Pham 289288

1: Lovelyunicorn_27 + 48
2: Renzie_27 + 3
3: McGalleon_28
4: Endor_28
5: CarisSwetlik_30
6: PuppyEggo_27 + 4
7: AlexAdler_27 + 2
8: HavenFinLeoSun_28
9: Superfresh_27
10: Acosta_28
11: JasonD_29
12: SolidSnake_28
13: Jenos_29
14: FarmerDoug_27
15: Zada_27
16: MonChoix_26
17: MiniVolent_26
18: Juanyo_26
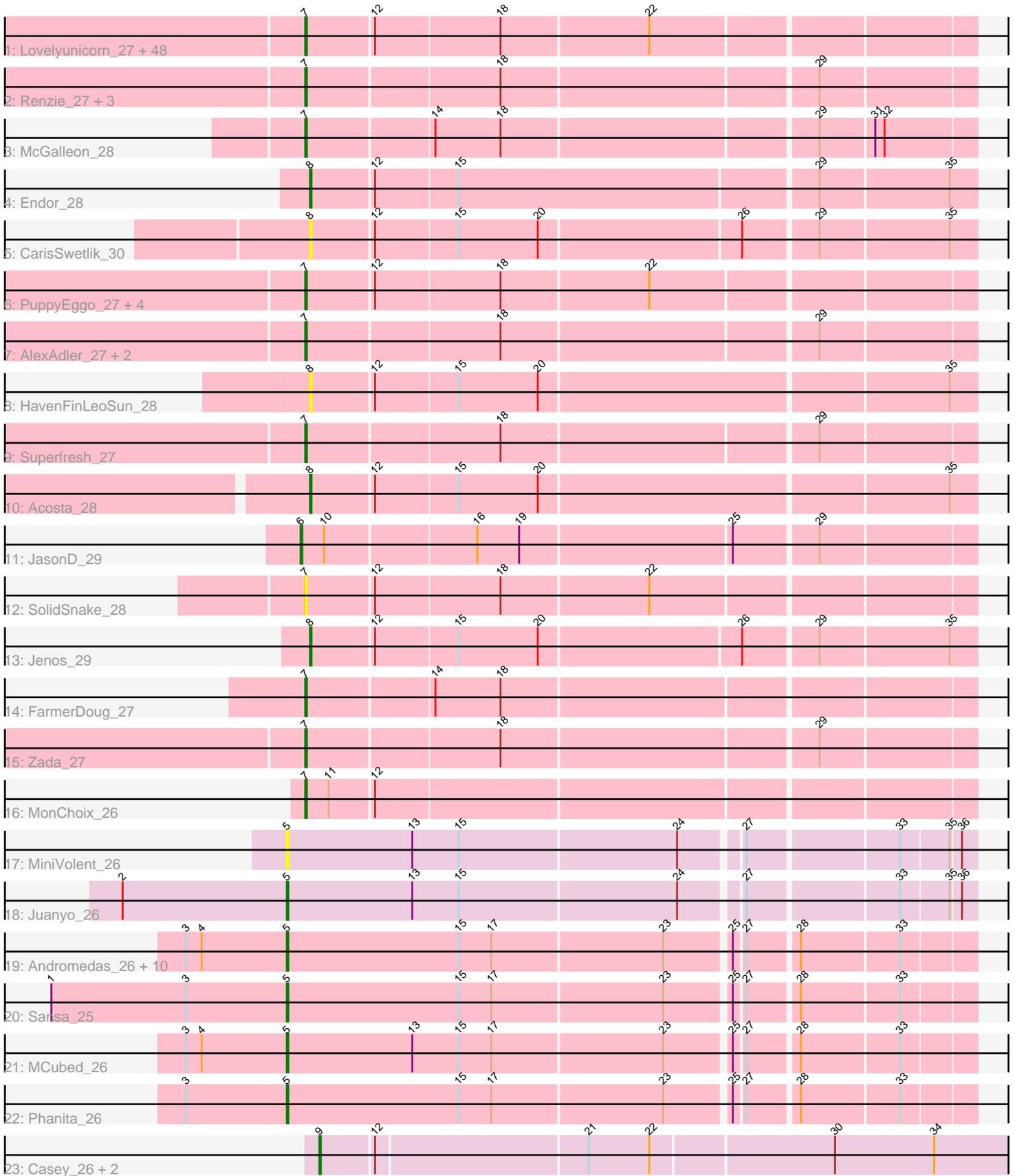19: Andromedas_26 + 10
20: Sansa_25
21: MCubed_26
22: Phanita_26
23: Casey_26 + 2

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 289288 Report

This analysis was run 03/28/26 on database version 641.

Pham number 289288 has 92 members, 7 are drafts.

Phages represented in each track:
• Track 1 : Lovelyunicorn_27, Phireproof_27, Oxtober96_27, Stanktossa_27, SoilGremlin_27, TinSulphur_27, Velene_27, Inventa_27, Riyhil_27, Strathdee_27, Teagan_27, MillyPhilly_27, Shee_27, Alyxandracam_27, Gargoyle_27, Kurt1_27, Rapheph_27, Delphidian_27, Byron23_27, Dothraki_27, TatarkaPM_27, Nagem_27, Phriends_27, GoingMerry_27, Convict_27, Pherferi_27, Blage_27, WildNOut_27, Den3_27, ParleG_27, PhredFlintston_27, MaeLinda_27, Knox_27, NickSell_27, Martin_28, OldNelly_27, Greys_27, Merida02_28, Bandik_27, Ludgate_27, SJay_27, Ioannes_27, BeautPeep30_27, BigRedClifford_27, BonesMcCoy_27, Thompsone_27, Phiderman_27, Raptor_27, MrWorldwide_27
• Track 2 : Renzie_27, Antoinette_27, Peep_27, Dave_27
• Track 3 : McGalleon_28
• Track 4 : Endor_28
• Track 5 : CarisSwetlik_30
• Track 6 : PuppyEggo_27, Vispistious_27, AxiPup_27, ShaiHulud_27, Thorongil_27
• Track 7 : AlexAdler_27, Figueroism_27, Robinson_27
• Track 8 : HavenFinLeoSun_28
• Track 9 : Superfresh_27
• Track 10 : Acosta_28
• Track 11 : JasonD_29
• Track 12 : SolidSnake_28
• Track 13 : Jenos_29
• Track 14 : FarmerDoug_27
• Track 15 : Zada_27
• Track 16 : MonChoix_26
• Track 17 : MiniVolent_26
• Track 18 : Juanyo_26
• Track 19 : Andromedas_26, ChikPic_26, Xebius_26, Eleri_26, Glamour_25, Finny_26, PSirce_26, Zenitsu_26, Shamu_26, Saratos_26, ColaCorta_26
• Track 20 : Sansa_25
• Track 21 : MCubed_26
• Track 22 : Phanita_26
• Track 23 : Casey_26, Pajaza_26, Pikmin_26

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

The start number called the most often in the published annotations is 7, it was called in 64 of the 85 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• AlexAdler_27, Alyxandracam_27, Antoinette_27, AxiPup_27, Bandik_27, BeautPeep30_27, BigRedClifford_27, Blage_27, BonesMcCoy_27, Byron23_27, Convict_27, Dave_27, Delphidian_27, Den3_27, Dothraki_27, FarmerDoug_27, Figueroism_27, Gargoyle_27, GoingMerry_27, Greys_27, Inventa_27, Ioannes_27, Knox_27, Kurt1_27, Lovelyunicorn_27, Ludgate_27, MaeLinda_27, Martin_28, McGalleon_28, Merida02_28, MillyPhilly_27, MonChoix_26, MrWorldwide_27, Nagem_27, NickSell_27, OldNelly_27, Oxtober96_27, ParleG_27, Peep_27, Pherferi_27, Phiderman_27, Phireproof_27, PhredFlintston_27, Phriends_27, PuppyEggo_27, Rapheph_27, Raptor_27, Renzie_27, Riyhil_27, Robinson_27, SJay_27, ShaiHulud_27, Shee_27, SoilGremlin_27, SolidSnake_28, Stanktossa_27, Strathdee_27, Superfresh_27, TatarkaPM_27, Teagan_27, Thompsone_27, Thorongil_27, TinSulphur_27, Velene_27, Vispistious_27, WildNOut_27, Zada_27,

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

Genes that do not have the "Most Annotated" start:
• Acosta_28, Andromedas_26, CarisSwetlik_30, Casey_26, ChikPic_26, ColaCorta_26, Eleri_26, Endor_28, Finny_26, Glamour_25, HavenFinLeoSun_28, JasonD_29, Jenos_29, Juanyo_26, MCubed_26, MiniVolent_26, PSirce_26, Pajaza_26, Phanita_26, Pikmin_26, Sansa_25, Saratos_26, Shamu_26, Xebius_26, Zenitsu_26,

Summary by start number:

Start 5:
• Found in 16 of 92 (17.4%) of genes in pham
• Manual Annotations of this start: 14 of 85
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Andromedas_26 (EA2), ChikPic_26 (EA2), ColaCorta_26 (EA2), Eleri_26 (EA2), Finny_26 (EA2), Glamour_25 (EA2), Juanyo_26 (EA10), MCubed_26 (EA2), MiniVolent_26 (EA10), PSirce_26 (EA2), Phanita_26 (EA2), Sansa_25 (EA2), Saratos_26 (EA2), Shamu_26 (EA2), Xebius_26 (EA2), Zenitsu_26 (EA2),

Start 6:
• Found in 1 of 92 (1.1%) of genes in pham
• Manual Annotations of this start: 1 of 85
• Called 100.0% of time when present
• Phage (with cluster) where this start called: JasonD_29 (EA1),

Start 7:
• Found in 67 of 92 (72.8%) of genes in pham
• Manual Annotations of this start: 64 of 85
• Called 100.0% of time when present
• Phage (with cluster) where this start called: AlexAdler_27 (EA1), Alyxandracam_27 (EA1), Antoinette_27 (EA1), AxiPup_27 (EA1), Bandik_27 (EA1), BeautPeep30_27 (EA1), BigRedClifford_27 (EA1), Blage_27 (EA1), BonesMcCoy_27 (EA1),

Byron23_27 (EA1), Convict_27 (EA1), Dave_27 (EA1), Delphidian_27 (EA1), Den3_27 (EA1), Dothraki_27 (EA1), FarmerDoug_27 (EA1), Figueroism_27 (EA1), Gargoyle_27 (EA1), GoingMerry_27 (EA1), Greys_27 (EA1), Inventa_27 (EA1), Ioannes_27 (EA1), Knox_27 (EA1), Kurt1_27 (EA1), Lovelyunicorn_27 (EA1), Ludgate_27 (EA1), MaeLinda_27 (EA1), Martin_28 (EA1), McGalleon_28 (EA1), Merida02_28 (EA1), MillyPhilly_27 (EA1), MonChoix_26 (EA1), MrWorldwide_27 (EA1), Nagem_27 (EA1), NickSell_27 (EA1), OldNelly_27 (EA1), Oxtober96_27 (EA1), ParleG_27 (EA1), Peep_27 (EA1), Pherferi_27 (EA1), Phiderman_27 (EA1), Phireproof_27 (EA1), PhredFlintston_27 (EA1), Phriends_27 (EA1), PuppyEggo_27 (EA1), Rapheph_27 (EA1), Raptor_27 (EA1), Renzie_27 (EA1), Riyhil_27 (EA1), Robinson_27 (EA1), SJay_27 (EA1), ShaiHulud_27 (EA1), Shee_27 (EA1), SoilGremlin_27 (EA1), SolidSnake_28 (EA1), Stanktossa_27 (EA1), Strathdee_27 (EA1), Superfresh_27 (EA1), TatarkaPM_27 (EA1), Teagan_27 (EA1), Thompsone_27 (EA1), Thorongil_27 (EA1), TinSulphur_27 (EA1), Velene_27 (EA1), Vispistious_27 (EA1), WildNOut_27 (EA1), Zada_27 (EA1),

Start 8:
• Found in 5 of 92 (5.4%) of genes in pham
• Manual Annotations of this start: 3 of 85
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Acosta_28 (EA1), CarisSwetlik_30 (EA1), Endor_28 (EA1), HavenFinLeoSun_28 (EA1), Jenos_29 (EA1),

Start 9:
• Found in 3 of 92 (3.3%) of genes in pham
• Manual Annotations of this start: 3 of 85
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Casey_26 (EA3), Pajaza_26 (EA3), Pikmin_26 (EA3),

Summary by clusters:

There are 4 clusters represented in this pham: EA1, EA3, EA2, EA10,

Info for manual annotations of cluster EA1:
•Start number 6 was manually annotated 1 time for cluster EA1.
•Start number 7 was manually annotated 64 times for cluster EA1.
•Start number 8 was manually annotated 3 times for cluster EA1.

Info for manual annotations of cluster EA10:
•Start number 5 was manually annotated 1 time for cluster EA10.

Info for manual annotations of cluster EA2:
•Start number 5 was manually annotated 13 times for cluster EA2.

Info for manual annotations of cluster EA3:
•Start number 9 was manually annotated 3 times for cluster EA3.

Gene Information:
Gene: Acosta_28 Start: 20180, Stop: 20593, Start Num: 8

Candidate Starts for Acosta_28:
(Start: 8 @20180 has 3 MA's), (12, 20219), (15, 20270), (20, 20321), (35, 20576),

Gene: AlexAdler_27 Start: 19886, Stop: 20296, Start Num: 7
Candidate Starts for AlexAdler_27:
(Start: 7 @19886 has 64 MA's), (18, 20006), (29, 20201),

Gene: Alyxandracam_27 Start: 19895, Stop: 20305, Start Num: 7
Candidate Starts for Alyxandracam_27:
(Start: 7 @19895 has 64 MA's), (12, 19937), (18, 20015), (22, 20108),

Gene: Andromedas_26 Start: 19937, Stop: 20356, Start Num: 5
Candidate Starts for Andromedas_26:
(3, 19874), (4, 19883), (Start: 5 @19937 has 14 MA's), (15, 20048), (17, 20069), (23, 20177), (25, 20216), (27, 20222), (28, 20252), (33, 20312),

Gene: Antoinette_27 Start: 19883, Stop: 20293, Start Num: 7
Candidate Starts for Antoinette_27:
(Start: 7 @19883 has 64 MA's), (18, 20003), (29, 20198),

Gene: AxiPup_27 Start: 19895, Stop: 20305, Start Num: 7
Candidate Starts for AxiPup_27:
(Start: 7 @19895 has 64 MA's), (12, 19937), (18, 20015), (22, 20108),

Gene: Bandik_27 Start: 19891, Stop: 20301, Start Num: 7
Candidate Starts for Bandik_27:
(Start: 7 @19891 has 64 MA's), (12, 19933), (18, 20011), (22, 20104),

Gene: BeautPeep30_27 Start: 19897, Stop: 20307, Start Num: 7
Candidate Starts for BeautPeep30_27:
(Start: 7 @19897 has 64 MA's), (12, 19939), (18, 20017), (22, 20110),

Gene: BigRedClifford_27 Start: 19895, Stop: 20305, Start Num: 7
Candidate Starts for BigRedClifford_27:
(Start: 7 @19895 has 64 MA's), (12, 19937), (18, 20015), (22, 20108),

Gene: Blage_27 Start: 19895, Stop: 20305, Start Num: 7
Candidate Starts for Blage_27:
(Start: 7 @19895 has 64 MA's), (12, 19937), (18, 20015), (22, 20108),

Gene: BonesMcCoy_27 Start: 19895, Stop: 20305, Start Num: 7
Candidate Starts for BonesMcCoy_27:
(Start: 7 @19895 has 64 MA's), (12, 19937), (18, 20015), (22, 20108),

Gene: Byron23_27 Start: 19900, Stop: 20310, Start Num: 7
Candidate Starts for Byron23_27:
(Start: 7 @19900 has 64 MA's), (12, 19942), (18, 20020), (22, 20113),

Gene: CarisSwetlik_30 Start: 20680, Stop: 21090, Start Num: 8
Candidate Starts for CarisSwetlik_30:
(Start: 8 @20680 has 3 MA's), (12, 20719), (15, 20770), (20, 20821), (26, 20947), (29, 20992), (35, 21073),

Gene: Casey_26 Start: 20263, Stop: 20694, Start Num: 9
Candidate Starts for Casey_26:
(Start: 9 @20263 has 3 MA's), (12, 20296), (21, 20428), (22, 20467), (30, 20581), (34, 20644),

Gene: ChikPic_26 Start: 19953, Stop: 20372, Start Num: 5
Candidate Starts for ChikPic_26:
(3, 19890), (4, 19899), (Start: 5 @19953 has 14 MA's), (15, 20064), (17, 20085), (23, 20193), (25, 20232), (27, 20238), (28, 20268), (33, 20328),

Gene: ColaCorta_26 Start: 19937, Stop: 20356, Start Num: 5
Candidate Starts for ColaCorta_26:
(3, 19874), (4, 19883), (Start: 5 @19937 has 14 MA's), (15, 20048), (17, 20069), (23, 20177), (25, 20216), (27, 20222), (28, 20252), (33, 20312),

Gene: Convict_27 Start: 19895, Stop: 20305, Start Num: 7
Candidate Starts for Convict_27:
(Start: 7 @19895 has 64 MA's), (12, 19937), (18, 20015), (22, 20108),

Gene: Dave_27 Start: 19883, Stop: 20293, Start Num: 7
Candidate Starts for Dave_27:
(Start: 7 @19883 has 64 MA's), (18, 20003), (29, 20198),

Gene: Delphidian_27 Start: 19894, Stop: 20304, Start Num: 7
Candidate Starts for Delphidian_27:
(Start: 7 @19894 has 64 MA's), (12, 19936), (18, 20014), (22, 20107),

Gene: Den3_27 Start: 19899, Stop: 20309, Start Num: 7
Candidate Starts for Den3_27:
(Start: 7 @19899 has 64 MA's), (12, 19941), (18, 20019), (22, 20112),

Gene: Dothraki_27 Start: 19897, Stop: 20307, Start Num: 7
Candidate Starts for Dothraki_27:
(Start: 7 @19897 has 64 MA's), (12, 19939), (18, 20017), (22, 20110),

Gene: Eleri_26 Start: 19950, Stop: 20369, Start Num: 5
Candidate Starts for Eleri_26:
(3, 19887), (4, 19896), (Start: 5 @19950 has 14 MA's), (15, 20061), (17, 20082), (23, 20190), (25, 20229), (27, 20235), (28, 20265), (33, 20325),

Gene: Endor_28 Start: 20303, Stop: 20716, Start Num: 8
Candidate Starts for Endor_28:
(Start: 8 @20303 has 3 MA's), (12, 20342), (15, 20393), (29, 20618), (35, 20699),

Gene: FarmerDoug_27 Start: 19924, Stop: 20334, Start Num: 7
Candidate Starts for FarmerDoug_27:
(Start: 7 @19924 has 64 MA's), (14, 20002), (18, 20044),

Gene: Figueroism_27 Start: 19882, Stop: 20292, Start Num: 7
Candidate Starts for Figueroism_27:
(Start: 7 @19882 has 64 MA's), (18, 20002), (29, 20197),

Gene: Finny_26 Start: 19936, Stop: 20355, Start Num: 5
Candidate Starts for Finny_26:

(3, 19873), (4, 19882), (Start: 5 @19936 has 14 MA's), (15, 20047), (17, 20068), (23, 20176), (25, 20215), (27, 20221), (28, 20251), (33, 20311),

Gene: Gargoyle_27 Start: 19897, Stop: 20307, Start Num: 7
Candidate Starts for Gargoyle_27:
(Start: 7 @19897 has 64 MA's), (12, 19939), (18, 20017), (22, 20110),

Gene: Glamour_25 Start: 19938, Stop: 20357, Start Num: 5
Candidate Starts for Glamour_25:
(3, 19875), (4, 19884), (Start: 5 @19938 has 14 MA's), (15, 20049), (17, 20070), (23, 20178), (25, 20217), (27, 20223), (28, 20253), (33, 20313),

Gene: GoingMerry_27 Start: 19905, Stop: 20315, Start Num: 7
Candidate Starts for GoingMerry_27:
(Start: 7 @19905 has 64 MA's), (12, 19947), (18, 20025), (22, 20118),

Gene: Greys_27 Start: 19892, Stop: 20302, Start Num: 7
Candidate Starts for Greys_27:
(Start: 7 @19892 has 64 MA's), (12, 19934), (18, 20012), (22, 20105),

Gene: HavenFinLeoSun_28 Start: 20162, Stop: 20575, Start Num: 8
Candidate Starts for HavenFinLeoSun_28:
(Start: 8 @20162 has 3 MA's), (12, 20201), (15, 20252), (20, 20303), (35, 20558),

Gene: Inventa_27 Start: 19897, Stop: 20307, Start Num: 7
Candidate Starts for Inventa_27:
(Start: 7 @19897 has 64 MA's), (12, 19939), (18, 20017), (22, 20110),

Gene: Ioannes_27 Start: 19895, Stop: 20305, Start Num: 7
Candidate Starts for Ioannes_27:
(Start: 7 @19895 has 64 MA's), (12, 19937), (18, 20015), (22, 20108),

Gene: JasonD_29 Start: 20345, Stop: 20758, Start Num: 6
Candidate Starts for JasonD_29:
(Start: 6 @20345 has 1 MA's), (10, 20360), (16, 20453), (19, 20480), (25, 20612), (29, 20663),

Gene: Jenos_29 Start: 20622, Stop: 21032, Start Num: 8
Candidate Starts for Jenos_29:
(Start: 8 @20622 has 3 MA's), (12, 20661), (15, 20712), (20, 20763), (26, 20889), (29, 20934), (35, 21015),

Gene: Juanyo_26 Start: 20158, Stop: 20577, Start Num: 5
Candidate Starts for Juanyo_26:
(2, 20053), (Start: 5 @20158 has 14 MA's), (13, 20239), (15, 20269), (24, 20407), (27, 20443), (33, 20533), (35, 20563), (36, 20569),

Gene: Knox_27 Start: 19895, Stop: 20305, Start Num: 7
Candidate Starts for Knox_27:
(Start: 7 @19895 has 64 MA's), (12, 19937), (18, 20015), (22, 20108),

Gene: Kurt1_27 Start: 19897, Stop: 20307, Start Num: 7
Candidate Starts for Kurt1_27:
(Start: 7 @19897 has 64 MA's), (12, 19939), (18, 20017), (22, 20110),

Gene: Lovelyunicorn_27 Start: 19895, Stop: 20305, Start Num: 7
Candidate Starts for Lovelyunicorn_27:
(Start: 7 @19895 has 64 MA's), (12, 19937), (18, 20015), (22, 20108),

Gene: Ludgate_27 Start: 19891, Stop: 20301, Start Num: 7
Candidate Starts for Ludgate_27:
(Start: 7 @19891 has 64 MA's), (12, 19933), (18, 20011), (22, 20104),

Gene: MCubed_26 Start: 19964, Stop: 20383, Start Num: 5
Candidate Starts for MCubed_26:
(3, 19901), (4, 19910), (Start: 5 @19964 has 14 MA's), (13, 20045), (15, 20075), (17, 20096), (23, 20204), (25, 20243), (27, 20249), (28, 20279), (33, 20339),

Gene: MaeLinda_27 Start: 19897, Stop: 20307, Start Num: 7
Candidate Starts for MaeLinda_27:
(Start: 7 @19897 has 64 MA's), (12, 19939), (18, 20017), (22, 20110),

Gene: Martin_28 Start: 19897, Stop: 20307, Start Num: 7
Candidate Starts for Martin_28:
(Start: 7 @19897 has 64 MA's), (12, 19939), (18, 20017), (22, 20110),

Gene: McGalleon_28 Start: 20783, Stop: 21193, Start Num: 7
Candidate Starts for McGalleon_28:
(Start: 7 @20783 has 64 MA's), (14, 20861), (18, 20903), (29, 21098), (31, 21131), (32, 21137),

Gene: Merida02_28 Start: 19894, Stop: 20304, Start Num: 7
Candidate Starts for Merida02_28:
(Start: 7 @19894 has 64 MA's), (12, 19936), (18, 20014), (22, 20107),

Gene: MillyPhilly_27 Start: 19894, Stop: 20304, Start Num: 7
Candidate Starts for MillyPhilly_27:
(Start: 7 @19894 has 64 MA's), (12, 19936), (18, 20014), (22, 20107),

Gene: MiniVolent_26 Start: 20147, Stop: 20566, Start Num: 5
Candidate Starts for MiniVolent_26:
(Start: 5 @20147 has 14 MA's), (13, 20228), (15, 20258), (24, 20396), (27, 20432), (33, 20522), (35, 20552), (36, 20558),

Gene: MonChoix_26 Start: 19858, Stop: 20268, Start Num: 7
Candidate Starts for MonChoix_26:
(Start: 7 @19858 has 64 MA's), (11, 19873), (12, 19900),

Gene: MrWorldwide_27 Start: 19898, Stop: 20308, Start Num: 7
Candidate Starts for MrWorldwide_27:
(Start: 7 @19898 has 64 MA's), (12, 19940), (18, 20018), (22, 20111),

Gene: Nagem_27 Start: 19891, Stop: 20301, Start Num: 7
Candidate Starts for Nagem_27:
(Start: 7 @19891 has 64 MA's), (12, 19933), (18, 20011), (22, 20104),

Gene: NickSell_27 Start: 19897, Stop: 20307, Start Num: 7
Candidate Starts for NickSell_27:

(Start: 7 @19897 has 64 MA's), (12, 19939), (18, 20017), (22, 20110),

Gene: OldNelly_27 Start: 19897, Stop: 20307, Start Num: 7
Candidate Starts for OldNelly_27:
(Start: 7 @19897 has 64 MA's), (12, 19939), (18, 20017), (22, 20110),

Gene: Oxtober96_27 Start: 19895, Stop: 20305, Start Num: 7
Candidate Starts for Oxtober96_27:
(Start: 7 @19895 has 64 MA's), (12, 19937), (18, 20015), (22, 20108),

Gene: PSirce_26 Start: 19953, Stop: 20372, Start Num: 5
Candidate Starts for PSirce_26:
(3, 19890), (4, 19899), (Start: 5 @19953 has 14 MA's), (15, 20064), (17, 20085), (23, 20193), (25, 20232), (27, 20238), (28, 20268), (33, 20328),

Gene: Pajaza_26 Start: 20263, Stop: 20694, Start Num: 9
Candidate Starts for Pajaza_26:
(Start: 9 @20263 has 3 MA's), (12, 20296), (21, 20428), (22, 20467), (30, 20581), (34, 20644),

Gene: ParleG_27 Start: 19898, Stop: 20308, Start Num: 7
Candidate Starts for ParleG_27:
(Start: 7 @19898 has 64 MA's), (12, 19940), (18, 20018), (22, 20111),

Gene: Peep_27 Start: 19883, Stop: 20293, Start Num: 7
Candidate Starts for Peep_27:
(Start: 7 @19883 has 64 MA's), (18, 20003), (29, 20198),

Gene: Phanita_26 Start: 19937, Stop: 20356, Start Num: 5
Candidate Starts for Phanita_26:
(3, 19874), (Start: 5 @19937 has 14 MA's), (15, 20048), (17, 20069), (23, 20177), (25, 20216), (27, 20222), (28, 20252), (33, 20312),

Gene: Pherferi_27 Start: 19897, Stop: 20307, Start Num: 7
Candidate Starts for Pherferi_27:
(Start: 7 @19897 has 64 MA's), (12, 19939), (18, 20017), (22, 20110),

Gene: Phiderman_27 Start: 19894, Stop: 20304, Start Num: 7
Candidate Starts for Phiderman_27:
(Start: 7 @19894 has 64 MA's), (12, 19936), (18, 20014), (22, 20107),

Gene: Phireproof_27 Start: 19897, Stop: 20307, Start Num: 7
Candidate Starts for Phireproof_27:
(Start: 7 @19897 has 64 MA's), (12, 19939), (18, 20017), (22, 20110),

Gene: PhredFlintston_27 Start: 19897, Stop: 20307, Start Num: 7
Candidate Starts for PhredFlintston_27:
(Start: 7 @19897 has 64 MA's), (12, 19939), (18, 20017), (22, 20110),

Gene: Phriends_27 Start: 19897, Stop: 20307, Start Num: 7
Candidate Starts for Phriends_27:
(Start: 7 @19897 has 64 MA's), (12, 19939), (18, 20017), (22, 20110),

Gene: Pikmin_26 Start: 20263, Stop: 20694, Start Num: 9

Candidate Starts for Pikmin_26:
(Start: 9 @20263 has 3 MA's), (12, 20296), (21, 20428), (22, 20467), (30, 20581), (34, 20644),

Gene: PuppyEggo_27 Start: 19895, Stop: 20305, Start Num: 7
Candidate Starts for PuppyEggo_27:
(Start: 7 @19895 has 64 MA's), (12, 19937), (18, 20015), (22, 20108),

Gene: Rapheph_27 Start: 19897, Stop: 20307, Start Num: 7
Candidate Starts for Rapheph_27:
(Start: 7 @19897 has 64 MA's), (12, 19939), (18, 20017), (22, 20110),

Gene: Raptor_27 Start: 19895, Stop: 20305, Start Num: 7
Candidate Starts for Raptor_27:
(Start: 7 @19895 has 64 MA's), (12, 19937), (18, 20015), (22, 20108),

Gene: Renzie_27 Start: 19883, Stop: 20293, Start Num: 7
Candidate Starts for Renzie_27:
(Start: 7 @19883 has 64 MA's), (18, 20003), (29, 20198),

Gene: Riyhil_27 Start: 19897, Stop: 20307, Start Num: 7
Candidate Starts for Riyhil_27:
(Start: 7 @19897 has 64 MA's), (12, 19939), (18, 20017), (22, 20110),

Gene: Robinson_27 Start: 19889, Stop: 20299, Start Num: 7
Candidate Starts for Robinson_27:
(Start: 7 @19889 has 64 MA's), (18, 20009), (29, 20204),

Gene: SJay_27 Start: 19892, Stop: 20302, Start Num: 7
Candidate Starts for SJay_27:
(Start: 7 @19892 has 64 MA's), (12, 19934), (18, 20012), (22, 20105),

Gene: Sansa_25 Start: 19960, Stop: 20379, Start Num: 5
Candidate Starts for Sansa_25:
(1, 19810), (3, 19897), (Start: 5 @19960 has 14 MA's), (15, 20071), (17, 20092), (23, 20200), (25, 20239), (27, 20245), (28, 20275), (33, 20335),

Gene: Saratos_26 Start: 19938, Stop: 20357, Start Num: 5
Candidate Starts for Saratos_26:
(3, 19875), (4, 19884), (Start: 5 @19938 has 14 MA's), (15, 20049), (17, 20070), (23, 20178), (25, 20217), (27, 20223), (28, 20253), (33, 20313),

Gene: ShaiHulud_27 Start: 19895, Stop: 20305, Start Num: 7
Candidate Starts for ShaiHulud_27:
(Start: 7 @19895 has 64 MA's), (12, 19937), (18, 20015), (22, 20108),

Gene: Shamu_26 Start: 19950, Stop: 20369, Start Num: 5
Candidate Starts for Shamu_26:
(3, 19887), (4, 19896), (Start: 5 @19950 has 14 MA's), (15, 20061), (17, 20082), (23, 20190), (25, 20229), (27, 20235), (28, 20265), (33, 20325),

Gene: Shee_27 Start: 19894, Stop: 20304, Start Num: 7
Candidate Starts for Shee_27:
(Start: 7 @19894 has 64 MA's), (12, 19936), (18, 20014), (22, 20107),

Gene: SoilGremlin_27 Start: 19894, Stop: 20304, Start Num: 7
Candidate Starts for SoilGremlin_27:
(Start: 7 @19894 has 64 MA's), (12, 19936), (18, 20014), (22, 20107),

Gene: SolidSnake_28 Start: 19897, Stop: 20307, Start Num: 7
Candidate Starts for SolidSnake_28:
(Start: 7 @19897 has 64 MA's), (12, 19939), (18, 20017), (22, 20110),

Gene: Stanktossa_27 Start: 19897, Stop: 20307, Start Num: 7
Candidate Starts for Stanktossa_27:
(Start: 7 @19897 has 64 MA's), (12, 19939), (18, 20017), (22, 20110),

Gene: Strathdee_27 Start: 19896, Stop: 20306, Start Num: 7
Candidate Starts for Strathdee_27:
(Start: 7 @19896 has 64 MA's), (12, 19938), (18, 20016), (22, 20109),

Gene: Superfresh_27 Start: 19883, Stop: 20293, Start Num: 7
Candidate Starts for Superfresh_27:
(Start: 7 @19883 has 64 MA's), (18, 20003), (29, 20198),

Gene: TatarkaPM_27 Start: 19897, Stop: 20307, Start Num: 7
Candidate Starts for TatarkaPM_27:
(Start: 7 @19897 has 64 MA's), (12, 19939), (18, 20017), (22, 20110),

Gene: Teagan_27 Start: 19891, Stop: 20301, Start Num: 7
Candidate Starts for Teagan_27:
(Start: 7 @19891 has 64 MA's), (12, 19933), (18, 20011), (22, 20104),

Gene: Thompsone_27 Start: 19895, Stop: 20305, Start Num: 7
Candidate Starts for Thompsone_27:
(Start: 7 @19895 has 64 MA's), (12, 19937), (18, 20015), (22, 20108),

Gene: Thorongil_27 Start: 19895, Stop: 20305, Start Num: 7
Candidate Starts for Thorongil_27:
(Start: 7 @19895 has 64 MA's), (12, 19937), (18, 20015), (22, 20108),

Gene: TinSulphur_27 Start: 19897, Stop: 20307, Start Num: 7
Candidate Starts for TinSulphur_27:
(Start: 7 @19897 has 64 MA's), (12, 19939), (18, 20017), (22, 20110),

Gene: Velene_27 Start: 19895, Stop: 20305, Start Num: 7
Candidate Starts for Velene_27:
(Start: 7 @19895 has 64 MA's), (12, 19937), (18, 20015), (22, 20108),

Gene: Vispistious_27 Start: 19895, Stop: 20305, Start Num: 7
Candidate Starts for Vispistious_27:
(Start: 7 @19895 has 64 MA's), (12, 19937), (18, 20015), (22, 20108),

Gene: WildNOut_27 Start: 19895, Stop: 20305, Start Num: 7
Candidate Starts for WildNOut_27:
(Start: 7 @19895 has 64 MA's), (12, 19937), (18, 20015), (22, 20108),

Gene: Xebius_26 Start: 19938, Stop: 20357, Start Num: 5
Candidate Starts for Xebius_26:
(3, 19875), (4, 19884), (Start: 5 @19938 has 14 MA's), (15, 20049), (17, 20070), (23, 20178), (25, 20217), (27, 20223), (28, 20253), (33, 20313),

Gene: Zada_27 Start: 19876, Stop: 20286, Start Num: 7
Candidate Starts for Zada_27:
(Start: 7 @19876 has 64 MA's), (18, 19996), (29, 20191),

Gene: Zenitsu_26 Start: 19965, Stop: 20384, Start Num: 5
Candidate Starts for Zenitsu_26:
(3, 19902), (4, 19911), (Start: 5 @19965 has 14 MA's), (15, 20076), (17, 20097), (23, 20205), (25, 20244), (27, 20250), (28, 20280), (33, 20340),