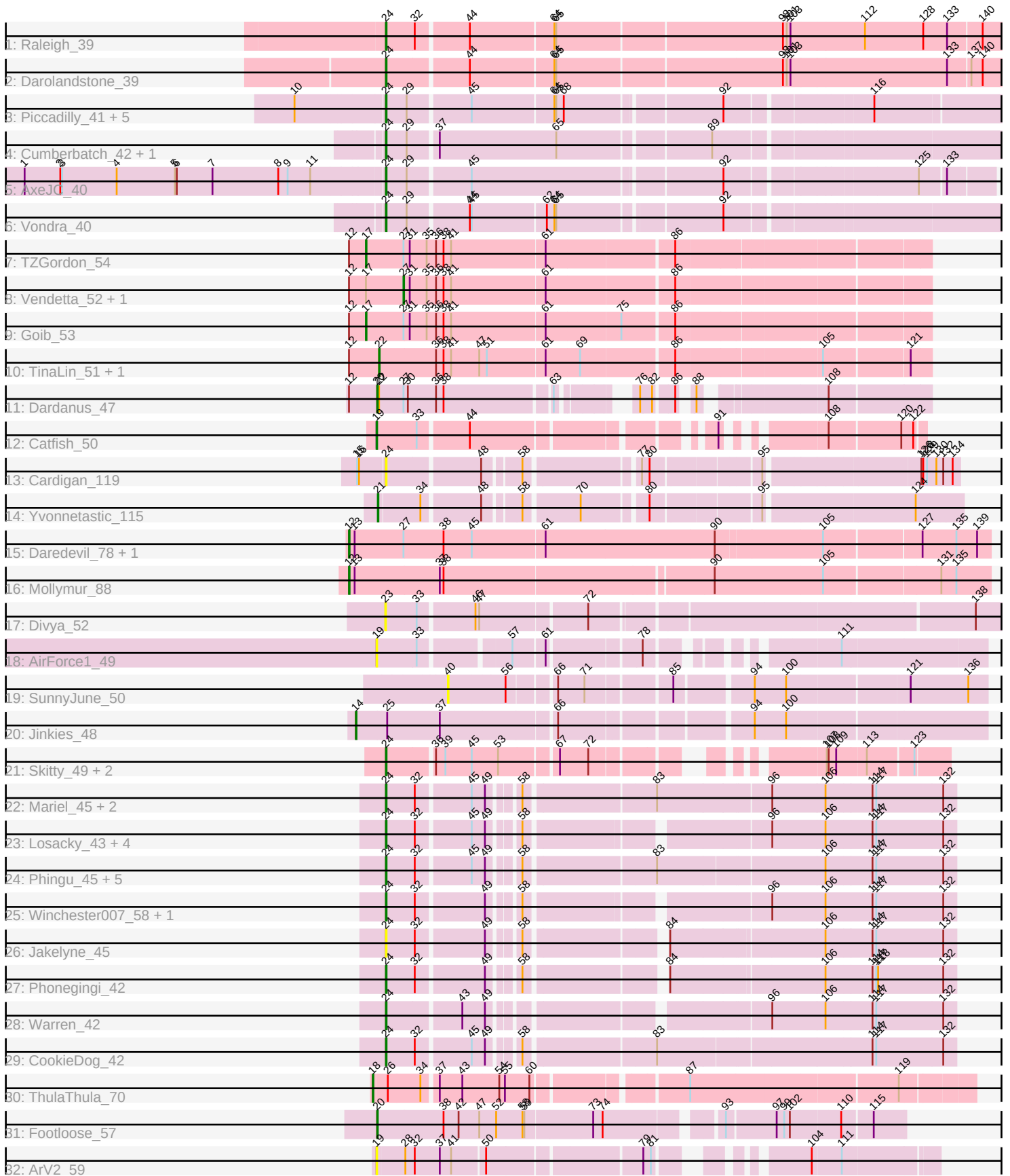


Pham 278244



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 278244 Report

This analysis was run 02/07/26 on database version 634.

WARNING: Pham size does not match number of genes in report. Either unphamerated genes have been added (by you) or starterator has removed genes due to invalid start codon.

Pham number 278244 has 55 members, 15 are drafts.

Phages represented in each track:

- Track 1 : Raleigh_39
- Track 2 : Darolandstone_39
- Track 3 : Piccadilly_41, Eastland_41, HFrancette_42, Schlegelian_42, Ignacio_41, FrumpyGal_42
- Track 4 : Cumberbatch_42, ArizonaGT_42
- Track 5 : AxeJC_40
- Track 6 : Vondra_40
- Track 7 : TZGordon_54
- Track 8 : Vendetta_52, Splinter_52
- Track 9 : Goib_53
- Track 10 : TinaLin_51, Banquo_51
- Track 11 : Dardanus_47
- Track 12 : Catfish_50
- Track 13 : Cardigan_119
- Track 14 : Yvonnetastic_115
- Track 15 : Daredevil_78, Towmatter_78
- Track 16 : Mollymur_88
- Track 17 : Divya_52
- Track 18 : AirForce1_49
- Track 19 : SunnyJune_50
- Track 20 : Jinkies_48
- Track 21 : Skitty_49, Merpity_56, MrSmee_55
- Track 22 : Mariel_45, Antuna_43, MenE_43
- Track 23 : Losacky_43, PhillyJawn_43, Guzman_42, Dropshot_42, Appa_42
- Track 24 : Phingu_45, Blett_42, Violeta_44, Carrillo_44, Bush_43, NCRodriguez_44
- Track 25 : Winchester007_58, Pickles13_41
- Track 26 : Jakelyne_45
- Track 27 : Phonegingi_42
- Track 28 : Warren_42
- Track 29 : CookieDog_42
- Track 30 : ThulaThula_70
- Track 31 : Footloose_57
- Track 32 : ArV2_59

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

The start number called the most often in the published annotations is 24, it was called in 25 of the 40 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Antuna_43, Appa_42, ArizonaGT_42, AxeJC_40, Blett_42, Bush_43, Cardigan_119, Carrillo_44, CookieDog_42, Cumberbatch_42, Darolandstone_39, Dropshot_42, Eastland_41, FrumpyGal_42, Guzman_42, HFrancette_42, Ignacio_41, Jakelyne_45, Losacky_43, Mariel_45, MenE_43, Merpity_56, MrSmee_55, NCRodriguez_44, PhillyJawn_43, Phingu_45, Phonegingi_42, Piccadilly_41, Pickles13_41, Raleigh_39, Schlegelian_42, Skitty_49, Violeta_44, Vondra_40, Warren_42, Winchester007_58,

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

-

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

- AirForce1_49, ArV2_59, Banquo_51, Catfish_50, Dardanus_47, Daredevil_78, Divya_52, Footloose_57, Goib_53, Jinkies_48, Mollymur_88, Splinter_52, SunnyJune_50, TZGordon_54, ThulaThula_70, TinaLin_51, Towmatter_78, Vendetta_52, Yvonnetastic_115,

Summary by start number:

Start 12:

- Found in 10 of 55 (18.2%) of genes in pham
- Manual Annotations of this start: 3 of 40
- Called 30.0% of time when present
- Phage (with cluster) where this start called: Daredevil_78 (DL), Mollymur_88 (DL), Towmatter_78 (DL),

Start 14:

- Found in 1 of 55 (1.8%) of genes in pham
- Manual Annotations of this start: 1 of 40
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Jinkies_48 (FL),

Start 17:

- Found in 4 of 55 (7.3%) of genes in pham
- Manual Annotations of this start: 2 of 40
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Goib_53 (CU1), TZGordon_54 (CU1),

Start 18:

- Found in 1 of 55 (1.8%) of genes in pham
- Manual Annotations of this start: 1 of 40
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ThulaThula_70 (P5),

Start 19:

- Found in 3 of 55 (5.5%) of genes in pham
- Manual Annotations of this start: 1 of 40
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AirForce1_49 (FL), ArV2_59 (singleton), Catfish_50 (CU5),

Start 20:

- Found in 2 of 55 (3.6%) of genes in pham
- Manual Annotations of this start: 2 of 40
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Dardanus_47 (CU3), Footloose_57 (singleton),

Start 21:

- Found in 1 of 55 (1.8%) of genes in pham
- Manual Annotations of this start: 1 of 40
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Yvonnestic_115 (DD),

Start 22:

- Found in 3 of 55 (5.5%) of genes in pham
- Manual Annotations of this start: 2 of 40
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Banquo_51 (CU1), TinaLin_51 (CU1),

Start 23:

- Found in 1 of 55 (1.8%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Divya_52 (FL),

Start 24:

- Found in 36 of 55 (65.5%) of genes in pham
- Manual Annotations of this start: 25 of 40
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Antuna_43 (GA), Appa_42 (GA), ArizonaGT_42 (BP), AxeJC_40 (BP), Blett_42 (GA), Bush_43 (GA), Cardigan_119 (DD), Carrillo_44 (GA), CookieDog_42 (GA), Cumberbatch_42 (BP), Darolandstone_39 (BC2), Dropshot_42 (GA), Eastland_41 (BP), FrumpyGal_42 (BP), Guzman_42 (GA), HFrancette_42 (BP), Ignacio_41 (BP), Jakelyne_45 (GA), Losacky_43 (GA), Mariel_45 (GA), MenE_43 (GA), Merpity_56 (FQ), MrSmee_55 (FQ), NCRodriguez_44 (GA), PhillyJawn_43 (GA), Phingu_45 (GA), Phonegingi_42 (GA), Piccadilly_41 (BP), Pickles13_41 (GA), Raleigh_39 (BC2), Schlegelian_42 (BP), Skitty_49 (FQ), Violeta_44 (GA), Vondra_40 (BP), Warren_42 (GA), Winchester007_58 (GA),

Start 27:

- Found in 7 of 55 (12.7%) of genes in pham
- Manual Annotations of this start: 2 of 40
- Called 28.6% of time when present
- Phage (with cluster) where this start called: Splinter_52 (CU1), Vendetta_52 (CU1),

Start 40:

- Found in 1 of 55 (1.8%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: SunnyJune_50 (FL),

Summary by clusters:

There are 12 clusters represented in this pham: FQ, DL, CU3, CU1, P5, DD, CU5, BP, GA, singleton, FL, BC2,

Info for manual annotations of cluster BC2:

- Start number 24 was manually annotated 2 times for cluster BC2.

Info for manual annotations of cluster BP:

- Start number 24 was manually annotated 10 times for cluster BP.

Info for manual annotations of cluster CU1:

- Start number 17 was manually annotated 2 times for cluster CU1.
- Start number 22 was manually annotated 2 times for cluster CU1.
- Start number 27 was manually annotated 2 times for cluster CU1.

Info for manual annotations of cluster CU3:

- Start number 20 was manually annotated 1 time for cluster CU3.

Info for manual annotations of cluster CU5:

- Start number 19 was manually annotated 1 time for cluster CU5.

Info for manual annotations of cluster DD:

- Start number 21 was manually annotated 1 time for cluster DD.

Info for manual annotations of cluster DL:

- Start number 12 was manually annotated 3 times for cluster DL.

Info for manual annotations of cluster FL:

- Start number 14 was manually annotated 1 time for cluster FL.

Info for manual annotations of cluster FQ:

- Start number 24 was manually annotated 2 times for cluster FQ.

Info for manual annotations of cluster GA:

- Start number 24 was manually annotated 11 times for cluster GA.

Info for manual annotations of cluster P5:

- Start number 18 was manually annotated 1 time for cluster P5.

Gene Information:

Gene: AirForce1_49 Start: 34022, Stop: 34846, Start Num: 19

Candidate Starts for AirForce1_49:

(Start: 19 @34022 has 1 MA's), (33, 34085), (57, 34214), (61, 34259), (78, 34394), (111, 34622),

Gene: Antuna_43 Start: 26101, Stop: 26937, Start Num: 24

Candidate Starts for Antuna_43:

(Start: 24 @26101 has 25 MA's), (32, 26146), (45, 26227), (49, 26248), (58, 26284), (83, 26479), (96, 26650), (106, 26734), (114, 26806), (117, 26812), (132, 26917),

Gene: Appa_42 Start: 26023, Stop: 26835, Start Num: 24

Candidate Starts for Appa_42:

(Start: 24 @26023 has 25 MA's), (32, 26068), (45, 26149), (49, 26170), (58, 26206), (96, 26548), (106, 26632), (114, 26704), (117, 26710), (132, 26815),

Gene: ArV2_59 Start: 32108, Stop: 32857, Start Num: 19

Candidate Starts for ArV2_59:

(Start: 19 @32108 has 1 MA's), (28, 32150), (32, 32165), (37, 32204), (41, 32222), (50, 32270), (79, 32495), (81, 32507), (104, 32669), (111, 32714),

Gene: ArizonaGT_42 Start: 28364, Stop: 29290, Start Num: 24

Candidate Starts for ArizonaGT_42:

(Start: 24 @28364 has 25 MA's), (29, 28397), (37, 28439), (65, 28625), (89, 28853),

Gene: AxeJC_40 Start: 28086, Stop: 28979, Start Num: 24

Candidate Starts for AxeJC_40:

(1, 27522), (2, 27579), (3, 27582), (4, 27669), (5, 27762), (6, 27765), (7, 27822), (8, 27927), (9, 27942), (11, 27978), (Start: 24 @28086 has 25 MA's), (29, 28119), (45, 28212), (92, 28590), (125, 28869), (133, 28908),

Gene: Banquo_51 Start: 32896, Stop: 33726, Start Num: 22

Candidate Starts for Banquo_51:

(Start: 12 @32848 has 3 MA's), (Start: 22 @32896 has 2 MA's), (36, 32986), (38, 32998), (41, 33010), (47, 33055), (51, 33067), (61, 33157), (69, 33208), (86, 33349), (105, 33565), (121, 33694),

Gene: Blett_42 Start: 26203, Stop: 27036, Start Num: 24

Candidate Starts for Blett_42:

(Start: 24 @26203 has 25 MA's), (32, 26248), (45, 26329), (49, 26350), (58, 26386), (83, 26581), (106, 26833), (114, 26905), (117, 26911), (132, 27016),

Gene: Bush_43 Start: 26151, Stop: 26984, Start Num: 24

Candidate Starts for Bush_43:

(Start: 24 @26151 has 25 MA's), (32, 26196), (45, 26277), (49, 26298), (58, 26334), (83, 26529), (106, 26781), (114, 26853), (117, 26859), (132, 26964),

Gene: Cardigan_119 Start: 67606, Stop: 68412, Start Num: 24

Candidate Starts for Cardigan_119:

(15, 67564), (16, 67567), (Start: 24 @67606 has 25 MA's), (48, 67747), (58, 67798), (77, 67960), (80, 67972), (95, 68125), (126, 68353), (128, 68356), (129, 68362), (130, 68377), (132, 68386), (134, 68401),

Gene: Carrillo_44 Start: 26124, Stop: 26957, Start Num: 24

Candidate Starts for Carrillo_44:

(Start: 24 @26124 has 25 MA's), (32, 26169), (45, 26250), (49, 26271), (58, 26307), (83, 26502), (106, 26754), (114, 26826), (117, 26832), (132, 26937),

Gene: Catfish_50 Start: 34417, Stop: 35127, Start Num: 19

Candidate Starts for Catfish_50:

(Start: 19 @34417 has 1 MA's), (33, 34480), (44, 34555), (91, 34873), (108, 34987), (120, 35095), (122, 35113),

Gene: CookieDog_42 Start: 26124, Stop: 26957, Start Num: 24

Candidate Starts for CookieDog_42:

(Start: 24 @26124 has 25 MA's), (32, 26169), (45, 26250), (49, 26271), (58, 26307), (83, 26502), (114, 26826), (117, 26832), (132, 26937),

Gene: Cumberbatch_42 Start: 28364, Stop: 29290, Start Num: 24

Candidate Starts for Cumberbatch_42:

(Start: 24 @28364 has 25 MA's), (29, 28397), (37, 28439), (65, 28625), (89, 28853),

Gene: Dardanus_47 Start: 31666, Stop: 32385, Start Num: 20

Candidate Starts for Dardanus_47:

(Start: 12 @31621 has 3 MA's), (Start: 20 @31666 has 2 MA's), (Start: 22 @31669 has 2 MA's), (Start: 27 @31708 has 2 MA's), (30, 31714), (36, 31759), (38, 31771), (63, 31930), (76, 32008), (82, 32026), (86, 32053), (88, 32065), (108, 32230),

Gene: Daredevil_78 Start: 56200, Stop: 55208, Start Num: 12

Candidate Starts for Daredevil_78:

(Start: 12 @56200 has 3 MA's), (13, 56191), (Start: 27 @56113 has 2 MA's), (38, 56050), (45, 56005), (61, 55891), (90, 55624), (105, 55462), (127, 55315), (135, 55261), (139, 55228),

Gene: Darolandstone_39 Start: 30667, Stop: 31617, Start Num: 24

Candidate Starts for Darolandstone_39:

(Start: 24 @30667 has 25 MA's), (44, 30790), (64, 30919), (65, 30922), (98, 31270), (101, 31276), (103, 31282), (133, 31525), (137, 31558), (140, 31576),

Gene: Divya_52 Start: 34928, Stop: 35869, Start Num: 23

Candidate Starts for Divya_52:

(23, 34928), (33, 34976), (46, 35060), (47, 35066), (72, 35228), (138, 35804),

Gene: Dropshot_42 Start: 25858, Stop: 26670, Start Num: 24

Candidate Starts for Dropshot_42:

(Start: 24 @25858 has 25 MA's), (32, 25903), (45, 25984), (49, 26005), (58, 26041), (96, 26383), (106, 26467), (114, 26539), (117, 26545), (132, 26650),

Gene: Eastland_41 Start: 28339, Stop: 29250, Start Num: 24

Candidate Starts for Eastland_41:

(10, 28204), (Start: 24 @28339 has 25 MA's), (29, 28372), (45, 28465), (64, 28591), (65, 28594), (68, 28606), (92, 28837), (116, 29047),

Gene: Footloose_57 Start: 32676, Stop: 33455, Start Num: 20

Candidate Starts for Footloose_57:

(Start: 20 @32676 has 2 MA's), (38, 32781), (42, 32805), (47, 32838), (52, 32865), (58, 32907), (59, 32910), (73, 33012), (74, 33027), (93, 33189), (97, 33264), (99, 33276), (102, 33285), (110, 33360), (115, 33405),

Gene: FrumpyGal_42 Start: 28339, Stop: 29250, Start Num: 24

Candidate Starts for FrumpyGal_42:

(10, 28204), (Start: 24 @28339 has 25 MA's), (29, 28372), (45, 28465), (64, 28591), (65, 28594), (68, 28606), (92, 28837), (116, 29047),

Gene: Goib_53 Start: 33944, Stop: 34795, Start Num: 17

Candidate Starts for Goib_53:

(Start: 12 @33917 has 3 MA's), (Start: 17 @33944 has 2 MA's), (Start: 27 @34004 has 2 MA's), (31, 34013), (35, 34040), (36, 34055), (38, 34067), (41, 34079), (61, 34226), (75, 34340), (86, 34418),

Gene: Guzman_42 Start: 26122, Stop: 26934, Start Num: 24

Candidate Starts for Guzman_42:

(Start: 24 @26122 has 25 MA's), (32, 26167), (45, 26248), (49, 26269), (58, 26305), (96, 26647), (106, 26731), (114, 26803), (117, 26809), (132, 26914),

Gene: HFrancette_42 Start: 29117, Stop: 30028, Start Num: 24

Candidate Starts for HFrancette_42:

(10, 28982), (Start: 24 @29117 has 25 MA's), (29, 29150), (45, 29243), (64, 29369), (65, 29372), (68, 29384), (92, 29615), (116, 29825),

Gene: Ignacio_41 Start: 29020, Stop: 29931, Start Num: 24

Candidate Starts for Ignacio_41:

(10, 28885), (Start: 24 @29020 has 25 MA's), (29, 29053), (45, 29146), (64, 29272), (65, 29275), (68, 29287), (92, 29518), (116, 29728),

Gene: Jakelyne_45 Start: 26233, Stop: 27045, Start Num: 24

Candidate Starts for Jakelyne_45:

(Start: 24 @26233 has 25 MA's), (32, 26278), (49, 26380), (58, 26416), (84, 26611), (106, 26842), (114, 26914), (117, 26920), (132, 27025),

Gene: Jinkies_48 Start: 35024, Stop: 35947, Start Num: 14

Candidate Starts for Jinkies_48:

(Start: 14 @35024 has 1 MA's), (25, 35072), (37, 35156), (66, 35324), (94, 35594), (100, 35642),

Gene: Losacky_43 Start: 26243, Stop: 27055, Start Num: 24

Candidate Starts for Losacky_43:

(Start: 24 @26243 has 25 MA's), (32, 26288), (45, 26369), (49, 26390), (58, 26426), (96, 26768), (106, 26852), (114, 26924), (117, 26930), (132, 27035),

Gene: Mariel_45 Start: 26592, Stop: 27428, Start Num: 24

Candidate Starts for Mariel_45:

(Start: 24 @26592 has 25 MA's), (32, 26637), (45, 26718), (49, 26739), (58, 26775), (83, 26970), (96, 27141), (106, 27225), (114, 27297), (117, 27303), (132, 27408),

Gene: MenE_43 Start: 26123, Stop: 26959, Start Num: 24

Candidate Starts for MenE_43:

(Start: 24 @26123 has 25 MA's), (32, 26168), (45, 26249), (49, 26270), (58, 26306), (83, 26501), (96, 26672), (106, 26756), (114, 26828), (117, 26834), (132, 26939),

Gene: Merpity_56 Start: 32461, Stop: 33207, Start Num: 24

Candidate Starts for Merpity_56:

(Start: 24 @32461 has 25 MA's), (36, 32530), (39, 32545), (45, 32587), (53, 32629), (67, 32713), (72, 32758), (107, 33025), (108, 33028), (109, 33040), (113, 33085), (123, 33154),

Gene: Mollymur_88 Start: 61334, Stop: 60348, Start Num: 12

Candidate Starts for Mollymur_88:

(Start: 12 @61334 has 3 MA's), (13, 61325), (37, 61190), (38, 61184), (90, 60773), (105, 60602), (131, 60425), (135, 60401),

Gene: MrSmee_55 Start: 32435, Stop: 33181, Start Num: 24

Candidate Starts for MrSmee_55:

(Start: 24 @32435 has 25 MA's), (36, 32504), (39, 32519), (45, 32561), (53, 32603), (67, 32687), (72, 32732), (107, 32999), (108, 33002), (109, 33014), (113, 33059), (123, 33128),

Gene: NCRodriguez_44 Start: 26345, Stop: 27178, Start Num: 24

Candidate Starts for NCRodriguez_44:

(Start: 24 @26345 has 25 MA's), (32, 26390), (45, 26471), (49, 26492), (58, 26528), (83, 26723), (106, 26975), (114, 27047), (117, 27053), (132, 27158),

Gene: PhillyJawn_43 Start: 26020, Stop: 26832, Start Num: 24

Candidate Starts for PhillyJawn_43:

(Start: 24 @26020 has 25 MA's), (32, 26065), (45, 26146), (49, 26167), (58, 26203), (96, 26545), (106, 26629), (114, 26701), (117, 26707), (132, 26812),

Gene: Phingu_45 Start: 26236, Stop: 27069, Start Num: 24

Candidate Starts for Phingu_45:

(Start: 24 @26236 has 25 MA's), (32, 26281), (45, 26362), (49, 26383), (58, 26419), (83, 26614), (106, 26866), (114, 26938), (117, 26944), (132, 27049),

Gene: Phonegingi_42 Start: 26069, Stop: 26881, Start Num: 24

Candidate Starts for Phonegingi_42:

(Start: 24 @26069 has 25 MA's), (32, 26114), (49, 26216), (58, 26252), (84, 26447), (106, 26678), (114, 26750), (117, 26756), (118, 26759), (132, 26861),

Gene: Piccadilly_41 Start: 28338, Stop: 29249, Start Num: 24

Candidate Starts for Piccadilly_41:

(10, 28203), (Start: 24 @28338 has 25 MA's), (29, 28371), (45, 28464), (64, 28590), (65, 28593), (68, 28605), (92, 28836), (116, 29046),

Gene: Pickles13_41 Start: 26333, Stop: 27145, Start Num: 24

Candidate Starts for Pickles13_41:

(Start: 24 @26333 has 25 MA's), (32, 26378), (49, 26480), (58, 26516), (96, 26858), (106, 26942), (114, 27014), (117, 27020), (132, 27125),

Gene: Raleigh_39 Start: 31035, Stop: 31985, Start Num: 24

Candidate Starts for Raleigh_39:

(Start: 24 @31035 has 25 MA's), (32, 31080), (44, 31158), (64, 31287), (65, 31290), (98, 31638), (101, 31644), (103, 31650), (112, 31764), (128, 31857), (133, 31893), (140, 31944),

Gene: Schlegelian_42 Start: 28903, Stop: 29814, Start Num: 24

Candidate Starts for Schlegelian_42:

(10, 28768), (Start: 24 @28903 has 25 MA's), (29, 28936), (45, 29029), (64, 29155), (65, 29158), (68, 29170), (92, 29401), (116, 29611),

Gene: Skitty_49 Start: 30277, Stop: 31023, Start Num: 24

Candidate Starts for Skitty_49:

(Start: 24 @30277 has 25 MA's), (36, 30346), (39, 30361), (45, 30403), (53, 30445), (67, 30529), (72, 30574), (107, 30841), (108, 30844), (109, 30856), (113, 30901), (123, 30970),

Gene: Splinter_52 Start: 34027, Stop: 34818, Start Num: 27

Candidate Starts for Splinter_52:

(Start: 12 @33940 has 3 MA's), (Start: 17 @33967 has 2 MA's), (Start: 27 @34027 has 2 MA's), (31, 34036), (35, 34063), (36, 34078), (38, 34090), (41, 34102), (61, 34249), (86, 34441),

Gene: SunnyJune_50 Start: 34761, Stop: 35537, Start Num: 40

Candidate Starts for SunnyJune_50:

(40, 34761), (56, 34848), (66, 34911), (71, 34953), (85, 35076), (94, 35187), (100, 35235), (121, 35418), (136, 35508),

Gene: TZGordon_54 Start: 33313, Stop: 34164, Start Num: 17

Candidate Starts for TZGordon_54:

(Start: 12 @33286 has 3 MA's), (Start: 17 @33313 has 2 MA's), (Start: 27 @33373 has 2 MA's), (31, 33382), (35, 33409), (36, 33424), (38, 33436), (41, 33448), (61, 33595), (86, 33787),

Gene: ThulaThula_70 Start: 45355, Stop: 46230, Start Num: 18

Candidate Starts for ThulaThula_70:

(Start: 18 @45355 has 1 MA's), (26, 45376), (34, 45427), (37, 45448), (43, 45484), (54, 45541), (55, 45550), (60, 45589), (87, 45802), (119, 46120),

Gene: TinaLin_51 Start: 32790, Stop: 33620, Start Num: 22

Candidate Starts for TinaLin_51:

(Start: 12 @32742 has 3 MA's), (Start: 22 @32790 has 2 MA's), (36, 32880), (38, 32892), (41, 32904), (47, 32949), (51, 32961), (61, 33051), (69, 33102), (86, 33243), (105, 33459), (121, 33588),

Gene: Towmatter_78 Start: 56279, Stop: 55287, Start Num: 12

Candidate Starts for Towmatter_78:

(Start: 12 @56279 has 3 MA's), (13, 56270), (Start: 27 @56192 has 2 MA's), (38, 56129), (45, 56084), (61, 55970), (90, 55703), (105, 55541), (127, 55394), (135, 55340), (139, 55307),

Gene: Vendetta_52 Start: 34027, Stop: 34818, Start Num: 27

Candidate Starts for Vendetta_52:

(Start: 12 @33940 has 3 MA's), (Start: 17 @33967 has 2 MA's), (Start: 27 @34027 has 2 MA's), (31, 34036), (35, 34063), (36, 34078), (38, 34090), (41, 34102), (61, 34249), (86, 34441),

Gene: Violeta_44 Start: 26115, Stop: 26948, Start Num: 24

Candidate Starts for Violeta_44:

(Start: 24 @26115 has 25 MA's), (32, 26160), (45, 26241), (49, 26262), (58, 26298), (83, 26493), (106, 26745), (114, 26817), (117, 26823), (132, 26928),

Gene: Vondra_40 Start: 28184, Stop: 29101, Start Num: 24

Candidate Starts for Vondra_40:

(Start: 24 @28184 has 25 MA's), (29, 28217), (44, 28307), (45, 28310), (62, 28424), (64, 28436), (65, 28439), (92, 28682),

Gene: Warren_42 Start: 26076, Stop: 26891, Start Num: 24

Candidate Starts for Warren_42:

(Start: 24 @26076 has 25 MA's), (43, 26187), (49, 26223), (96, 26604), (106, 26688), (114, 26760), (117, 26766), (132, 26871),

Gene: Winchester007_58 Start: 32135, Stop: 32947, Start Num: 24

Candidate Starts for Winchester007_58:

(Start: 24 @32135 has 25 MA's), (32, 32180), (49, 32282), (58, 32318), (96, 32660), (106, 32744), (114, 32816), (117, 32822), (132, 32927),

Gene: Yvonnetastic_115 Start: 65057, Stop: 65878, Start Num: 21

Candidate Starts for Yvonnetastic_115:

(Start: 21 @65057 has 1 MA's), (34, 65120), (48, 65207), (58, 65258), (70, 65339), (80, 65432), (95, 65585), (124, 65807),