\_69 (A2), Centaur\_68 (A2), ChipMunk\_69 (A2), Colin\_65 (A2), Crucio\_67 (A2), Dalmatian\_68 (A2), Dignity\_69 (A2), DontArgue\_37 (A10), Drake55\_69 (A2), Drake94\_35 (A10), DudeLittle\_66 (A2), Echild\_67 (A2), Equemioh13\_67 (A2), EvilGenius\_68 (A2), FiringLine\_67 (A2), Flare16\_67 (A2), Georgie2\_68 (A2), Gratitude\_65 (A2), HarryHoudini\_68 (A2), Jerm\_69 (A2), JoshKayV\_68 (A2), Kalpine\_66 (A2), KingCyrus\_68 (A2), KittenMittens\_34 (A10), Larenn\_65 (A2), Leviathan\_69 (A2), LilTurb\_68 (A2), Luchador\_69 (A14), Malec\_66 (A2), MiculUcigas\_67 (A2), NaSiaTalie\_67 (A2), PeaceMeal1\_35 (A10), Pharaoh\_64 (A12), Piro94\_67 (A2), Poompha\_36 (A10),

Power\_66 (A2), QueenBeesly\_67 (A2), SemperFi\_68 (A2), Severus\_35 (A10), Sknot\_67 (A2), Smeagan\_70 (A2), SnapTap\_67 (A2), SweetiePie\_67 (A2), TarsusIV\_64 (A2), Terrific\_68 (A2), Trike\_34 (A10), Trixie\_65 (A2), Turbido\_68 (A2), Updawn\_68 (A2), WeiHuaDA\_68 (A2), Whabigail7\_68 (A2), WideWale\_68 (A2), XianYue\_64 (A2),

### **Summary by clusters:**

There are 5 clusters represented in this pham: A12, A14, A2, AZ5, A10,

Info for manual annotations of cluster A10:

- Start number 19 was manually annotated 6 times for cluster A10.

Info for manual annotations of cluster A12:

- Start number 19 was manually annotated 1 time for cluster A12.

Info for manual annotations of cluster A14:

- Start number 19 was manually annotated 1 time for cluster A14.

Info for manual annotations of cluster A2:

- Start number 19 was manually annotated 44 times for cluster A2.

Info for manual annotations of cluster AZ5:

- Start number 18 was manually annotated 16 times for cluster AZ5.

### **Gene Information:**

Gene: AbbyPaige\_69 Start: 42100, Stop: 41798, Start Num: 19

Candidate Starts for AbbyPaige\_69:

(Start: 19 @42100 has 52 MA's), (24, 41992), (29, 41956), (35, 41908), (38, 41833), (40, 41818),

Gene: Agape74\_69 Start: 42094, Stop: 41792, Start Num: 19

Candidate Starts for Agape74\_69:

(Start: 19 @42094 has 52 MA's), (24, 41986), (29, 41950), (35, 41902), (38, 41827), (40, 41812),

Gene: Ashes\_50 Start: 34805, Stop: 35224, Start Num: 18

Candidate Starts for Ashes\_50:

(Start: 18 @34805 has 16 MA's), (23, 34919), (26, 34937), (29, 34973), (39, 35120), (43, 35171),

Gene: Baehexic\_66 Start: 41584, Stop: 41297, Start Num: 19

Candidate Starts for Baehexic\_66:

(Start: 19 @41584 has 52 MA's), (20, 41512), (24, 41482), (32, 41434),

Gene: Beaupre\_49 Start: 34615, Stop: 35034, Start Num: 18

Candidate Starts for Beaupre\_49:

(Start: 18 @34615 has 16 MA's), (23, 34729), (26, 34747), (29, 34783), (39, 34930), (43, 34981),

Gene: Benvolio\_64 Start: 41122, Stop: 40823, Start Num: 19

Candidate Starts for Benvolio\_64:

(Start: 19 @41122 has 52 MA's), (24, 41014), (29, 40978), (38, 40855), (39, 40849),

Gene: Buggy\_69 Start: 42147, Stop: 41848, Start Num: 19  
Candidate Starts for Buggy\_69:  
(Start: 19 @42147 has 52 MA's), (24, 42039), (35, 41955), (38, 41880), (40, 41865),

Gene: Cappuccino\_50 Start: 34666, Stop: 35085, Start Num: 18  
Candidate Starts for Cappuccino\_50:  
(Start: 18 @34666 has 16 MA's), (23, 34783), (26, 34801), (39, 34981), (42, 35005), (43, 35032),

Gene: Centaur\_68 Start: 41799, Stop: 41512, Start Num: 19  
Candidate Starts for Centaur\_68:  
(Start: 19 @41799 has 52 MA's), (20, 41727), (24, 41697), (32, 41649), (37, 41562),

Gene: ChipMunk\_69 Start: 43378, Stop: 43073, Start Num: 19  
Candidate Starts for ChipMunk\_69:  
(Start: 19 @43378 has 52 MA's), (24, 43270), (29, 43234), (35, 43186), (40, 43093),

Gene: Colin\_65 Start: 41841, Stop: 41533, Start Num: 19  
Candidate Starts for Colin\_65:  
(8, 41952), (9, 41946), (10, 41940), (12, 41922), (Start: 19 @41841 has 52 MA's), (24, 41733), (29, 41697), (35, 41649), (40, 41553),

Gene: Crucio\_67 Start: 41766, Stop: 41467, Start Num: 19  
Candidate Starts for Crucio\_67:  
(Start: 19 @41766 has 52 MA's), (24, 41658), (35, 41574), (38, 41499),

Gene: Dalmatian\_68 Start: 41966, Stop: 41667, Start Num: 19  
Candidate Starts for Dalmatian\_68:  
(Start: 19 @41966 has 52 MA's), (23, 41861), (24, 41858), (29, 41822), (35, 41774), (38, 41699),

Gene: Dignity\_69 Start: 42185, Stop: 41886, Start Num: 19  
Candidate Starts for Dignity\_69:  
(Start: 19 @42185 has 52 MA's), (24, 42077), (35, 41993), (38, 41918), (40, 41903),

Gene: Donkey\_50 Start: 34656, Stop: 35075, Start Num: 18  
Candidate Starts for Donkey\_50:  
(Start: 18 @34656 has 16 MA's), (23, 34773), (26, 34791), (39, 34971), (42, 34995), (43, 35022),

Gene: DontArgue\_37 Start: 27222, Stop: 26932, Start Num: 19  
Candidate Starts for DontArgue\_37:  
(1, 27858), (2, 27762), (16, 27267), (Start: 19 @27222 has 52 MA's), (20, 27150), (21, 27135), (24, 27120), (28, 27093), (32, 27072), (34, 27042), (36, 26997),

Gene: Drake55\_69 Start: 41900, Stop: 41613, Start Num: 19  
Candidate Starts for Drake55\_69:  
(Start: 19 @41900 has 52 MA's), (20, 41828), (24, 41798), (32, 41750),

Gene: Drake94\_35 Start: 27059, Stop: 26775, Start Num: 19  
Candidate Starts for Drake94\_35:  
(14, 27128), (Start: 19 @27059 has 52 MA's), (21, 26972), (22, 26966), (28, 26930), (32, 26909),

Gene: DudeLittle\_66 Start: 41732, Stop: 41433, Start Num: 19  
Candidate Starts for DudeLittle\_66:  
(Start: 19 @41732 has 52 MA's), (23, 41627), (24, 41624), (29, 41588), (35, 41540), (38, 41465),

Gene: Echild\_67 Start: 41146, Stop: 40847, Start Num: 19  
Candidate Starts for Echild\_67:  
(Start: 19 @41146 has 52 MA's), (24, 41038), (29, 41002), (38, 40879),

Gene: Equemioh13\_67 Start: 41704, Stop: 41417, Start Num: 19  
Candidate Starts for Equemioh13\_67:  
(Start: 19 @41704 has 52 MA's), (20, 41632), (24, 41602), (32, 41554),

Gene: EvilGenius\_68 Start: 43379, Stop: 43074, Start Num: 19  
Candidate Starts for EvilGenius\_68:  
(Start: 19 @43379 has 52 MA's), (24, 43271), (29, 43235), (35, 43187), (40, 43094),

Gene: FiringLine\_67 Start: 41747, Stop: 41448, Start Num: 19  
Candidate Starts for FiringLine\_67:  
(Start: 19 @41747 has 52 MA's), (24, 41639), (35, 41555), (38, 41480),

Gene: Flare16\_67 Start: 41460, Stop: 41173, Start Num: 19  
Candidate Starts for Flare16\_67:  
(Start: 19 @41460 has 52 MA's), (20, 41388), (24, 41358), (32, 41310),

Gene: Gambol\_51 Start: 34675, Stop: 35094, Start Num: 18  
Candidate Starts for Gambol\_51:  
(Start: 18 @34675 has 16 MA's), (23, 34792), (26, 34810), (39, 34990), (42, 35014), (43, 35041),

Gene: Georgie2\_68 Start: 41792, Stop: 41493, Start Num: 19  
Candidate Starts for Georgie2\_68:  
(Start: 19 @41792 has 52 MA's), (24, 41684), (35, 41600), (38, 41525),

Gene: Giorgio\_49 Start: 34598, Stop: 35017, Start Num: 18  
Candidate Starts for Giorgio\_49:  
(Start: 18 @34598 has 16 MA's), (23, 34712), (26, 34730), (29, 34766), (39, 34913), (43, 34964),

Gene: Gratitude\_65 Start: 41704, Stop: 41417, Start Num: 19  
Candidate Starts for Gratitude\_65:  
(Start: 19 @41704 has 52 MA's), (20, 41632), (24, 41602), (32, 41554),

Gene: Gumpizza\_49 Start: 34554, Stop: 34973, Start Num: 18  
Candidate Starts for Gumpizza\_49:  
(Start: 18 @34554 has 16 MA's), (23, 34668), (26, 34686), (29, 34722), (39, 34869), (43, 34920),

Gene: Halsey\_50 Start: 34795, Stop: 35214, Start Num: 18  
Candidate Starts for Halsey\_50:  
(Start: 18 @34795 has 16 MA's), (23, 34909), (26, 34927), (29, 34963), (39, 35110), (43, 35161),

Gene: HarryHoudini\_68 Start: 41901, Stop: 41614, Start Num: 19  
Candidate Starts for HarryHoudini\_68:  
(Start: 19 @41901 has 52 MA's), (20, 41829), (24, 41799), (32, 41751),

Gene: Jerm\_69 Start: 42166, Stop: 41864, Start Num: 19  
Candidate Starts for Jerm\_69:  
(3, 42442), (4, 42373), (6, 42286), (17, 42199), (Start: 19 @42166 has 52 MA's), (24, 42058), (35, 41974), (38, 41899), (40, 41884),

Gene: JoshKayV\_68 Start: 42218, Stop: 41919, Start Num: 19

Candidate Starts for JoshKayV\_68:

(Start: 19 @42218 has 52 MA's), (24, 42110), (29, 42074), (35, 42026), (38, 41951), (40, 41936), (41, 41933),

Gene: Kalimba\_50 Start: 34653, Stop: 35072, Start Num: 18

Candidate Starts for Kalimba\_50:

(Start: 18 @34653 has 16 MA's), (23, 34770), (26, 34788), (39, 34968), (42, 34992), (43, 35019),

Gene: Kalpine\_66 Start: 42022, Stop: 41714, Start Num: 19

Candidate Starts for Kalpine\_66:

(8, 42133), (9, 42127), (10, 42121), (12, 42103), (Start: 19 @42022 has 52 MA's), (24, 41914), (35, 41830), (40, 41734),

Gene: KingCyrus\_68 Start: 43374, Stop: 43069, Start Num: 19

Candidate Starts for KingCyrus\_68:

(Start: 19 @43374 has 52 MA's), (24, 43266), (29, 43230), (35, 43182), (40, 43089),

Gene: KittenMittens\_34 Start: 27067, Stop: 26783, Start Num: 19

Candidate Starts for KittenMittens\_34:

(Start: 19 @27067 has 52 MA's), (21, 26980), (22, 26974), (28, 26938), (32, 26917),

Gene: Larenn\_65 Start: 41737, Stop: 41453, Start Num: 19

Candidate Starts for Larenn\_65:

(15, 41785), (17, 41767), (Start: 19 @41737 has 52 MA's), (20, 41665), (24, 41635), (30, 41602),

Gene: Leviathan\_69 Start: 42234, Stop: 41935, Start Num: 19

Candidate Starts for Leviathan\_69:

(Start: 19 @42234 has 52 MA's), (24, 42126), (35, 42042), (38, 41967), (40, 41952),

Gene: LilTurb\_68 Start: 42048, Stop: 41746, Start Num: 19

Candidate Starts for LilTurb\_68:

(Start: 19 @42048 has 52 MA's), (24, 41940), (35, 41856), (38, 41781), (40, 41766),

Gene: Luchador\_69 Start: 42331, Stop: 42044, Start Num: 19

Candidate Starts for Luchador\_69:

(5, 42454), (7, 42448), (11, 42424), (13, 42406), (Start: 19 @42331 has 52 MA's), (21, 42244), (24, 42226), (25, 42220), (27, 42208), (32, 42178), (33, 42157),

Gene: Malec\_66 Start: 42304, Stop: 42020, Start Num: 19

Candidate Starts for Malec\_66:

(15, 42352), (17, 42334), (Start: 19 @42304 has 52 MA's), (20, 42232), (24, 42202), (30, 42169),

Gene: MiculUcigas\_67 Start: 41363, Stop: 41076, Start Num: 19

Candidate Starts for MiculUcigas\_67:

(Start: 19 @41363 has 52 MA's), (20, 41291), (24, 41261), (32, 41213),

Gene: Moss\_50 Start: 34736, Stop: 35155, Start Num: 18

Candidate Starts for Moss\_50:

(Start: 18 @34736 has 16 MA's), (23, 34850), (26, 34868), (29, 34904), (39, 35051), (43, 35102),

Gene: Mysterium\_49 Start: 34583, Stop: 35002, Start Num: 18

Candidate Starts for Mysterium\_49:

(Start: 18 @34583 has 16 MA's), (23, 34697), (26, 34715), (29, 34751), (39, 34898), (43, 34949),

Gene: NaSiaTalie\_67 Start: 41457, Stop: 41170, Start Num: 19

Candidate Starts for NaSiaTalie\_67:

(Start: 19 @41457 has 52 MA's), (20, 41385), (24, 41355), (32, 41307),

Gene: PeaceMeal1\_35 Start: 27068, Stop: 26784, Start Num: 19

Candidate Starts for PeaceMeal1\_35:

(14, 27137), (Start: 19 @27068 has 52 MA's), (21, 26981), (22, 26975), (28, 26939), (32, 26918),

Gene: Pharaoh\_64 Start: 41329, Stop: 41009, Start Num: 19

Candidate Starts for Pharaoh\_64:

(12, 41410), (Start: 19 @41329 has 52 MA's), (21, 41242), (25, 41218), (28, 41197), (29, 41185), (38, 41041), (41, 41023),

Gene: Piro94\_67 Start: 41808, Stop: 41521, Start Num: 19

Candidate Starts for Piro94\_67:

(Start: 19 @41808 has 52 MA's), (20, 41736), (24, 41706), (32, 41658),

Gene: Poompha\_36 Start: 27066, Stop: 26782, Start Num: 19

Candidate Starts for Poompha\_36:

(14, 27135), (Start: 19 @27066 has 52 MA's), (21, 26979), (22, 26973), (28, 26937), (32, 26916),

Gene: Power\_66 Start: 41791, Stop: 41492, Start Num: 19

Candidate Starts for Power\_66:

(Start: 19 @41791 has 52 MA's), (24, 41683), (35, 41599), (38, 41524),

Gene: QueenBeesly\_67 Start: 41747, Stop: 41448, Start Num: 19

Candidate Starts for QueenBeesly\_67:

(Start: 19 @41747 has 52 MA's), (24, 41639), (35, 41555), (38, 41480),

Gene: RockScotty\_49 Start: 34578, Stop: 34997, Start Num: 18

Candidate Starts for RockScotty\_49:

(Start: 18 @34578 has 16 MA's), (23, 34692), (26, 34710), (29, 34746), (39, 34893), (43, 34944),

Gene: Sabourin\_50 Start: 34654, Stop: 35073, Start Num: 18

Candidate Starts for Sabourin\_50:

(Start: 18 @34654 has 16 MA's), (23, 34771), (26, 34789), (39, 34969), (42, 34993), (43, 35020),

Gene: SemperFi\_68 Start: 42015, Stop: 41716, Start Num: 19

Candidate Starts for SemperFi\_68:

(Start: 19 @42015 has 52 MA's), (24, 41907), (35, 41823), (38, 41748),

Gene: Severus\_35 Start: 27066, Stop: 26782, Start Num: 19

Candidate Starts for Severus\_35:

(14, 27135), (Start: 19 @27066 has 52 MA's), (21, 26979), (28, 26937), (32, 26916),

Gene: Sknot\_67 Start: 41460, Stop: 41173, Start Num: 19

Candidate Starts for Sknot\_67:

(Start: 19 @41460 has 52 MA's), (20, 41388), (24, 41358), (32, 41310),

Gene: Smeagan\_70 Start: 42325, Stop: 42023, Start Num: 19

Candidate Starts for Smeagan\_70:

(Start: 19 @42325 has 52 MA's), (24, 42217), (29, 42181), (35, 42133), (38, 42058), (40, 42043),

Gene: SnapTap\_67 Start: 41826, Stop: 41527, Start Num: 19

Candidate Starts for SnapTap\_67:

(Start: 19 @41826 has 52 MA's), (24, 41718), (35, 41634), (38, 41559),

Gene: Sooty\_50 Start: 34668, Stop: 35087, Start Num: 18

Candidate Starts for Sooty\_50:

(Start: 18 @34668 has 16 MA's), (23, 34785), (26, 34803), (39, 34983), (42, 35007), (43, 35034),

Gene: SpecialK\_50 Start: 34645, Stop: 35064, Start Num: 18

Candidate Starts for SpecialK\_50:

(Start: 18 @34645 has 16 MA's), (23, 34759), (26, 34777), (29, 34813), (39, 34960), (43, 35011),

Gene: Stuu\_50 Start: 34768, Stop: 35187, Start Num: 18

Candidate Starts for Stuu\_50:

(Start: 18 @34768 has 16 MA's), (23, 34882), (26, 34900), (29, 34936), (39, 35083), (43, 35134),

Gene: SweetiePie\_67 Start: 41958, Stop: 41659, Start Num: 19

Candidate Starts for SweetiePie\_67:

(Start: 19 @41958 has 52 MA's), (24, 41850), (35, 41766), (38, 41691),

Gene: TarsusIV\_64 Start: 41427, Stop: 41122, Start Num: 19

Candidate Starts for TarsusIV\_64:

(Start: 19 @41427 has 52 MA's), (23, 41322), (24, 41319), (31, 41274), (35, 41232), (38, 41154), (40, 41139),

Gene: Terrific\_68 Start: 41814, Stop: 41527, Start Num: 19

Candidate Starts for Terrific\_68:

(Start: 19 @41814 has 52 MA's), (20, 41742), (24, 41712), (32, 41664), (37, 41577),

Gene: Trike\_34 Start: 26899, Stop: 26615, Start Num: 19

Candidate Starts for Trike\_34:

(14, 26968), (Start: 19 @26899 has 52 MA's), (21, 26812), (22, 26806), (28, 26770), (32, 26749),

Gene: Trixie\_65 Start: 41657, Stop: 41343, Start Num: 19

Candidate Starts for Trixie\_65:

(8, 41768), (9, 41762), (10, 41756), (12, 41738), (Start: 19 @41657 has 52 MA's), (24, 41549), (29, 41513), (35, 41459), (40, 41363),

Gene: Turbido\_68 Start: 42044, Stop: 41742, Start Num: 19

Candidate Starts for Turbido\_68:

(Start: 19 @42044 has 52 MA's), (24, 41936), (35, 41852), (38, 41777), (40, 41762),

Gene: Updawg\_68 Start: 41704, Stop: 41417, Start Num: 19

Candidate Starts for Updawg\_68:

(Start: 19 @41704 has 52 MA's), (20, 41632), (24, 41602), (32, 41554),

Gene: WeiHuaDA\_68 Start: 42635, Stop: 42330, Start Num: 19

Candidate Starts for WeiHuaDA\_68:

(Start: 19 @42635 has 52 MA's), (24, 42527), (29, 42491), (35, 42443), (38, 42365),

Gene: Whabigail7\_68 Start: 42044, Stop: 41742, Start Num: 19

Candidate Starts for Whabigail7\_68:

(Start: 19 @42044 has 52 MA's), (24, 41936), (29, 41900), (35, 41852), (38, 41777), (40, 41762),

Gene: WideWale\_68 Start: 41704, Stop: 41417, Start Num: 19

Candidate Starts for WideWale\_68:

(Start: 19 @41704 has 52 MA's), (20, 41632), (24, 41602), (32, 41554),

Gene: XianYue\_64 Start: 41016, Stop: 40708, Start Num: 19

Candidate Starts for XianYue\_64:

(Start: 19 @41016 has 52 MA's), (24, 40908), (29, 40872), (35, 40824), (40, 40725),