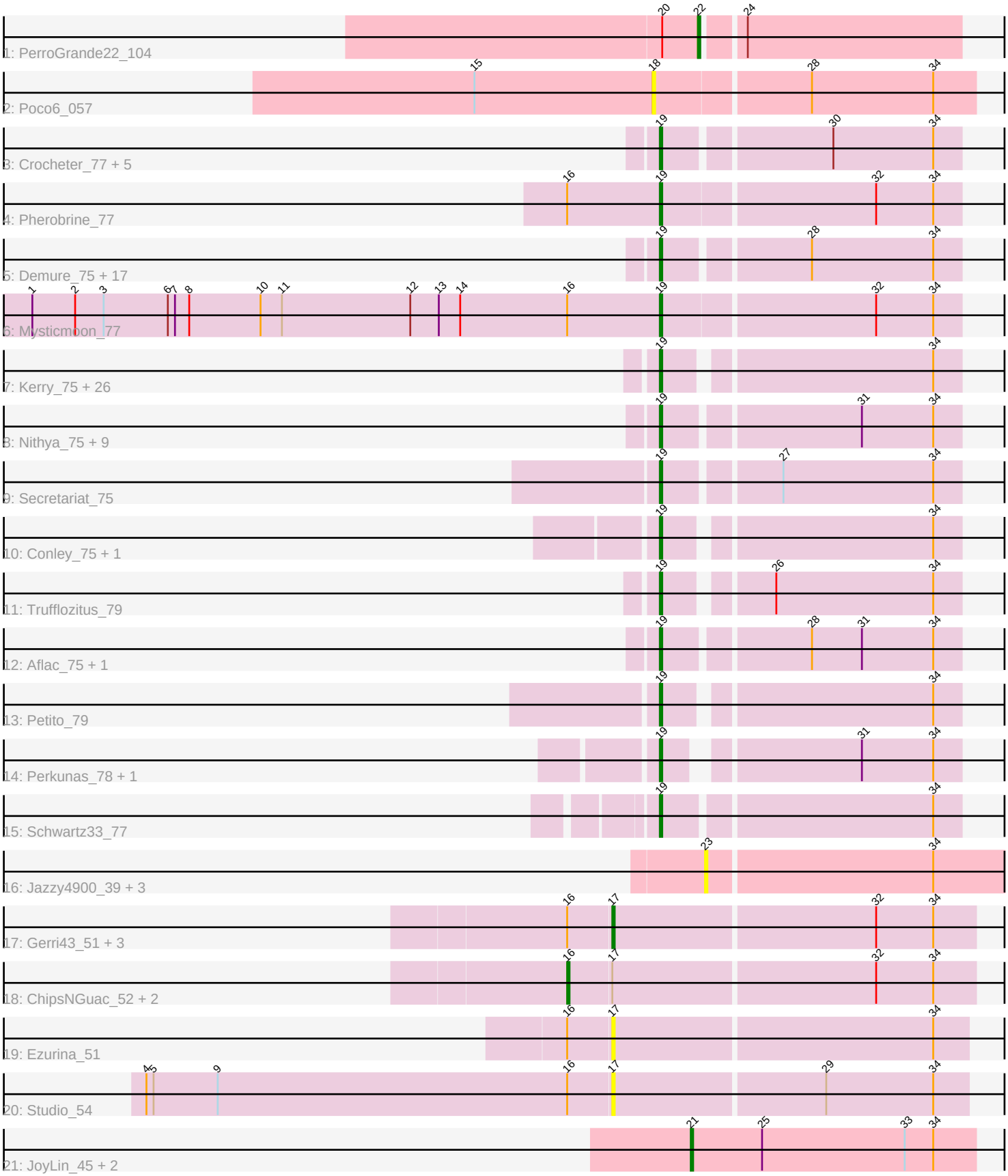
Pham 342021


1: PerroGrande22_104
2: Poco6_057
3: Crocheter_77 + 5
4: Pherobrine_77
5: Demure_75 + 17
6: Mysticmoon_77
7: Kerry_75 + 26
8: Nithya_75 + 9
9: Secretariat_75
10: Conley_75 + 1
11: Trufflozitus_79
12: Aflac_75 + 1
13: Petito_79
14: Perkunas_78 + 1
15: Schwartz33_77
16: Jazzy4900_39 + 3
17: Gerri43_51 + 3
18: ChipsNGuac_52 + 2
19: Ezurina_51
20: Studio_54
21: JoyLin_45 + 2

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 342021 Report

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

Pham number 342021 has 91 members, 20 are drafts.

Phages represented in each track:
• Track 1 : PerroGrande22_104
• Track 2 : Poco6_057
• Track 3 : Crocheter_77, PestoPenguin_78, Aloe25_78, ShaggyRogers_76, BetterYeti_76, Gusicorn_78
• Track 4 : Pherobrine_77
• Track 5 : Demure_75, Burley_76, Jodelie19_74, BluerMoon_74, Eddiemania_77, Luthien_75, Glintora_77, Arataki_75, Figliar_74, Zeph_78, Vardy_75, MajinBuu_76, Rickmore_74, Chikenjars_75, TenaciousP_76, Phepper_77, EndAve_77, Citrus_75
• Track 6 : Mysticmoon_77
• Track 7 : Kerry_75, Talon44_80, Avazak_79, Hortihabitatio_79, Artorias_78, Magel_77, Mossy_77, Roney_75, Bugg_82, Captrips_77, NoPickles_77, Football_81, JulesRay_78, ChickyNuggy_81, Blanky_72, AlainaMarie_75, Kenosha_75, Odesza_75, Dancer_78, Tairn4Wing_81, Hydrus_76, Tanis_76, Capybara_76, OhMyWard_73, Gill_76, Gravy_75, FortCran_78
• Track 8 : Nithya_75, Dialga_78, OlgasClover_77, Untouchable_78, Nadmeg_76, Runhaar_75, ArtetaBall_76, Madvan_76, Duffington_76, CWormy_75
• Track 9 : Secretariat_75
• Track 10 : Conley_75, Fazel_80
• Track 11 : Trufflozitus_79
• Track 12 : Aflac_75, Tonaltzin_74
• Track 13 : Petito_79
• Track 14 : Perkunas_78, SweetCrkHerbs_79
• Track 15 : Schwartz33_77
• Track 16 : Jazzy4900_39, GermyBearimy_43, Sunny4976_38, Arzan_40
• Track 17 : Gerri43_51, Neuvillette_51, CardboardBox_52, ChamoyPickle_53
• Track 18 : ChipsNGuac_52, AnnabelLee_53, Roberts_52
• Track 19 : Ezurina_51
• Track 20 : Studio_54
• Track 21 : JoyLin_45, Eevee_45, Yotsuba_45

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 63 of the 71 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Aflac_75, AlainaMarie_75, Aloe25_78, Arataki_75, ArtetaBall_76, Artorias_78, Avazak_79, BetterYeti_76, Blanky_72, BluerMoon_74, Bugg_82, Burley_76, CWormy_75, Captrips_77, Capybara_76, ChickyNuggy_81, Chikenjars_75, Citrus_75, Conley_75, Crocheter_77, Dancer_78, Demure_75, Dialga_78, Duffington_76, Eddiemania_77, EndAve_77, Fazel_80, Figliar_74, Football_81, FortCran_78, Gill_76, Glintora_77, Gravy_75, Gusicorn_78, Hortihabitatio_79, Hydrus_76, Jodelie19_74, JulesRay_78, Kenosha_75, Kerry_75, Luthien_75, Madvan_76, Magel_77, MajinBuu_76, Mossy_77, Mysticmoon_77, Nadmeg_76, Nithya_75, NoPickles_77, Odesza_75, OhMyWard_73, OlgasClover_77, Perkunas_78, PestoPenguin_78, Petito_79, Phepper_77, Pherobrine_77, Rickmore_74, Roney_75, Runhaar_75, Schwartz33_77, Secretariat_75, ShaggyRogers_76, SweetCrkHerbs_79, Tairn4Wing_81, Talon44_80, Tanis_76, TenaciousP_76, Tonaltzin_74, Trufflozitus_79, Untouchable_78, Vardy_75, Zeph_78,

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

Genes that do not have the "Most Annotated" start:
• AnnabelLee_53, Arzan_40, CardboardBox_52, ChamoyPickle_53, ChipsNGuac_52, Eevee_45, Ezurina_51, GermyBearimy_43, Gerri43_51, Jazzy4900_39, JoyLin_45, Neuvillette_51, PerroGrande22_104, Poco6_057, Roberts_52, Studio_54, Sunny4976_38, Yotsuba_45,

Summary by start number:

Start 16:
• Found in 11 of 91 (12.1%) of genes in pham
• Manual Annotations of this start: 3 of 71
• Called 27.3% of time when present
• Phage (with cluster) where this start called: AnnabelLee_53 (FR), ChipsNGuac_52 (FR), Roberts_52 (FR),

Start 17:
• Found in 9 of 91 (9.9%) of genes in pham
• Manual Annotations of this start: 1 of 71
• Called 66.7% of time when present
• Phage (with cluster) where this start called: CardboardBox_52 (FR), ChamoyPickle_53 (FR), Ezurina_51 (FR), Gerri43_51 (FR), Neuvillette_51 (FR), Studio_54 (FR),

Start 18:
• Found in 1 of 91 (1.1%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Poco6_057 (CC),

Start 19:
• Found in 73 of 91 (80.2%) of genes in pham
• Manual Annotations of this start: 63 of 71
• Called 100.0% of time when present

• Phage (with cluster) where this start called: Aflac_75 (DJ), AlainaMarie_75 (DJ), Aloe25_78 (DJ), Arataki_75 (DJ), ArtetaBall_76 (DJ), Artorias_78 (DJ), Avazak_79 (DJ), BetterYeti_76 (DJ), Blanky_72 (DJ), BluerMoon_74 (DJ), Bugg_82 (DJ), Burley_76 (DJ), CWormy_75 (DJ), Captrips_77 (DJ), Capybara_76 (DJ), ChickyNuggy_81 (DJ), Chikenjars_75 (DJ), Citrus_75 (DJ), Conley_75 (DJ), Crocheter_77 (DJ), Dancer_78 (DJ), Demure_75 (DJ), Dialga_78 (DJ), Duffington_76 (DJ), Eddiemania_77 (DJ), EndAve_77 (DJ), Fazel_80 (DJ), Figliar_74 (DJ), Football_81 (DJ), FortCran_78 (DJ), Gill_76 (DJ), Glintora_77 (DJ), Gravy_75 (DJ), Gusicorn_78 (DJ), Hortihabitatio_79 (DJ), Hydrus_76 (DJ), Jodelie19_74 (DJ), JulesRay_78 (DJ), Kenosha_75 (DJ), Kerry_75 (DJ), Luthien_75 (DJ), Madvan_76 (DJ), Magel_77 (DJ), MajinBuu_76 (DJ), Mossy_77 (DJ), Mysticmoon_77 (DJ), Nadmeg_76 (DJ), Nithya_75 (DJ), NoPickles_77 (DJ), Odesza_75 (DJ), OhMyWard_73 (DJ), OlgasClover_77 (DJ), Perkunas_78 (DJ), PestoPenguin_78 (DJ), Petito_79 (DJ), Phepper_77 (DJ), Pherobrine_77 (DJ), Rickmore_74 (DJ), Roney_75 (DJ), Runhaar_75 (DJ), Schwartz33_77 (DJ), Secretariat_75 (DJ), ShaggyRogers_76 (DJ), SweetCrkHerbs_79 (DJ), Tairn4Wing_81 (DJ), Talon44_80 (DJ), Tanis_76 (DJ), TenaciousP_76 (DJ), Tonaltzin_74 (DJ), Trufflozitus_79 (DJ), Untouchable_78 (DJ), Vardy_75 (DJ), Zeph_78 (DJ),

Start 21:
• Found in 3 of 91 (3.3%) of genes in pham
• Manual Annotations of this start: 3 of 71
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Eevee_45 (JA), JoyLin_45 (JA), Yotsuba_45 (JA),

Start 22:
• Found in 1 of 91 (1.1%) of genes in pham
• Manual Annotations of this start: 1 of 71
• Called 100.0% of time when present
• Phage (with cluster) where this start called: PerroGrande22_104 (CC),

Start 23:
• Found in 4 of 91 (4.4%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Arzan_40 (FI), GermyBearimy_43 (FI), Jazzy4900_39 (FI), Sunny4976_38 (FI),

Summary by clusters:

There are 5 clusters represented in this pham: CC, FI, FR, DJ, JA,

Info for manual annotations of cluster CC:
•Start number 22 was manually annotated 1 time for cluster CC.

Info for manual annotations of cluster DJ:
•Start number 19 was manually annotated 63 times for cluster DJ.

Info for manual annotations of cluster FR:
•Start number 16 was manually annotated 3 times for cluster FR.
•Start number 17 was manually annotated 1 time for cluster FR.

Info for manual annotations of cluster JA:
•Start number 21 was manually annotated 3 times for cluster JA.

Gene Information:

Gene: Aflac_75 Start: 51259, Stop: 51378, Start Num: 19
Candidate Starts for Aflac_75:
(Start: 19 @51259 has 63 MA's), (28, 51316), (31, 51337), (34, 51367),

Gene: AlainaMarie_75 Start: 51316, Stop: 51435, Start Num: 19
Candidate Starts for AlainaMarie_75:
(Start: 19 @51316 has 63 MA's), (34, 51424),

Gene: Aloe25_78 Start: 51133, Stop: 51252, Start Num: 19
Candidate Starts for Aloe25_78:
(Start: 19 @51133 has 63 MA's), (30, 51199), (34, 51241),

Gene: AnnabelLee_53 Start: 32600, Stop: 32433, Start Num: 16
Candidate Starts for AnnabelLee_53:
(Start: 16 @32600 has 3 MA's), (Start: 17 @32582 has 1 MA's), (32, 32474), (34, 32450),

Gene: Arataki_75 Start: 50746, Stop: 50865, Start Num: 19
Candidate Starts for Arataki_75:
(Start: 19 @50746 has 63 MA's), (28, 50803), (34, 50854),

Gene: ArtetaBall_76 Start: 51306, Stop: 51425, Start Num: 19
Candidate Starts for ArtetaBall_76:
(Start: 19 @51306 has 63 MA's), (31, 51384), (34, 51414),

Gene: Artorias_78 Start: 50947, Stop: 51063, Start Num: 19
Candidate Starts for Artorias_78:
(Start: 19 @50947 has 63 MA's), (34, 51052),

Gene: Arzan_40 Start: 28874, Stop: 29023, Start Num: 23
Candidate Starts for Arzan_40:
(23, 28874), (34, 28967),

Gene: Avazak_79 Start: 51629, Stop: 51745, Start Num: 19
Candidate Starts for Avazak_79:
(Start: 19 @51629 has 63 MA's), (34, 51734),

Gene: BetterYeti_76 Start: 51132, Stop: 51251, Start Num: 19
Candidate Starts for BetterYeti_76:
(Start: 19 @51132 has 63 MA's), (30, 51198), (34, 51240),

Gene: Blanky_72 Start: 52228, Stop: 52347, Start Num: 19
Candidate Starts for Blanky_72:
(Start: 19 @52228 has 63 MA's), (34, 52336),

Gene: BluerMoon_74 Start: 51213, Stop: 51332, Start Num: 19

Candidate Starts for BluerMoon_74:
(Start: 19 @51213 has 63 MA's), (28, 51270), (34, 51321),

Gene: Bugg_82 Start: 50992, Stop: 51108, Start Num: 19
Candidate Starts for Bugg_82:
(Start: 19 @50992 has 63 MA's), (34, 51097),

Gene: Burley_76 Start: 50762, Stop: 50881, Start Num: 19
Candidate Starts for Burley_76:
(Start: 19 @50762 has 63 MA's), (28, 50819), (34, 50870),

Gene: CWormy_75 Start: 50723, Stop: 50842, Start Num: 19
Candidate Starts for CWormy_75:
(Start: 19 @50723 has 63 MA's), (31, 50801), (34, 50831),

Gene: Captrips_77 Start: 50777, Stop: 50893, Start Num: 19
Candidate Starts for Captrips_77:
(Start: 19 @50777 has 63 MA's), (34, 50882),

Gene: Capybara_76 Start: 50614, Stop: 50730, Start Num: 19
Candidate Starts for Capybara_76:
(Start: 19 @50614 has 63 MA's), (34, 50719),

Gene: CardboardBox_52 Start: 32585, Stop: 32436, Start Num: 17
Candidate Starts for CardboardBox_52:
(Start: 16 @32603 has 3 MA's), (Start: 17 @32585 has 1 MA's), (32, 32477), (34, 32453),

Gene: ChamoyPickle_53 Start: 33125, Stop: 32976, Start Num: 17
Candidate Starts for ChamoyPickle_53:
(Start: 16 @33143 has 3 MA's), (Start: 17 @33125 has 1 MA's), (32, 33017), (34, 32993),

Gene: ChickyNuggy_81 Start: 51371, Stop: 51487, Start Num: 19
Candidate Starts for ChickyNuggy_81:
(Start: 19 @51371 has 63 MA's), (34, 51476),

Gene: Chikenjars_75 Start: 51562, Stop: 51681, Start Num: 19
Candidate Starts for Chikenjars_75:
(Start: 19 @51562 has 63 MA's), (28, 51619), (34, 51670),

Gene: ChipsNGuac_52 Start: 32603, Stop: 32436, Start Num: 16
Candidate Starts for ChipsNGuac_52:
(Start: 16 @32603 has 3 MA's), (Start: 17 @32585 has 1 MA's), (32, 32477), (34, 32453),

Gene: Citrus_75 Start: 51612, Stop: 51731, Start Num: 19
Candidate Starts for Citrus_75:
(Start: 19 @51612 has 63 MA's), (28, 51669), (34, 51720),

Gene: Conley_75 Start: 51077, Stop: 51193, Start Num: 19
Candidate Starts for Conley_75:
(Start: 19 @51077 has 63 MA's), (34, 51182),

Gene: Crocheter_77 Start: 51226, Stop: 51345, Start Num: 19
Candidate Starts for Crocheter_77:

(Start: 19 @51226 has 63 MA's), (30, 51292), (34, 51334),

Gene: Dancer_78 Start: 50684, Stop: 50800, Start Num: 19
Candidate Starts for Dancer_78:
(Start: 19 @50684 has 63 MA's), (34, 50789),

Gene: Demure_75 Start: 50746, Stop: 50865, Start Num: 19
Candidate Starts for Demure_75:
(Start: 19 @50746 has 63 MA's), (28, 50803), (34, 50854),

Gene: Dialga_78 Start: 51325, Stop: 51444, Start Num: 19
Candidate Starts for Dialga_78:
(Start: 19 @51325 has 63 MA's), (31, 51403), (34, 51433),

Gene: Duffington_76 Start: 51530, Stop: 51649, Start Num: 19
Candidate Starts for Duffington_76:
(Start: 19 @51530 has 63 MA's), (31, 51608), (34, 51638),

Gene: Eddiemania_77 Start: 51804, Stop: 51923, Start Num: 19
Candidate Starts for Eddiemania_77:
(Start: 19 @51804 has 63 MA's), (28, 51861), (34, 51912),

Gene: Eevee_45 Start: 34471, Stop: 34590, Start Num: 21
Candidate Starts for Eevee_45:
(Start: 21 @34471 has 3 MA's), (25, 34501), (33, 34561), (34, 34573),

Gene: EndAve_77 Start: 51506, Stop: 51625, Start Num: 19
Candidate Starts for EndAve_77:
(Start: 19 @51506 has 63 MA's), (28, 51563), (34, 51614),

Gene: Ezurina_51 Start: 33562, Stop: 33416, Start Num: 17
Candidate Starts for Ezurina_51:
(Start: 16 @33580 has 3 MA's), (Start: 17 @33562 has 1 MA's), (34, 33430),

Gene: Fazel_80 Start: 51692, Stop: 51811, Start Num: 19
Candidate Starts for Fazel_80:
(Start: 19 @51692 has 63 MA's), (34, 51800),

Gene: Figliar_74 Start: 51330, Stop: 51449, Start Num: 19
Candidate Starts for Figliar_74:
(Start: 19 @51330 has 63 MA's), (28, 51387), (34, 51438),

Gene: Football_81 Start: 50574, Stop: 50690, Start Num: 19
Candidate Starts for Football_81:
(Start: 19 @50574 has 63 MA's), (34, 50679),

Gene: FortCran_78 Start: 50947, Stop: 51063, Start Num: 19
Candidate Starts for FortCran_78:
(Start: 19 @50947 has 63 MA's), (34, 51052),

Gene: GermyBearimy_43 Start: 29294, Stop: 29443, Start Num: 23
Candidate Starts for GermyBearimy_43:
(23, 29294), (34, 29387),

Gene: Gerri43_51 Start: 32585, Stop: 32436, Start Num: 17
Candidate Starts for Gerri43_51:
(Start: 16 @32603 has 3 MA's), (Start: 17 @32585 has 1 MA's), (32, 32477), (34, 32453),

Gene: Gill_76 Start: 50642, Stop: 50758, Start Num: 19
Candidate Starts for Gill_76:
(Start: 19 @50642 has 63 MA's), (34, 50747),

Gene: Glintora_77 Start: 51707, Stop: 51826, Start Num: 19
Candidate Starts for Glintora_77:
(Start: 19 @51707 has 63 MA's), (28, 51764), (34, 51815),

Gene: Gravy_75 Start: 50304, Stop: 50420, Start Num: 19
Candidate Starts for Gravy_75:
(Start: 19 @50304 has 63 MA's), (34, 50409),

Gene: Gusicorn_78 Start: 51133, Stop: 51252, Start Num: 19
Candidate Starts for Gusicorn_78:
(Start: 19 @51133 has 63 MA's), (30, 51199), (34, 51241),

Gene: Hortihabitatio_79 Start: 52082, Stop: 52201, Start Num: 19
Candidate Starts for Hortihabitatio_79:
(Start: 19 @52082 has 63 MA's), (34, 52190),

Gene: Hydrus_76 Start: 51523, Stop: 51642, Start Num: 19
Candidate Starts for Hydrus_76:
(Start: 19 @51523 has 63 MA's), (34, 51631),

Gene: Jazzy4900_39 Start: 29823, Stop: 29972, Start Num: 23
Candidate Starts for Jazzy4900_39:
(23, 29823), (34, 29916),

Gene: Jodelie19_74 Start: 52497, Stop: 52616, Start Num: 19
Candidate Starts for Jodelie19_74:
(Start: 19 @52497 has 63 MA's), (28, 52554), (34, 52605),

Gene: JoyLin_45 Start: 34591, Stop: 34710, Start Num: 21
Candidate Starts for JoyLin_45:
(Start: 21 @34591 has 3 MA's), (25, 34621), (33, 34681), (34, 34693),

Gene: JulesRay_78 Start: 51296, Stop: 51412, Start Num: 19
Candidate Starts for JulesRay_78:
(Start: 19 @51296 has 63 MA's), (34, 51401),

Gene: Kenosha_75 Start: 51351, Stop: 51470, Start Num: 19
Candidate Starts for Kenosha_75:
(Start: 19 @51351 has 63 MA's), (34, 51459),

Gene: Kerry_75 Start: 50367, Stop: 50483, Start Num: 19
Candidate Starts for Kerry_75:
(Start: 19 @50367 has 63 MA's), (34, 50472),

Gene: Luthien_75 Start: 51501, Stop: 51620, Start Num: 19
Candidate Starts for Luthien_75:
(Start: 19 @51501 has 63 MA's), (28, 51558), (34, 51609),

Gene: Madvan_76 Start: 50818, Stop: 50937, Start Num: 19
Candidate Starts for Madvan_76:
(Start: 19 @50818 has 63 MA's), (31, 50896), (34, 50926),

Gene: Magel_77 Start: 50557, Stop: 50673, Start Num: 19
Candidate Starts for Magel_77:
(Start: 19 @50557 has 63 MA's), (34, 50662),

Gene: MajinBuu_76 Start: 51712, Stop: 51831, Start Num: 19
Candidate Starts for MajinBuu_76:
(Start: 19 @51712 has 63 MA's), (28, 51769), (34, 51820),

Gene: Mossy_77 Start: 52440, Stop: 52559, Start Num: 19
Candidate Starts for Mossy_77:
(Start: 19 @52440 has 63 MA's), (34, 52548),

Gene: Mysticmoon_77 Start: 52079, Stop: 52201, Start Num: 19
Candidate Starts for Mysticmoon_77:
(1, 51815), (2, 51833), (3, 51845), (6, 51872), (7, 51875), (8, 51881), (10, 51911), (11, 51920), (12, 51974), (13, 51986), (14, 51995), (Start: 16 @52040 has 3 MA's), (Start: 19 @52079 has 63 MA's), (32, 52166), (34, 52190),

Gene: Nadmeg_76 Start: 51821, Stop: 51940, Start Num: 19
Candidate Starts for Nadmeg_76:
(Start: 19 @51821 has 63 MA's), (31, 51899), (34, 51929),

Gene: Neuvillette_51 Start: 32585, Stop: 32436, Start Num: 17
Candidate Starts for Neuvillette_51:
(Start: 16 @32603 has 3 MA's), (Start: 17 @32585 has 1 MA's), (32, 32477), (34, 32453),

Gene: Nithya_75 Start: 51204, Stop: 51323, Start Num: 19
Candidate Starts for Nithya_75:
(Start: 19 @51204 has 63 MA's), (31, 51282), (34, 51312),

Gene: NoPickles_77 Start: 50463, Stop: 50579, Start Num: 19
Candidate Starts for NoPickles_77:
(Start: 19 @50463 has 63 MA's), (34, 50568),

Gene: Odesza_75 Start: 50501, Stop: 50617, Start Num: 19
Candidate Starts for Odesza_75:
(Start: 19 @50501 has 63 MA's), (34, 50606),

Gene: OhMyWard_73 Start: 52199, Stop: 52318, Start Num: 19
Candidate Starts for OhMyWard_73:
(Start: 19 @52199 has 63 MA's), (34, 52307),

Gene: OlgasClover_77 Start: 52120, Stop: 52239, Start Num: 19
Candidate Starts for OlgasClover_77:
(Start: 19 @52120 has 63 MA's), (31, 52198), (34, 52228),

Gene: Perkunas_78 Start: 50566, Stop: 50679, Start Num: 19
Candidate Starts for Perkunas_78:
(Start: 19 @50566 has 63 MA's), (31, 50638), (34, 50668),

Gene: PerroGrande22_104 Start: 67639, Stop: 67743, Start Num: 22
Candidate Starts for PerroGrande22_104:
(20, 67624), (Start: 22 @67639 has 1 MA's), (24, 67654),

Gene: PestoPenguin_78 Start: 51133, Stop: 51252, Start Num: 19
Candidate Starts for PestoPenguin_78:
(Start: 19 @51133 has 63 MA's), (30, 51199), (34, 51241),

Gene: Petito_79 Start: 52029, Stop: 52145, Start Num: 19
Candidate Starts for Petito_79:
(Start: 19 @52029 has 63 MA's), (34, 52134),

Gene: Phepper_77 Start: 51060, Stop: 51179, Start Num: 19
Candidate Starts for Phepper_77:
(Start: 19 @51060 has 63 MA's), (28, 51117), (34, 51168),

Gene: Pherobrine_77 Start: 52134, Stop: 52256, Start Num: 19
Candidate Starts for Pherobrine_77:
(Start: 16 @52095 has 3 MA's), (Start: 19 @52134 has 63 MA's), (32, 52221), (34, 52245),

Gene: Poco6_057 Start: 66807, Stop: 66938, Start Num: 18
Candidate Starts for Poco6_057:
(15, 66732), (18, 66807), (28, 66870), (34, 66921),

Gene: Rickmore_74 Start: 49877, Stop: 49996, Start Num: 19
Candidate Starts for Rickmore_74:
(Start: 19 @49877 has 63 MA's), (28, 49934), (34, 49985),

Gene: Roberts_52 Start: 32603, Stop: 32436, Start Num: 16
Candidate Starts for Roberts_52:
(Start: 16 @32603 has 3 MA's), (Start: 17 @32585 has 1 MA's), (32, 32477), (34, 32453),

Gene: Roney_75 Start: 50667, Stop: 50783, Start Num: 19
Candidate Starts for Roney_75:
(Start: 19 @50667 has 63 MA's), (34, 50772),

Gene: Runhaar_75 Start: 50869, Stop: 50988, Start Num: 19
Candidate Starts for Runhaar_75:
(Start: 19 @50869 has 63 MA's), (31, 50947), (34, 50977),

Gene: Schwartz33_77 Start: 51200, Stop: 51319, Start Num: 19
Candidate Starts for Schwartz33_77:
(Start: 19 @51200 has 63 MA's), (34, 51308),

Gene: Secretariat_75 Start: 50334, Stop: 50453, Start Num: 19
Candidate Starts for Secretariat_75:
(Start: 19 @50334 has 63 MA's), (27, 50379), (34, 50442),

Gene: ShaggyRogers_76 Start: 50863, Stop: 50982, Start Num: 19
Candidate Starts for ShaggyRogers_76:
(Start: 19 @50863 has 63 MA's), (30, 50929), (34, 50971),

Gene: Studio_54 Start: 33799, Stop: 33653, Start Num: 17
Candidate Starts for Studio_54:
(4, 33994), (5, 33991), (9, 33964), (Start: 16 @33817 has 3 MA's), (Start: 17 @33799 has 1 MA's), (29, 33712), (34, 33667),

Gene: Sunny4976_38 Start: 29823, Stop: 29972, Start Num: 23
Candidate Starts for Sunny4976_38:
(23, 29823), (34, 29916),

Gene: SweetCrkHerbs_79 Start: 50579, Stop: 50692, Start Num: 19
Candidate Starts for SweetCrkHerbs_79:
(Start: 19 @50579 has 63 MA's), (31, 50651), (34, 50681),

Gene: Tairn4Wing_81 Start: 50785, Stop: 50901, Start Num: 19
Candidate Starts for Tairn4Wing_81:
(Start: 19 @50785 has 63 MA's), (34, 50890),

Gene: Talon44_80 Start: 51415, Stop: 51531, Start Num: 19
Candidate Starts for Talon44_80:
(Start: 19 @51415 has 63 MA's), (34, 51520),

Gene: Tanis_76 Start: 50487, Stop: 50603, Start Num: 19
Candidate Starts for Tanis_76:
(Start: 19 @50487 has 63 MA's), (34, 50592),

Gene: TenaciousP_76 Start: 52459, Stop: 52578, Start Num: 19
Candidate Starts for TenaciousP_76:
(Start: 19 @52459 has 63 MA's), (28, 52516), (34, 52567),

Gene: Tonaltzin_74 Start: 51027, Stop: 51146, Start Num: 19
Candidate Starts for Tonaltzin_74:
(Start: 19 @51027 has 63 MA's), (28, 51084), (31, 51105), (34, 51135),

Gene: Trufflozitus_79 Start: 51300, Stop: 51416, Start Num: 19
Candidate Starts for Trufflozitus_79:
(Start: 19 @51300 has 63 MA's), (26, 51339), (34, 51405),

Gene: Untouchable_78 Start: 52057, Stop: 52176, Start Num: 19
Candidate Starts for Untouchable_78:
(Start: 19 @52057 has 63 MA's), (31, 52135), (34, 52165),

Gene: Vardy_75 Start: 50756, Stop: 50875, Start Num: 19
Candidate Starts for Vardy_75:
(Start: 19 @50756 has 63 MA's), (28, 50813), (34, 50864),

Gene: Yotsuba_45 Start: 34609, Stop: 34728, Start Num: 21
Candidate Starts for Yotsuba_45:
(Start: 21 @34609 has 3 MA's), (25, 34639), (33, 34699), (34, 34711),

Gene: Zeph_78 Start: 51894, Stop: 52013, Start Num: 19
Candidate Starts for Zeph_78:
(Start: 19 @51894 has 63 MA's), (28, 51951), (34, 52002),