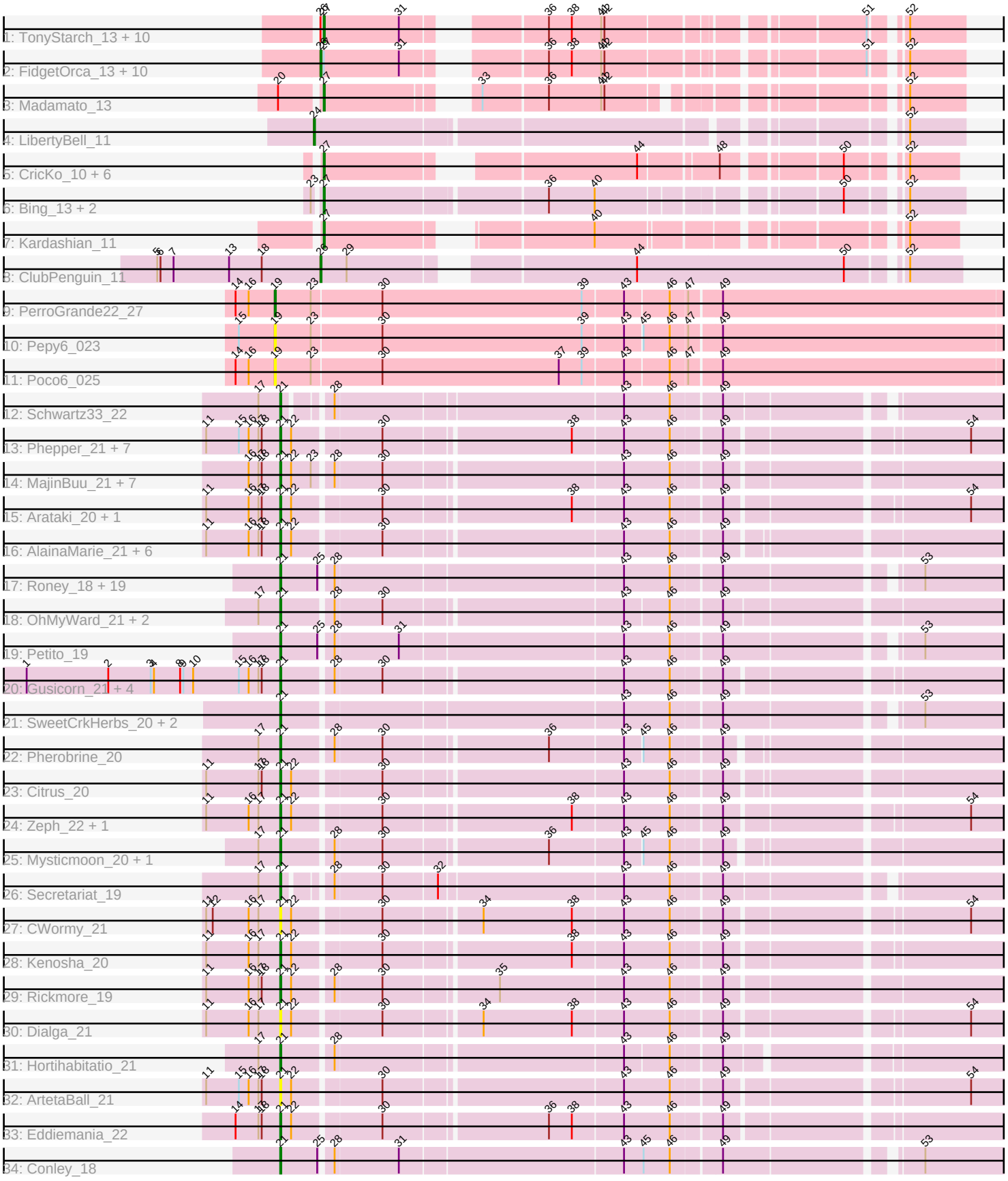
Pham 336562


1: TonyStarch_13 + 10
2: FidgetOrca_13 + 10
3: Madamato_13
4: LibertyBell_11
5: CricKo_10 + 6
6: Bing_13 + 2
7: Kardashian_11
8: ClubPenguin_11
9: PerroGrande22_27
10: Pepy6_023
11: Poco6_025
12: Schwartz33_22
13: Phepper_21 + 7
14: MajinBuu_21 + 7
15: Arataki_20 + 1
16: AlainaMarie_21 + 6
17: Roney_18 + 19
18: OhMyWard_21 + 2
19: Petito_19
20: Gusicorn_21 + 4
21: SweetCrkHerbs_20 + 2
22: Pherobrine_20
23: Citrus_20
24: Zeph_22 + 1
25: Mysticmoon_20 + 1
26: Secretariat_19
27: CWormy_21
28: Kenosha_20
29: Rickmore_19
30: Dialga_21
31: Hortihabitatio_21
32: ArtetaBall_21
33: Eddiemania_22
34: Conley_18

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 336562 Report

This analysis was run 11/14/26 on database version 672.

Pham number 336562 has 112 members, 15 are drafts.

Phages represented in each track:
• Track 1 : TonyStarch_13, Jaylociraptor_13, IceWarrior_13, Hoshi_13, Meibysrarus_13, Soshi_13, Namo_13, TieDye_12, TaidaOne_13, HazuAndZazu_13, CherryBlossom_13
• Track 2 : FidgetOrca_13, Maya_13, OlympicHelado_13, FrodoSwaggins_13, Rima_13, Espio_13, Indigenous_13, Spectropatronm_13, DrGrey_13, Popy_13, Esketit_13
• Track 3 : Madamato_13
• Track 4 : LibertyBell_11
• Track 5 : CricKo_10, Regigigas_11, FromIndy_11, SendItCS_10, Miek_10, Rainydai_10, Thiqqums_10
• Track 6 : Bing_13, Hajile_13, Wigberry_12
• Track 7 : Kardashian_11
• Track 8 : ClubPenguin_11
• Track 9 : PerroGrande22_27
• Track 10 : Pepy6_023
• Track 11 : Poco6_025
• Track 12 : Schwartz33_22
• Track 13 : Phepper_21, Madvan_21, Runhaar_21, Burley_21, Nadmeg_21, Crocheter_20, Untouchable_20, Vardy_21
• Track 14 : MajinBuu_21, Aflac_21, Jodelie19_21, TenaciousP_21, Tonaltzin_21, BluerMoon_21, Figliar_21, OlgasClover_21
• Track 15 : Arataki_20, Demure_20
• Track 16 : AlainaMarie_21, Chikenjars_21, Duffington_21, Glintora_20, Nithya_21, Luthien_21, EndAve_21
• Track 17 : Roney_18, Capybara_18, Tanis_18, NoPickles_18, Gill_18, Magel_18, FortCran_18, JulesRay_18, Kerry_18, Dancer_18, Artorias_18, Avazak_18, Trufflozitus_18, Tairn4Wing_20, Captrips_18, Bugg_20, Football_19, Gravy_18, Odesza_18, ChickyNuggy_19
• Track 18 : OhMyWard_21, Blanky_21, Mossy_22
• Track 19 : Petito_19
• Track 20 : Gusicorn_21, BetterYeti_21, PestoPenguin_21, Aloe25_21, ShaggyRogers_21
• Track 21 : SweetCrkHerbs_20, Perkunas_20, Talon44_19
• Track 22 : Pherobrine_20
• Track 23 : Citrus_20
• Track 24 : Zeph_22, Hydrus_22
• Track 25 : Mysticmoon_20, Fazel_19

• Track 26 : Secretariat_19
• Track 27 : CWormy_21
• Track 28 : Kenosha_20
• Track 29 : Rickmore_19
• Track 30 : Dialga_21
• Track 31 : Hortihabitatio_21
• Track 32 : ArtetaBall_21
• Track 33 : Eddiemania_22
• Track 34 : Conley_18

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

The start number called the most often in the published annotations is 21, it was called in 63 of the 97 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Aflac_21, AlainaMarie_21, Aloe25_21, Arataki_20, ArtetaBall_21, Artorias_18, Avazak_18, BetterYeti_21, Blanky_21, BluerMoon_21, Bugg_20, Burley_21, CWormy_21, Captrips_18, Capybara_18, ChickyNuggy_19, Chikenjars_21, Citrus_20, Conley_18, Crocheter_20, Dancer_18, Demure_20, Dialga_21, Duffington_21, Eddiemania_22, EndAve_21, Fazel_19, Figliar_21, Football_19, FortCran_18, Gill_18, Glintora_20, Gravy_18, Gusicorn_21, Hortihabitatio_21, Hydrus_22, Jodelie19_21, JulesRay_18, Kenosha_20, Kerry_18, Luthien_21, Madvan_21, Magel_18, MajinBuu_21, Mossy_22, Mysticmoon_20, Nadmeg_21, Nithya_21, NoPickles_18, Odesza_18, OhMyWard_21, OlgasClover_21, Perkunas_20, PestoPenguin_21, Petito_19, Phepper_21, Pherobrine_20, Rickmore_19, Roney_18, Runhaar_21, Schwartz33_22, Secretariat_19, ShaggyRogers_21, SweetCrkHerbs_20, Tairn4Wing_20, Talon44_19, Tanis_18, TenaciousP_21, Tonaltzin_21, Trufflozitus_18, Untouchable_20, Vardy_21, Zeph_22,

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

Genes that do not have the "Most Annotated" start:
• Bing_13, CherryBlossom_13, ClubPenguin_11, CricKo_10, DrGrey_13, Esketit_13, Espio_13, FidgetOrca_13, FrodoSwaggins_13, FromIndy_11, Hajile_13, HazuAndZazu_13, Hoshi_13, IceWarrior_13, Indigenous_13, Jaylociraptor_13, Kardashian_11, LibertyBell_11, Madamato_13, Maya_13, Meibysrarus_13, Miek_10, Namo_13, OlympicHelado_13, Pepy6_023, PerroGrande22_27, Poco6_025, Popy_13, Rainydai_10, Regigigas_11, Rima_13, SendItCS_10, Soshi_13, Spectropatronm_13, TaidaOne_13, Thiqqums_10, TieDye_12, TonyStarch_13, Wigberry_12,

Summary by start number:

Start 19:
• Found in 3 of 112 (2.7%) of genes in pham
• Manual Annotations of this start: 1 of 97
• Called 100.0% of time when present

• Phage (with cluster) where this start called: Pepy6_023 (CC), PerroGrande22_27 (CC), Poco6_025 (CC),

Start 21:
• Found in 73 of 112 (65.2%) of genes in pham
• Manual Annotations of this start: 63 of 97
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Aflac_21 (DJ), AlainaMarie_21 (DJ), Aloe25_21 (DJ), Arataki_20 (DJ), ArtetaBall_21 (DJ), Artorias_18 (DJ), Avazak_18 (DJ), BetterYeti_21 (DJ), Blanky_21 (DJ), BluerMoon_21 (DJ), Bugg_20 (DJ), Burley_21 (DJ), CWormy_21 (DJ), Captrips_18 (DJ), Capybara_18 (DJ), ChickyNuggy_19 (DJ), Chikenjars_21 (DJ), Citrus_20 (DJ), Conley_18 (DJ), Crocheter_20 (DJ), Dancer_18 (DJ), Demure_20 (DJ), Dialga_21 (DJ), Duffington_21 (DJ), Eddiemania_22 (DJ), EndAve_21 (DJ), Fazel_19 (DJ), Figliar_21 (DJ), Football_19 (DJ), FortCran_18 (DJ), Gill_18 (DJ), Glintora_20 (DJ), Gravy_18 (DJ), Gusicorn_21 (DJ), Hortihabitatio_21 (DJ), Hydrus_22 (DJ), Jodelie19_21 (DJ), JulesRay_18 (DJ), Kenosha_20 (DJ), Kerry_18 (DJ), Luthien_21 (DJ), Madvan_21 (DJ), Magel_18 (DJ), MajinBuu_21 (DJ), Mossy_22 (DJ), Mysticmoon_20 (DJ), Nadmeg_21 (DJ), Nithya_21 (DJ), NoPickles_18 (DJ), Odesza_18 (DJ), OhMyWard_21 (DJ), OlgasClover_21 (DJ), Perkunas_20 (DJ), PestoPenguin_21 (DJ), Petito_19 (DJ), Phepper_21 (DJ), Pherobrine_20 (DJ), Rickmore_19 (DJ), Roney_18 (DJ), Runhaar_21 (DJ), Schwartz33_22 (DJ), Secretariat_19 (DJ), ShaggyRogers_21 (DJ), SweetCrkHerbs_20 (DJ), Tairn4Wing_20 (DJ), Talon44_19 (DJ), Tanis_18 (DJ), TenaciousP_21 (DJ), Tonaltzin_21 (DJ), Trufflozitus_18 (DJ), Untouchable_20 (DJ), Vardy_21 (DJ), Zeph_22 (DJ),

Start 24:
• Found in 1 of 112 (0.9%) of genes in pham
• Manual Annotations of this start: 1 of 97
• Called 100.0% of time when present
• Phage (with cluster) where this start called: LibertyBell_11 (BI3),

Start 26:
• Found in 23 of 112 (20.5%) of genes in pham
• Manual Annotations of this start: 12 of 97
• Called 52.2% of time when present
• Phage (with cluster) where this start called: ClubPenguin_11 (BI7), DrGrey_13 (BI1), Esketit_13 (BI1), Espio_13 (BI1), FidgetOrca_13 (BI1), FrodoSwaggins_13 (BI1), Indigenous_13 (BI1), Maya_13 (BI1), OlympicHelado_13 (BI1), Popy_13 (BI1), Rima_13 (BI1), Spectropatronm_13 (BI1),

Start 27:
• Found in 34 of 112 (30.4%) of genes in pham
• Manual Annotations of this start: 20 of 97
• Called 67.6% of time when present
• Phage (with cluster) where this start called: Bing_13 (BI5), CherryBlossom_13 (BI1), CricKo_10 (BI4), FromIndy_11 (BI4), Hajile_13 (BI5), HazuAndZazu_13 (BI1), Hoshi_13 (BI1), IceWarrior_13 (BI1), Jaylociraptor_13 (BI1), Kardashian_11 (BI6), Madamato_13 (BI1), Meibysrarus_13 (BI1), Miek_10 (BI4), Namo_13 (BI1), Rainydai_10 (BI4), Regigigas_11 (BI4), SendItCS_10 (BI4), Soshi_13 (BI1), TaidaOne_13 (BI1), Thiqqums_10 (BI4), TieDye_12 (BI1), TonyStarch_13 (BI1), Wigberry_12 (BI5),

Summary by clusters:

There are 8 clusters represented in this pham: DJ, CC, BI6, BI7, BI4, BI5, BI3, BI1,

Info for manual annotations of cluster BI1:
•Start number 26 was manually annotated 11 times for cluster BI1.
•Start number 27 was manually annotated 12 times for cluster BI1.

Info for manual annotations of cluster BI3:
•Start number 24 was manually annotated 1 time for cluster BI3.

Info for manual annotations of cluster BI4:
•Start number 27 was manually annotated 5 times for cluster BI4.

Info for manual annotations of cluster BI5:
•Start number 27 was manually annotated 2 times for cluster BI5.

Info for manual annotations of cluster BI6:
•Start number 27 was manually annotated 1 time for cluster BI6.

Info for manual annotations of cluster BI7:
•Start number 26 was manually annotated 1 time for cluster BI7.

Info for manual annotations of cluster CC:
•Start number 19 was manually annotated 1 time for cluster CC.

Info for manual annotations of cluster DJ:
•Start number 21 was manually annotated 63 times for cluster DJ.

Gene Information:

Gene: Aflac_21 Start: 15031, Stop: 15642, Start Num: 21
Candidate Starts for Aflac_21:
(16, 15004), (17, 15013), (18, 15016), (Start: 21 @15031 has 63 MA's), (22, 15040), (23, 15058), (28, 15073), (30, 15115), (43, 15322), (46, 15364), (49, 15406),

Gene: AlainaMarie_21 Start: 15021, Stop: 15629, Start Num: 21
Candidate Starts for AlainaMarie_21:
(11, 14955), (16, 14994), (17, 15003), (18, 15006), (Start: 21 @15021 has 63 MA's), (22, 15030), (30, 15105), (43, 15312), (46, 15354), (49, 15396),

Gene: Aloe25_21 Start: 14821, Stop: 15429, Start Num: 21
Candidate Starts for Aloe25_21:
(1, 14590), (2, 14665), (3, 14704), (4, 14707), (8, 14731), (9, 14734), (10, 14743), (15, 14785), (16, 14794), (17, 14803), (18, 14806), (Start: 21 @14821 has 63 MA's), (28, 14863), (30, 14905), (43, 15112), (46, 15154), (49, 15196),

Gene: Arataki_20 Start: 14150, Stop: 14758, Start Num: 21
Candidate Starts for Arataki_20:
(11, 14084), (16, 14123), (17, 14132), (18, 14135), (Start: 21 @14150 has 63 MA's), (22, 14159), (30, 14234), (38, 14396), (43, 14441), (46, 14483), (49, 14525), (54, 14729),

Gene: ArtetaBall_21 Start: 13743, Stop: 14351, Start Num: 21
Candidate Starts for ArtetaBall_21:
(11, 13677), (15, 13707), (16, 13716), (17, 13725), (18, 13728), (Start: 21 @13743 has 63 MA's), (22, 13752), (30, 13827), (43, 14034), (46, 14076), (49, 14118), (54, 14322),

Gene: Artorias_18 Start: 12367, Stop: 12981, Start Num: 21
Candidate Starts for Artorias_18:
(Start: 21 @12367 has 63 MA's), (25, 12400), (28, 12409), (43, 12664), (46, 12706), (49, 12748), (53, 12907),

Gene: Avazak_18 Start: 12374, Stop: 12988, Start Num: 21
Candidate Starts for Avazak_18:
(Start: 21 @12374 has 63 MA's), (25, 12407), (28, 12416), (43, 12671), (46, 12713), (49, 12755), (53, 12914),

Gene: BetterYeti_21 Start: 14821, Stop: 15429, Start Num: 21
Candidate Starts for BetterYeti_21:
(1, 14590), (2, 14665), (3, 14704), (4, 14707), (8, 14731), (9, 14734), (10, 14743), (15, 14785), (16, 14794), (17, 14803), (18, 14806), (Start: 21 @14821 has 63 MA's), (28, 14863), (30, 14905), (43, 15112), (46, 15154), (49, 15196),

Gene: Bing_13 Start: 7765, Stop: 8283, Start Num: 27
Candidate Starts for Bing_13:
(23, 7759), (Start: 27 @7765 has 20 MA's), (36, 7957), (40, 7999), (50, 8191), (52, 8233),

Gene: Blanky_21 Start: 16021, Stop: 16635, Start Num: 21
Candidate Starts for Blanky_21:
(17, 16003), (Start: 21 @16021 has 63 MA's), (28, 16063), (30, 16105), (43, 16312), (46, 16351), (49, 16393),

Gene: BluerMoon_21 Start: 15025, Stop: 15636, Start Num: 21
Candidate Starts for BluerMoon_21:
(16, 14998), (17, 15007), (18, 15010), (Start: 21 @15025 has 63 MA's), (22, 15034), (23, 15052), (28, 15067), (30, 15109), (43, 15316), (46, 15358), (49, 15400),

Gene: Bugg_20 Start: 12380, Stop: 12994, Start Num: 21
Candidate Starts for Bugg_20:
(Start: 21 @12380 has 63 MA's), (25, 12413), (28, 12422), (43, 12677), (46, 12719), (49, 12761), (53, 12920),

Gene: Burley_21 Start: 14783, Stop: 15391, Start Num: 21
Candidate Starts for Burley_21:
(11, 14717), (15, 14747), (16, 14756), (17, 14765), (18, 14768), (Start: 21 @14783 has 63 MA's), (22, 14792), (30, 14867), (38, 15029), (43, 15074), (46, 15116), (49, 15158), (54, 15362),

Gene: CWormy_21 Start: 14482, Stop: 15090, Start Num: 21
Candidate Starts for CWormy_21:
(11, 14416), (12, 14422), (16, 14455), (17, 14464), (Start: 21 @14482 has 63 MA's), (22, 14491), (30, 14566), (34, 14647), (38, 14728), (43, 14773), (46, 14815), (49, 14857), (54, 15061),

Gene: Captrips_18 Start: 12374, Stop: 12988, Start Num: 21
Candidate Starts for Captrips_18:

(Start: 21 @12374 has 63 MA's), (25, 12407), (28, 12416), (43, 12671), (46, 12713), (49, 12755), (53, 12914),

Gene: Capybara_18 Start: 12093, Stop: 12707, Start Num: 21
Candidate Starts for Capybara_18:
(Start: 21 @12093 has 63 MA's), (25, 12126), (28, 12135), (43, 12390), (46, 12432), (49, 12474), (53, 12633),

Gene: CherryBlossom_13 Start: 8239, Stop: 8730, Start Num: 27
Candidate Starts for CherryBlossom_13:
(Start: 26 @8236 has 12 MA's), (Start: 27 @8239 has 20 MA's), (31, 8308), (36, 8404), (38, 8425), (41, 8452), (42, 8455), (51, 8659), (52, 8680),

Gene: ChickyNuggy_19 Start: 12085, Stop: 12699, Start Num: 21
Candidate Starts for ChickyNuggy_19:
(Start: 21 @12085 has 63 MA's), (25, 12118), (28, 12127), (43, 12382), (46, 12424), (49, 12466), (53, 12625),

Gene: Chikenjars_21 Start: 15021, Stop: 15632, Start Num: 21
Candidate Starts for Chikenjars_21:
(11, 14955), (16, 14994), (17, 15003), (18, 15006), (Start: 21 @15021 has 63 MA's), (22, 15030), (30, 15105), (43, 15312), (46, 15354), (49, 15396),

Gene: Citrus_20 Start: 15028, Stop: 15636, Start Num: 21
Candidate Starts for Citrus_20:
(11, 14962), (17, 15010), (18, 15013), (Start: 21 @15028 has 63 MA's), (22, 15037), (30, 15112), (43, 15319), (46, 15361), (49, 15403),

Gene: ClubPenguin_11 Start: 8208, Stop: 8738, Start Num: 26
Candidate Starts for ClubPenguin_11:
(5, 8064), (6, 8067), (7, 8079), (13, 8130), (18, 8160), (Start: 26 @8208 has 12 MA's), (29, 8232), (44, 8460), (50, 8649), (52, 8691),

Gene: Conley_18 Start: 12391, Stop: 13005, Start Num: 21
Candidate Starts for Conley_18:
(Start: 21 @12391 has 63 MA's), (25, 12424), (28, 12433), (31, 12490), (43, 12688), (45, 12706), (46, 12730), (49, 12772), (53, 12931),

Gene: CricKo_10 Start: 6940, Stop: 7428, Start Num: 27
Candidate Starts for CricKo_10:
(Start: 27 @6940 has 20 MA's), (44, 7183), (48, 7249), (50, 7342), (52, 7384),

Gene: Crocheter_20 Start: 13743, Stop: 14351, Start Num: 21
Candidate Starts for Crocheter_20:
(11, 13677), (15, 13707), (16, 13716), (17, 13725), (18, 13728), (Start: 21 @13743 has 63 MA's), (22, 13752), (30, 13827), (38, 13989), (43, 14034), (46, 14076), (49, 14118), (54, 14322),

Gene: Dancer_18 Start: 12073, Stop: 12687, Start Num: 21
Candidate Starts for Dancer_18:
(Start: 21 @12073 has 63 MA's), (25, 12106), (28, 12115), (43, 12370), (46, 12412), (49, 12454), (53, 12613),

Gene: Demure_20 Start: 14150, Stop: 14758, Start Num: 21

Candidate Starts for Demure_20:
(11, 14084), (16, 14123), (17, 14132), (18, 14135), (Start: 21 @14150 has 63 MA's), (22, 14159), (30, 14234), (38, 14396), (43, 14441), (46, 14483), (49, 14525), (54, 14729),

Gene: Dialga_21 Start: 13765, Stop: 14373, Start Num: 21
Candidate Starts for Dialga_21:
(11, 13699), (16, 13738), (17, 13747), (Start: 21 @13765 has 63 MA's), (22, 13774), (30, 13849), (34, 13930), (38, 14011), (43, 14056), (46, 14098), (49, 14140), (54, 14344),

Gene: DrGrey_13 Start: 8738, Stop: 9232, Start Num: 26
Candidate Starts for DrGrey_13:
(Start: 26 @8738 has 12 MA's), (Start: 27 @8741 has 20 MA's), (31, 8810), (36, 8906), (38, 8927), (41, 8954), (42, 8957), (51, 9161), (52, 9182),

Gene: Duffington_21 Start: 15006, Stop: 15617, Start Num: 21
Candidate Starts for Duffington_21:
(11, 14940), (16, 14979), (17, 14988), (18, 14991), (Start: 21 @15006 has 63 MA's), (22, 15015), (30, 15090), (43, 15297), (46, 15339), (49, 15381),

Gene: Eddiemania_22 Start: 15695, Stop: 16303, Start Num: 21
Candidate Starts for Eddiemania_22:
(14, 15656), (17, 15677), (18, 15680), (Start: 21 @15695 has 63 MA's), (22, 15704), (30, 15779), (36, 15920), (38, 15941), (43, 15986), (46, 16028), (49, 16070),

Gene: EndAve_21 Start: 15021, Stop: 15632, Start Num: 21
Candidate Starts for EndAve_21:
(11, 14955), (16, 14994), (17, 15003), (18, 15006), (Start: 21 @15021 has 63 MA's), (22, 15030), (30, 15105), (43, 15312), (46, 15354), (49, 15396),

Gene: Esketit_13 Start: 8219, Stop: 8713, Start Num: 26
Candidate Starts for Esketit_13:
(Start: 26 @8219 has 12 MA's), (Start: 27 @8222 has 20 MA's), (31, 8291), (36, 8387), (38, 8408), (41, 8435), (42, 8438), (51, 8642), (52, 8663),

Gene: Espio_13 Start: 8739, Stop: 9233, Start Num: 26
Candidate Starts for Espio_13:
(Start: 26 @8739 has 12 MA's), (Start: 27 @8742 has 20 MA's), (31, 8811), (36, 8907), (38, 8928), (41, 8955), (42, 8958), (51, 9162), (52, 9183),

Gene: Fazel_19 Start: 14076, Stop: 14681, Start Num: 21
Candidate Starts for Fazel_19:
(17, 14058), (Start: 21 @14076 has 63 MA's), (28, 14118), (30, 14160), (36, 14301), (43, 14367), (45, 14382), (46, 14406), (49, 14448),

Gene: FidgetOrca_13 Start: 8219, Stop: 8713, Start Num: 26
Candidate Starts for FidgetOrca_13:
(Start: 26 @8219 has 12 MA's), (Start: 27 @8222 has 20 MA's), (31, 8291), (36, 8387), (38, 8408), (41, 8435), (42, 8438), (51, 8642), (52, 8663),

Gene: Figliar_21 Start: 15031, Stop: 15642, Start Num: 21
Candidate Starts for Figliar_21:
(16, 15004), (17, 15013), (18, 15016), (Start: 21 @15031 has 63 MA's), (22, 15040), (23, 15058), (28, 15073), (30, 15115), (43, 15322), (46, 15364), (49, 15406),

Gene: Football_19 Start: 12085, Stop: 12699, Start Num: 21
Candidate Starts for Football_19:
(Start: 21 @12085 has 63 MA's), (25, 12118), (28, 12127), (43, 12382), (46, 12424), (49, 12466), (53, 12625),

Gene: FortCran_18 Start: 12367, Stop: 12981, Start Num: 21
Candidate Starts for FortCran_18:
(Start: 21 @12367 has 63 MA's), (25, 12400), (28, 12409), (43, 12664), (46, 12706), (49, 12748), (53, 12907),

Gene: FrodoSwaggins_13 Start: 8738, Stop: 9232, Start Num: 26
Candidate Starts for FrodoSwaggins_13:
(Start: 26 @8738 has 12 MA's), (Start: 27 @8741 has 20 MA's), (31, 8810), (36, 8906), (38, 8927), (41, 8954), (42, 8957), (51, 9161), (52, 9182),

Gene: FromIndy_11 Start: 6940, Stop: 7428, Start Num: 27
Candidate Starts for FromIndy_11:
(Start: 27 @6940 has 20 MA's), (44, 7183), (48, 7249), (50, 7342), (52, 7384),

Gene: Gill_18 Start: 12093, Stop: 12707, Start Num: 21
Candidate Starts for Gill_18:
(Start: 21 @12093 has 63 MA's), (25, 12126), (28, 12135), (43, 12390), (46, 12432), (49, 12474), (53, 12633),

Gene: Glintora_20 Start: 14997, Stop: 15605, Start Num: 21
Candidate Starts for Glintora_20:
(11, 14931), (16, 14970), (17, 14979), (18, 14982), (Start: 21 @14997 has 63 MA's), (22, 15006), (30, 15081), (43, 15288), (46, 15330), (49, 15372),

Gene: Gravy_18 Start: 12093, Stop: 12707, Start Num: 21
Candidate Starts for Gravy_18:
(Start: 21 @12093 has 63 MA's), (25, 12126), (28, 12135), (43, 12390), (46, 12432), (49, 12474), (53, 12633),

Gene: Gusicorn_21 Start: 14821, Stop: 15429, Start Num: 21
Candidate Starts for Gusicorn_21:
(1, 14590), (2, 14665), (3, 14704), (4, 14707), (8, 14731), (9, 14734), (10, 14743), (15, 14785), (16, 14794), (17, 14803), (18, 14806), (Start: 21 @14821 has 63 MA's), (28, 14863), (30, 14905), (43, 15112), (46, 15154), (49, 15196),

Gene: Hajile_13 Start: 7310, Stop: 7828, Start Num: 27
Candidate Starts for Hajile_13:
(23, 7304), (Start: 27 @7310 has 20 MA's), (36, 7502), (40, 7544), (50, 7736), (52, 7778),

Gene: HazuAndZazu_13 Start: 8741, Stop: 9232, Start Num: 27
Candidate Starts for HazuAndZazu_13:
(Start: 26 @8738 has 12 MA's), (Start: 27 @8741 has 20 MA's), (31, 8810), (36, 8906), (38, 8927), (41, 8954), (42, 8957), (51, 9161), (52, 9182),

Gene: Hortihabitatio_21 Start: 14447, Stop: 15052, Start Num: 21
Candidate Starts for Hortihabitatio_21:
(17, 14429), (Start: 21 @14447 has 63 MA's), (28, 14489), (43, 14738), (46, 14777), (49, 14819),

Gene: Hoshi_13 Start: 8222, Stop: 8713, Start Num: 27
Candidate Starts for Hoshi_13:
(Start: 26 @8219 has 12 MA's), (Start: 27 @8222 has 20 MA's), (31, 8291), (36, 8387), (38, 8408), (41, 8435), (42, 8438), (51, 8642), (52, 8663),

Gene: Hydrus_22 Start: 15565, Stop: 16173, Start Num: 21
Candidate Starts for Hydrus_22:
(11, 15499), (16, 15538), (17, 15547), (Start: 21 @15565 has 63 MA's), (22, 15574), (30, 15649), (38, 15811), (43, 15856), (46, 15898), (49, 15940), (54, 16144),

Gene: IceWarrior_13 Start: 8222, Stop: 8713, Start Num: 27
Candidate Starts for IceWarrior_13:
(Start: 26 @8219 has 12 MA's), (Start: 27 @8222 has 20 MA's), (31, 8291), (36, 8387), (38, 8408), (41, 8435), (42, 8438), (51, 8642), (52, 8663),

Gene: Indigenous_13 Start: 8219, Stop: 8713, Start Num: 26
Candidate Starts for Indigenous_13:
(Start: 26 @8219 has 12 MA's), (Start: 27 @8222 has 20 MA's), (31, 8291), (36, 8387), (38, 8408), (41, 8435), (42, 8438), (51, 8642), (52, 8663),

Gene: Jaylociraptor_13 Start: 8222, Stop: 8713, Start Num: 27
Candidate Starts for Jaylociraptor_13:
(Start: 26 @8219 has 12 MA's), (Start: 27 @8222 has 20 MA's), (31, 8291), (36, 8387), (38, 8408), (41, 8435), (42, 8438), (51, 8642), (52, 8663),

Gene: Jodelie19_21 Start: 15025, Stop: 15636, Start Num: 21
Candidate Starts for Jodelie19_21:
(16, 14998), (17, 15007), (18, 15010), (Start: 21 @15025 has 63 MA's), (22, 15034), (23, 15052), (28, 15067), (30, 15109), (43, 15316), (46, 15358), (49, 15400),

Gene: JulesRay_18 Start: 12367, Stop: 12981, Start Num: 21
Candidate Starts for JulesRay_18:
(Start: 21 @12367 has 63 MA's), (25, 12400), (28, 12409), (43, 12664), (46, 12706), (49, 12748), (53, 12907),

Gene: Kardashian_11 Start: 7953, Stop: 8435, Start Num: 27
Candidate Starts for Kardashian_11:
(Start: 27 @7953 has 20 MA's), (40, 8154), (52, 8391),

Gene: Kenosha_20 Start: 14166, Stop: 14774, Start Num: 21
Candidate Starts for Kenosha_20:
(11, 14100), (16, 14139), (17, 14148), (Start: 21 @14166 has 63 MA's), (22, 14175), (30, 14250), (38, 14412), (43, 14457), (46, 14499), (49, 14541),

Gene: Kerry_18 Start: 12093, Stop: 12707, Start Num: 21
Candidate Starts for Kerry_18:
(Start: 21 @12093 has 63 MA's), (25, 12126), (28, 12135), (43, 12390), (46, 12432), (49, 12474), (53, 12633),

Gene: LibertyBell_11 Start: 6901, Stop: 7431, Start Num: 24
Candidate Starts for LibertyBell_11:
(Start: 24 @6901 has 1 MA's), (52, 7381),

Gene: Luthien_21 Start: 15022, Stop: 15630, Start Num: 21
Candidate Starts for Luthien_21:
(11, 14956), (16, 14995), (17, 15004), (18, 15007), (Start: 21 @15022 has 63 MA's), (22, 15031), (30, 15106), (43, 15313), (46, 15355), (49, 15397),

Gene: Madamato_13 Start: 8214, Stop: 8693, Start Num: 27
Candidate Starts for Madamato_13:
(20, 8181), (Start: 27 @8214 has 20 MA's), (33, 8319), (36, 8376), (41, 8424), (42, 8427), (52, 8643),

Gene: Madvan_21 Start: 14816, Stop: 15424, Start Num: 21
Candidate Starts for Madvan_21:
(11, 14750), (15, 14780), (16, 14789), (17, 14798), (18, 14801), (Start: 21 @14816 has 63 MA's), (22, 14825), (30, 14900), (38, 15062), (43, 15107), (46, 15149), (49, 15191), (54, 15395),

Gene: Magel_18 Start: 12093, Stop: 12707, Start Num: 21
Candidate Starts for Magel_18:
(Start: 21 @12093 has 63 MA's), (25, 12126), (28, 12135), (43, 12390), (46, 12432), (49, 12474), (53, 12633),

Gene: MajinBuu_21 Start: 15026, Stop: 15637, Start Num: 21
Candidate Starts for MajinBuu_21:
(16, 14999), (17, 15008), (18, 15011), (Start: 21 @15026 has 63 MA's), (22, 15035), (23, 15053), (28, 15068), (30, 15110), (43, 15317), (46, 15359), (49, 15401),

Gene: Maya_13 Start: 8227, Stop: 8721, Start Num: 26
Candidate Starts for Maya_13:
(Start: 26 @8227 has 12 MA's), (Start: 27 @8230 has 20 MA's), (31, 8299), (36, 8395), (38, 8416), (41, 8443), (42, 8446), (51, 8650), (52, 8671),

Gene: Meibysrarus_13 Start: 8222, Stop: 8713, Start Num: 27
Candidate Starts for Meibysrarus_13:
(Start: 26 @8219 has 12 MA's), (Start: 27 @8222 has 20 MA's), (31, 8291), (36, 8387), (38, 8408), (41, 8435), (42, 8438), (51, 8642), (52, 8663),

Gene: Miek_10 Start: 6940, Stop: 7428, Start Num: 27
Candidate Starts for Miek_10:
(Start: 27 @6940 has 20 MA's), (44, 7183), (48, 7249), (50, 7342), (52, 7384),

Gene: Mossy_22 Start: 16236, Stop: 16850, Start Num: 21
Candidate Starts for Mossy_22:
(17, 16218), (Start: 21 @16236 has 63 MA's), (28, 16278), (30, 16320), (43, 16527), (46, 16566), (49, 16608),

Gene: Mysticmoon_20 Start: 14850, Stop: 15455, Start Num: 21
Candidate Starts for Mysticmoon_20:
(17, 14832), (Start: 21 @14850 has 63 MA's), (28, 14892), (30, 14934), (36, 15075), (43, 15141), (45, 15156), (46, 15180), (49, 15222),

Gene: Nadmeg_21 Start: 14817, Stop: 15425, Start Num: 21
Candidate Starts for Nadmeg_21:
(11, 14751), (15, 14781), (16, 14790), (17, 14799), (18, 14802), (Start: 21 @14817 has 63 MA's), (22, 14826), (30, 14901), (38, 15063), (43, 15108), (46, 15150), (49, 15192), (54, 15396),

Gene: Namo_13 Start: 8222, Stop: 8713, Start Num: 27
Candidate Starts for Namo_13:
(Start: 26 @8219 has 12 MA's), (Start: 27 @8222 has 20 MA's), (31, 8291), (36, 8387), (38, 8408), (41, 8435), (42, 8438), (51, 8642), (52, 8663),

Gene: Nithya_21 Start: 15021, Stop: 15629, Start Num: 21
Candidate Starts for Nithya_21:
(11, 14955), (16, 14994), (17, 15003), (18, 15006), (Start: 21 @15021 has 63 MA's), (22, 15030), (30, 15105), (43, 15312), (46, 15354), (49, 15396),

Gene: NoPickles_18 Start: 12093, Stop: 12707, Start Num: 21
Candidate Starts for NoPickles_18:
(Start: 21 @12093 has 63 MA's), (25, 12126), (28, 12135), (43, 12390), (46, 12432), (49, 12474), (53, 12633),

Gene: Odesza_18 Start: 12093, Stop: 12707, Start Num: 21
Candidate Starts for Odesza_18:
(Start: 21 @12093 has 63 MA's), (25, 12126), (28, 12135), (43, 12390), (46, 12432), (49, 12474), (53, 12633),

Gene: OhMyWard_21 Start: 15558, Stop: 16172, Start Num: 21
Candidate Starts for OhMyWard_21:
(17, 15540), (Start: 21 @15558 has 63 MA's), (28, 15600), (30, 15642), (43, 15849), (46, 15888), (49, 15930),

Gene: OlgasClover_21 Start: 15754, Stop: 16365, Start Num: 21
Candidate Starts for OlgasClover_21:
(16, 15727), (17, 15736), (18, 15739), (Start: 21 @15754 has 63 MA's), (22, 15763), (23, 15781), (28, 15796), (30, 15838), (43, 16045), (46, 16087), (49, 16129),

Gene: OlympicHelado_13 Start: 8219, Stop: 8713, Start Num: 26
Candidate Starts for OlympicHelado_13:
(Start: 26 @8219 has 12 MA's), (Start: 27 @8222 has 20 MA's), (31, 8291), (36, 8387), (38, 8408), (41, 8435), (42, 8438), (51, 8642), (52, 8663),

Gene: Pepy6_023 Start: 21319, Stop: 21969, Start Num: 19
Candidate Starts for Pepy6_023:
(15, 21286), (Start: 19 @21319 has 1 MA's), (23, 21352), (30, 21415), (39, 21598), (43, 21634), (45, 21649), (46, 21673), (47, 21688), (49, 21715),

Gene: Perkunas_20 Start: 12889, Stop: 13503, Start Num: 21
Candidate Starts for Perkunas_20:
(Start: 21 @12889 has 63 MA's), (43, 13186), (46, 13228), (49, 13270), (53, 13429),

Gene: PerroGrande22_27 Start: 22648, Stop: 23298, Start Num: 19
Candidate Starts for PerroGrande22_27:
(14, 22612), (16, 22624), (Start: 19 @22648 has 1 MA's), (23, 22681), (30, 22744), (39, 22927), (43, 22963), (46, 23002), (47, 23017), (49, 23044),

Gene: PestoPenguin_21 Start: 14821, Stop: 15429, Start Num: 21
Candidate Starts for PestoPenguin_21:

(1, 14590), (2, 14665), (3, 14704), (4, 14707), (8, 14731), (9, 14734), (10, 14743), (15, 14785), (16, 14794), (17, 14803), (18, 14806), (Start: 21 @14821 has 63 MA's), (28, 14863), (30, 14905), (43, 15112), (46, 15154), (49, 15196),

Gene: Petito_19 Start: 12584, Stop: 13198, Start Num: 21
Candidate Starts for Petito_19:
(Start: 21 @12584 has 63 MA's), (25, 12617), (28, 12626), (31, 12683), (43, 12881), (46, 12923), (49, 12965), (53, 13124),

Gene: Phepper_21 Start: 14815, Stop: 15423, Start Num: 21
Candidate Starts for Phepper_21:
(11, 14749), (15, 14779), (16, 14788), (17, 14797), (18, 14800), (Start: 21 @14815 has 63 MA's), (22, 14824), (30, 14899), (38, 15061), (43, 15106), (46, 15148), (49, 15190), (54, 15394),

Gene: Pherobrine_20 Start: 14848, Stop: 15453, Start Num: 21
Candidate Starts for Pherobrine_20:
(17, 14830), (Start: 21 @14848 has 63 MA's), (28, 14890), (30, 14932), (36, 15073), (43, 15139), (45, 15154), (46, 15178), (49, 15220),

Gene: Poco6_025 Start: 23341, Stop: 23991, Start Num: 19
Candidate Starts for Poco6_025:
(14, 23305), (16, 23317), (Start: 19 @23341 has 1 MA's), (23, 23374), (30, 23437), (37, 23599), (39, 23620), (43, 23656), (46, 23695), (47, 23710), (49, 23737),

Gene: Popy_13 Start: 8738, Stop: 9232, Start Num: 26
Candidate Starts for Popy_13:
(Start: 26 @8738 has 12 MA's), (Start: 27 @8741 has 20 MA's), (31, 8810), (36, 8906), (38, 8927), (41, 8954), (42, 8957), (51, 9161), (52, 9182),

Gene: Rainydai_10 Start: 6940, Stop: 7428, Start Num: 27
Candidate Starts for Rainydai_10:
(Start: 27 @6940 has 20 MA's), (44, 7183), (48, 7249), (50, 7342), (52, 7384),

Gene: Regigigas_11 Start: 6940, Stop: 7428, Start Num: 27
Candidate Starts for Regigigas_11:
(Start: 27 @6940 has 20 MA's), (44, 7183), (48, 7249), (50, 7342), (52, 7384),

Gene: Rickmore_19 Start: 13040, Stop: 13651, Start Num: 21
Candidate Starts for Rickmore_19:
(11, 12974), (16, 13013), (17, 13022), (18, 13025), (Start: 21 @13040 has 63 MA's), (22, 13049), (28, 13082), (30, 13124), (35, 13220), (43, 13331), (46, 13373), (49, 13415),

Gene: Rima_13 Start: 8219, Stop: 8713, Start Num: 26
Candidate Starts for Rima_13:
(Start: 26 @8219 has 12 MA's), (Start: 27 @8222 has 20 MA's), (31, 8291), (36, 8387), (38, 8408), (41, 8435), (42, 8438), (51, 8642), (52, 8663),

Gene: Roney_18 Start: 12093, Stop: 12707, Start Num: 21
Candidate Starts for Roney_18:
(Start: 21 @12093 has 63 MA's), (25, 12126), (28, 12135), (43, 12390), (46, 12432), (49, 12474), (53, 12633),

Gene: Runhaar_21 Start: 14817, Stop: 15425, Start Num: 21

Candidate Starts for Runhaar_21:
(11, 14751), (15, 14781), (16, 14790), (17, 14799), (18, 14802), (Start: 21 @14817 has 63 MA's), (22, 14826), (30, 14901), (38, 15063), (43, 15108), (46, 15150), (49, 15192), (54, 15396),

Gene: Schwartz33_22 Start: 15138, Stop: 15734, Start Num: 21
Candidate Starts for Schwartz33_22:
(17, 15120), (Start: 21 @15138 has 63 MA's), (28, 15171), (43, 15423), (46, 15465), (49, 15507),

Gene: Secretariat_19 Start: 13878, Stop: 14474, Start Num: 21
Candidate Starts for Secretariat_19:
(17, 13860), (Start: 21 @13878 has 63 MA's), (28, 13911), (30, 13953), (32, 14001), (43, 14163), (46, 14205), (49, 14247),

Gene: SendItCS_10 Start: 6940, Stop: 7428, Start Num: 27
Candidate Starts for SendItCS_10:
(Start: 27 @6940 has 20 MA's), (44, 7183), (48, 7249), (50, 7342), (52, 7384),

Gene: ShaggyRogers_21 Start: 14820, Stop: 15428, Start Num: 21
Candidate Starts for ShaggyRogers_21:
(1, 14589), (2, 14664), (3, 14703), (4, 14706), (8, 14730), (9, 14733), (10, 14742), (15, 14784), (16, 14793), (17, 14802), (18, 14805), (Start: 21 @14820 has 63 MA's), (28, 14862), (30, 14904), (43, 15111), (46, 15153), (49, 15195),

Gene: Soshi_13 Start: 8741, Stop: 9232, Start Num: 27
Candidate Starts for Soshi_13:
(Start: 26 @8738 has 12 MA's), (Start: 27 @8741 has 20 MA's), (31, 8810), (36, 8906), (38, 8927), (41, 8954), (42, 8957), (51, 9161), (52, 9182),

Gene: Spectropatronm_13 Start: 8219, Stop: 8713, Start Num: 26
Candidate Starts for Spectropatronm_13:
(Start: 26 @8219 has 12 MA's), (Start: 27 @8222 has 20 MA's), (31, 8291), (36, 8387), (38, 8408), (41, 8435), (42, 8438), (51, 8642), (52, 8663),

Gene: SweetCrkHerbs_20 Start: 12565, Stop: 13179, Start Num: 21
Candidate Starts for SweetCrkHerbs_20:
(Start: 21 @12565 has 63 MA's), (43, 12862), (46, 12904), (49, 12946), (53, 13105),

Gene: TaidaOne_13 Start: 8864, Stop: 9355, Start Num: 27
Candidate Starts for TaidaOne_13:
(Start: 26 @8861 has 12 MA's), (Start: 27 @8864 has 20 MA's), (31, 8933), (36, 9029), (38, 9050), (41, 9077), (42, 9080), (51, 9284), (52, 9305),

Gene: Tairn4Wing_20 Start: 12366, Stop: 12980, Start Num: 21
Candidate Starts for Tairn4Wing_20:
(Start: 21 @12366 has 63 MA's), (25, 12399), (28, 12408), (43, 12663), (46, 12705), (49, 12747), (53, 12906),

Gene: Talon44_19 Start: 12565, Stop: 13179, Start Num: 21
Candidate Starts for Talon44_19:
(Start: 21 @12565 has 63 MA's), (43, 12862), (46, 12904), (49, 12946), (53, 13105),

Gene: Tanis_18 Start: 11943, Stop: 12557, Start Num: 21
Candidate Starts for Tanis_18:

(Start: 21 @11943 has 63 MA's), (25, 11976), (28, 11985), (43, 12240), (46, 12282), (49, 12324), (53, 12483),

Gene: TenaciousP_21 Start: 15025, Stop: 15636, Start Num: 21
Candidate Starts for TenaciousP_21:
(16, 14998), (17, 15007), (18, 15010), (Start: 21 @15025 has 63 MA's), (22, 15034), (23, 15052), (28, 15067), (30, 15109), (43, 15316), (46, 15358), (49, 15400),

Gene: Thiqqums_10 Start: 6940, Stop: 7428, Start Num: 27
Candidate Starts for Thiqqums_10:
(Start: 27 @6940 has 20 MA's), (44, 7183), (48, 7249), (50, 7342), (52, 7384),

Gene: TieDye_12 Start: 7932, Stop: 8423, Start Num: 27
Candidate Starts for TieDye_12:
(Start: 26 @7929 has 12 MA's), (Start: 27 @7932 has 20 MA's), (31, 8001), (36, 8097), (38, 8118), (41, 8145), (42, 8148), (51, 8352), (52, 8373),

Gene: Tonaltzin_21 Start: 15025, Stop: 15636, Start Num: 21
Candidate Starts for Tonaltzin_21:
(16, 14998), (17, 15007), (18, 15010), (Start: 21 @15025 has 63 MA's), (22, 15034), (23, 15052), (28, 15067), (30, 15109), (43, 15316), (46, 15358), (49, 15400),

Gene: TonyStarch_13 Start: 8222, Stop: 8713, Start Num: 27
Candidate Starts for TonyStarch_13:
(Start: 26 @8219 has 12 MA's), (Start: 27 @8222 has 20 MA's), (31, 8291), (36, 8387), (38, 8408), (41, 8435), (42, 8438), (51, 8642), (52, 8663),

Gene: Trufflozitus_18 Start: 12367, Stop: 12981, Start Num: 21
Candidate Starts for Trufflozitus_18:
(Start: 21 @12367 has 63 MA's), (25, 12400), (28, 12409), (43, 12664), (46, 12706), (49, 12748), (53, 12907),

Gene: Untouchable_20 Start: 13742, Stop: 14350, Start Num: 21
Candidate Starts for Untouchable_20:
(11, 13676), (15, 13706), (16, 13715), (17, 13724), (18, 13727), (Start: 21 @13742 has 63 MA's), (22, 13751), (30, 13826), (38, 13988), (43, 14033), (46, 14075), (49, 14117), (54, 14321),

Gene: Vardy_21 Start: 14782, Stop: 15390, Start Num: 21
Candidate Starts for Vardy_21:
(11, 14716), (15, 14746), (16, 14755), (17, 14764), (18, 14767), (Start: 21 @14782 has 63 MA's), (22, 14791), (30, 14866), (38, 15028), (43, 15073), (46, 15115), (49, 15157), (54, 15361),

Gene: Wigberry_12 Start: 7310, Stop: 7828, Start Num: 27
Candidate Starts for Wigberry_12:
(23, 7304), (Start: 27 @7310 has 20 MA's), (36, 7502), (40, 7544), (50, 7736), (52, 7778),

Gene: Zeph_22 Start: 15547, Stop: 16155, Start Num: 21
Candidate Starts for Zeph_22:
(11, 15481), (16, 15520), (17, 15529), (Start: 21 @15547 has 63 MA's), (22, 15556), (30, 15631), (38, 15793), (43, 15838), (46, 15880), (49, 15922), (54, 16126),