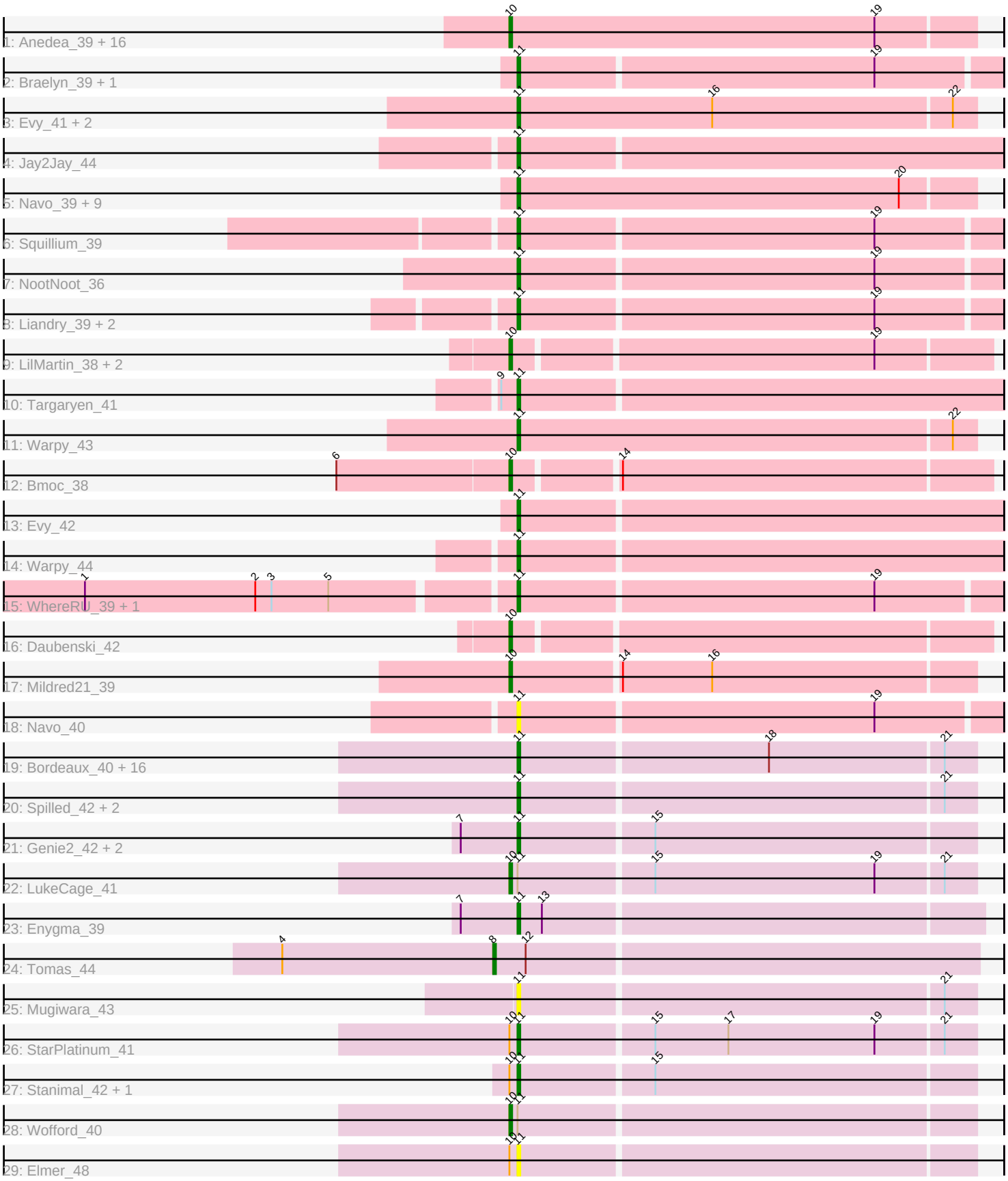
Pham 1592


1: Anedea_39 + 16
2: Braelyn_39 + 1
3: Evy_41 + 2
4: Jay2Jay_44
5: Navo_39 + 9
6: Squillium_39
7: NootNoot_36
8: Liandry_39 + 2
9: LilMartin_38 + 2
10: Targaryen_41
11: Warpy_43
12: Bmoc_38
13: Evy_42
14: Warpy_44
15: WhereRU_39 + 1
16: Daubenski_42
17: Mildred21_39
18: Navo_40
19: Bordeaux_40 + 16
20: Spilled_42 + 2
21: Genie2_42 + 2
22: LukeCage_41
23: Enygma_39
24: Tomas_44
25: Mugiwara_43
26: StarPlatinum_41
27: Stanimal_42 + 1
28: Wofford_40
29: Elmer_48

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 1592 Report

This analysis was run 04/28/24 on database version 559.

Pham number 1592 has 83 members, 16 are drafts.

Phages represented in each track:
• Track 1 : Anedea_39, HangryHippo_43, Watermoore_40, Cross_41, Cursive_38, PacManQ_42, Lululemon_42, BlueOtter_43, Peebs_40, Pepperwood_41, Tribute_39, Larnav_46, Teutsch_40, Sushi23_41, EGole_41, Leo04_41, Samisti12_40
• Track 2 : Braelyn_39, Persimmon_36
• Track 3 : Evy_41, Jay2Jay_43, Targaryen_40
• Track 4 : Jay2Jay_44
• Track 5 : Navo_39, Braelyn_38, Squillium_38, Liandry_38, Persimmon_35, Paradiddles_35, Bartholomune_38, WhereRU_38, PinkiePie_37, NootNoot_35
• Track 6 : Squillium_39
• Track 7 : NootNoot_36
• Track 8 : Liandry_39, Paradiddles_36, Bartholomune_39
• Track 9 : LilMartin_38, MulchMansion_38, Angela_38
• Track 10 : Targaryen_41
• Track 11 : Warpy_43
• Track 12 : Bmoc_38
• Track 13 : Evy_42
• Track 14 : Warpy_44
• Track 15 : WhereRU_39, PinkiePie_38
• Track 16 : Daubenski_42
• Track 17 : Mildred21_39
• Track 18 : Navo_40
• Track 19 : Bordeaux_40, SaltySpitoon_42, KentuckyRacer_46, Starbow_40, Amabiko_42, MindFlayer_40, Battuta_40, Birchlyn_39, TomSawyer_40, JimJam_42, Gibbi_45, PumpkinSpice_41, Wipeout_39, CeilingFan_44, Jollison_47, Spelly_42, Quaran19_42
• Track 20 : Spilled_42, IchabodCrane_39, Karimac_41
• Track 21 : Genie2_42, Yaboi_42, Sollertia_42
• Track 22 : LukeCage_41
• Track 23 : Enygma_39
• Track 24 : Tomas_44
• Track 25 : Mugiwara_43
• Track 26 : StarPlatinum_41
• Track 27 : Stanimal_42, BoomerJR_42
• Track 28 : Wofford_40
• Track 29 : Elmer_48

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

The start number called the most often in the published annotations is 11, it was called in 47 of the 67 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Amabiko_42, Bartholomune_38, Bartholomune_39, Battuta_40, Birchlyn_39, BoomerJR_42, Bordeaux_40, Braelyn_38, Braelyn_39, CeilingFan_44, Elmer_48, Enygma_39, Evy_41, Evy_42, Genie2_42, Gibbi_45, IchabodCrane_39, Jay2Jay_43, Jay2Jay_44, JimJam_42, Jollison_47, Karimac_41, KentuckyRacer_46, Liandry_38, Liandry_39, MindFlayer_40, Mugiwara_43, Navo_39, Navo_40, NootNoot_35, NootNoot_36, Paradiddles_35, Paradiddles_36, Persimmon_35, Persimmon_36, PinkiePie_37, PinkiePie_38, PumpkinSpice_41, Quaran19_42, SaltySpitoon_42, Sollertia_42, Spelly_42, Spilled_42, Squillium_38, Squillium_39, Stanimal_42, StarPlatinum_41, Starbow_40, Targaryen_40, Targaryen_41, TomSawyer_40, Warpy_43, Warpy_44, WhereRU_38, WhereRU_39, Wipeout_39, Yaboi_42,

Genes that have the "Most Annotated" start but do not call it:
• LukeCage_41, Wofford_40,

Genes that do not have the "Most Annotated" start:
• Anedea_39, Angela_38, BlueOtter_43, Bmoc_38, Cross_41, Cursive_38, Daubenski_42, EGole_41, HangryHippo_43, Larnav_46, Leo04_41, LilMartin_38, Lululemon_42, Mildred21_39, MulchMansion_38, PacManQ_42, Peebs_40, Pepperwood_41, Samisti12_40, Sushi23_41, Teutsch_40, Tomas_44, Tribute_39, Watermoore_40,

Summary by start number:

Start 8:
• Found in 1 of 83 (1.2%) of genes in pham
• Manual Annotations of this start: 1 of 67
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Tomas_44 (BE2),

Start 10:
• Found in 29 of 83 (34.9%) of genes in pham
• Manual Annotations of this start: 19 of 67
• Called 86.2% of time when present
• Phage (with cluster) where this start called: Anedea_39 (BE1), Angela_38 (BE1), BlueOtter_43 (BE1), Bmoc_38 (BE1), Cross_41 (BE1), Cursive_38 (BE1), Daubenski_42 (BE1), EGole_41 (BE1), HangryHippo_43 (BE1), Larnav_46 (BE1), Leo04_41 (BE1), LilMartin_38 (BE1), LukeCage_41 (BE2), Lululemon_42 (BE1), Mildred21_39 (BE1), MulchMansion_38 (BE1), PacManQ_42 (BE1), Peebs_40 (BE1), Pepperwood_41 (BE1), Samisti12_40 (BE1), Sushi23_41 (BE1), Teutsch_40 (BE1), Tribute_39 (BE1), Watermoore_40 (BE1), Wofford_40 (BE2),

Start 11:
• Found in 59 of 83 (71.1%) of genes in pham
• Manual Annotations of this start: 47 of 67
• Called 96.6% of time when present

• Phage (with cluster) where this start called: Amabiko_42 (BE2), Bartholomune_38 (BE1), Bartholomune_39 (BE1), Battuta_40 (BE2), Birchlyn_39 (BE2), BoomerJR_42 (BE2), Bordeaux_40 (BE2), Braelyn_38 (BE1), Braelyn_39 (BE1), CeilingFan_44 (BE2), Elmer_48 (BE2), Enygma_39 (BE2), Evy_41 (BE1), Evy_42 (BE1), Genie2_42 (BE2), Gibbi_45 (BE2), IchabodCrane_39 (BE2), Jay2Jay_43 (BE1), Jay2Jay_44 (BE1), JimJam_42 (BE2), Jollison_47 (BE2), Karimac_41 (BE2), KentuckyRacer_46 (BE2), Liandry_38 (BE1), Liandry_39 (BE1), MindFlayer_40 (BE2), Mugiwara_43 (BE2), Navo_39 (BE1), Navo_40 (BE1), NootNoot_35 (BE1), NootNoot_36 (BE1), Paradiddles_35 (BE1), Paradiddles_36 (BE1), Persimmon_35 (BE1), Persimmon_36 (BE1), PinkiePie_37 (BE1), PinkiePie_38 (BE1), PumpkinSpice_41 (BE2), Quaran19_42 (BE2), SaltySpitoon_42 (BE2), Sollertia_42 (BE2), Spelly_42 (BE2), Spilled_42 (BE2), Squillium_38 (BE1), Squillium_39 (BE1), Stanimal_42 (BE2), StarPlatinum_41 (BE2), Starbow_40 (BE2), Targaryen_40 (BE1), Targaryen_41 (BE1), TomSawyer_40 (BE2), Warpy_43 (BE1), Warpy_44 (BE1), WhereRU_38 (BE1), WhereRU_39 (BE1), Wipeout_39 (BE2), Yaboi_42 (BE2),

Summary by clusters:

There are 2 clusters represented in this pham: BE2, BE1,

Info for manual annotations of cluster BE1:
•Start number 10 was manually annotated 17 times for cluster BE1.
•Start number 11 was manually annotated 24 times for cluster BE1.

Info for manual annotations of cluster BE2:
•Start number 8 was manually annotated 1 time for cluster BE2.
•Start number 10 was manually annotated 2 times for cluster BE2.
•Start number 11 was manually annotated 23 times for cluster BE2.

Gene Information:

Gene: Amabiko_42 Start: 17915, Stop: 17751, Start Num: 11
Candidate Starts for Amabiko_42:
(Start: 11 @17915 has 47 MA's), (18, 17825), (21, 17762),

Gene: Anedea_39 Start: 16899, Stop: 16729, Start Num: 10
Candidate Starts for Anedea_39:
(Start: 10 @16899 has 19 MA's), (19, 16764),

Gene: Angela_38 Start: 16786, Stop: 16616, Start Num: 10
Candidate Starts for Angela_38:
(Start: 10 @16786 has 19 MA's), (19, 16657),

Gene: Bartholomune_38 Start: 16523, Stop: 16356, Start Num: 11
Candidate Starts for Bartholomune_38:
(Start: 11 @16523 has 47 MA's), (20, 16382),

Gene: Bartholomune_39 Start: 16693, Stop: 16520, Start Num: 11
Candidate Starts for Bartholomune_39:
(Start: 11 @16693 has 47 MA's), (19, 16564),

Gene: Battuta_40 Start: 17891, Stop: 17727, Start Num: 11
Candidate Starts for Battuta_40:
(Start: 11 @17891 has 47 MA's), (18, 17801), (21, 17738),

Gene: Birchlyn_39 Start: 15772, Stop: 15608, Start Num: 11
Candidate Starts for Birchlyn_39:
(Start: 11 @15772 has 47 MA's), (18, 15682), (21, 15619),

Gene: BlueOtter_43 Start: 18171, Stop: 18001, Start Num: 10
Candidate Starts for BlueOtter_43:
(Start: 10 @18171 has 19 MA's), (19, 18036),

Gene: Bmoc_38 Start: 17037, Stop: 16867, Start Num: 10
Candidate Starts for Bmoc_38:
(6, 17100), (Start: 10 @17037 has 19 MA's), (14, 17001),

Gene: BoomerJR_42 Start: 17712, Stop: 17548, Start Num: 11
Candidate Starts for BoomerJR_42:
(Start: 10 @17715 has 19 MA's), (Start: 11 @17712 has 47 MA's), (15, 17664),

Gene: Bordeaux_40 Start: 17906, Stop: 17742, Start Num: 11
Candidate Starts for Bordeaux_40:
(Start: 11 @17906 has 47 MA's), (18, 17816), (21, 17753),

Gene: Braelyn_39 Start: 17086, Stop: 16913, Start Num: 11
Candidate Starts for Braelyn_39:
(Start: 11 @17086 has 47 MA's), (19, 16957),

Gene: Braelyn_38 Start: 16916, Stop: 16749, Start Num: 11
Candidate Starts for Braelyn_38:
(Start: 11 @16916 has 47 MA's), (20, 16775),

Gene: CeilingFan_44 Start: 17666, Stop: 17502, Start Num: 11
Candidate Starts for CeilingFan_44:
(Start: 11 @17666 has 47 MA's), (18, 17576), (21, 17513),

Gene: Cross_41 Start: 18172, Stop: 18002, Start Num: 10
Candidate Starts for Cross_41:
(Start: 10 @18172 has 19 MA's), (19, 18037),

Gene: Cursive_38 Start: 16989, Stop: 16819, Start Num: 10
Candidate Starts for Cursive_38:
(Start: 10 @16989 has 19 MA's), (19, 16854),

Gene: Daubenski_42 Start: 18423, Stop: 18253, Start Num: 10
Candidate Starts for Daubenski_42:
(Start: 10 @18423 has 19 MA's),

Gene: EGole_41 Start: 19071, Stop: 18901, Start Num: 10
Candidate Starts for EGole_41:
(Start: 10 @19071 has 19 MA's), (19, 18936),

Gene: Elmer_48 Start: 18778, Stop: 18614, Start Num: 11

Candidate Starts for Elmer_48:
(Start: 10 @18781 has 19 MA's), (Start: 11 @18778 has 47 MA's),

Gene: Enygma_39 Start: 17067, Stop: 16900, Start Num: 11
Candidate Starts for Enygma_39:
(7, 17088), (Start: 11 @17067 has 47 MA's), (13, 17058),

Gene: Evy_41 Start: 18011, Stop: 17844, Start Num: 11
Candidate Starts for Evy_41:
(Start: 11 @18011 has 47 MA's), (16, 17939), (22, 17852),

Gene: Evy_42 Start: 18184, Stop: 18008, Start Num: 11
Candidate Starts for Evy_42:
(Start: 11 @18184 has 47 MA's),

Gene: Genie2_42 Start: 17715, Stop: 17551, Start Num: 11
Candidate Starts for Genie2_42:
(7, 17736), (Start: 11 @17715 has 47 MA's), (15, 17667),

Gene: Gibbi_45 Start: 17526, Stop: 17362, Start Num: 11
Candidate Starts for Gibbi_45:
(Start: 11 @17526 has 47 MA's), (18, 17436), (21, 17373),

Gene: HangryHippo_43 Start: 18171, Stop: 18001, Start Num: 10
Candidate Starts for HangryHippo_43:
(Start: 10 @18171 has 19 MA's), (19, 18036),

Gene: IchabodCrane_39 Start: 17618, Stop: 17454, Start Num: 11
Candidate Starts for IchabodCrane_39:
(Start: 11 @17618 has 47 MA's), (21, 17465),

Gene: Jay2Jay_43 Start: 18200, Stop: 18033, Start Num: 11
Candidate Starts for Jay2Jay_43:
(Start: 11 @18200 has 47 MA's), (16, 18128), (22, 18041),

Gene: Jay2Jay_44 Start: 18373, Stop: 18197, Start Num: 11
Candidate Starts for Jay2Jay_44:
(Start: 11 @18373 has 47 MA's),

Gene: JimJam_42 Start: 17854, Stop: 17690, Start Num: 11
Candidate Starts for JimJam_42:
(Start: 11 @17854 has 47 MA's), (18, 17764), (21, 17701),

Gene: Jollison_47 Start: 17872, Stop: 17708, Start Num: 11
Candidate Starts for Jollison_47:
(Start: 11 @17872 has 47 MA's), (18, 17782), (21, 17719),

Gene: Karimac_41 Start: 18021, Stop: 17857, Start Num: 11
Candidate Starts for Karimac_41:
(Start: 11 @18021 has 47 MA's), (21, 17868),

Gene: KentuckyRacer_46 Start: 17667, Stop: 17503, Start Num: 11
Candidate Starts for KentuckyRacer_46:

(Start: 11 @17667 has 47 MA's), (18, 17577), (21, 17514),

Gene: Larnav_46 Start: 18119, Stop: 17949, Start Num: 10
Candidate Starts for Larnav_46:
(Start: 10 @18119 has 19 MA's), (19, 17984),

Gene: Leo04_41 Start: 18170, Stop: 18000, Start Num: 10
Candidate Starts for Leo04_41:
(Start: 10 @18170 has 19 MA's), (19, 18035),

Gene: Liandry_39 Start: 16690, Stop: 16517, Start Num: 11
Candidate Starts for Liandry_39:
(Start: 11 @16690 has 47 MA's), (19, 16561),

Gene: Liandry_38 Start: 16520, Stop: 16353, Start Num: 11
Candidate Starts for Liandry_38:
(Start: 11 @16520 has 47 MA's), (20, 16379),

Gene: LilMartin_38 Start: 16733, Stop: 16563, Start Num: 10
Candidate Starts for LilMartin_38:
(Start: 10 @16733 has 19 MA's), (19, 16604),

Gene: LukeCage_41 Start: 17661, Stop: 17494, Start Num: 10
Candidate Starts for LukeCage_41:
(Start: 10 @17661 has 19 MA's), (Start: 11 @17658 has 47 MA's), (15, 17610), (19, 17529), (21, 17505),

Gene: Lululemon_42 Start: 17551, Stop: 17381, Start Num: 10
Candidate Starts for Lululemon_42:
(Start: 10 @17551 has 19 MA's), (19, 17416),

Gene: Mildred21_39 Start: 16940, Stop: 16773, Start Num: 10
Candidate Starts for Mildred21_39:
(Start: 10 @16940 has 19 MA's), (14, 16901), (16, 16868),

Gene: MindFlayer_40 Start: 17525, Stop: 17361, Start Num: 11
Candidate Starts for MindFlayer_40:
(Start: 11 @17525 has 47 MA's), (18, 17435), (21, 17372),

Gene: Mugiwara_43 Start: 17569, Stop: 17405, Start Num: 11
Candidate Starts for Mugiwara_43:
(Start: 11 @17569 has 47 MA's), (21, 17416),

Gene: MulchMansion_38 Start: 16734, Stop: 16564, Start Num: 10
Candidate Starts for MulchMansion_38:
(Start: 10 @16734 has 19 MA's), (19, 16605),

Gene: Navo_39 Start: 16679, Stop: 16512, Start Num: 11
Candidate Starts for Navo_39:
(Start: 11 @16679 has 47 MA's), (20, 16538),

Gene: Navo_40 Start: 16849, Stop: 16676, Start Num: 11
Candidate Starts for Navo_40:

(Start: 11 @16849 has 47 MA's), (19, 16720),

Gene: NootNoot_36 Start: 15872, Stop: 15699, Start Num: 11
Candidate Starts for NootNoot_36:
(Start: 11 @15872 has 47 MA's), (19, 15743),

Gene: NootNoot_35 Start: 15702, Stop: 15535, Start Num: 11
Candidate Starts for NootNoot_35:
(Start: 11 @15702 has 47 MA's), (20, 15561),

Gene: PacManQ_42 Start: 17551, Stop: 17381, Start Num: 10
Candidate Starts for PacManQ_42:
(Start: 10 @17551 has 19 MA's), (19, 17416),

Gene: Paradiddles_35 Start: 15693, Stop: 15526, Start Num: 11
Candidate Starts for Paradiddles_35:
(Start: 11 @15693 has 47 MA's), (20, 15552),

Gene: Paradiddles_36 Start: 15863, Stop: 15690, Start Num: 11
Candidate Starts for Paradiddles_36:
(Start: 11 @15863 has 47 MA's), (19, 15734),

Gene: Peebs_40 Start: 17870, Stop: 17700, Start Num: 10
Candidate Starts for Peebs_40:
(Start: 10 @17870 has 19 MA's), (19, 17735),

Gene: Pepperwood_41 Start: 18043, Stop: 17873, Start Num: 10
Candidate Starts for Pepperwood_41:
(Start: 10 @18043 has 19 MA's), (19, 17908),

Gene: Persimmon_36 Start: 15920, Stop: 15747, Start Num: 11
Candidate Starts for Persimmon_36:
(Start: 11 @15920 has 47 MA's), (19, 15791),

Gene: Persimmon_35 Start: 15750, Stop: 15583, Start Num: 11
Candidate Starts for Persimmon_35:
(Start: 11 @15750 has 47 MA's), (20, 15609),

Gene: PinkiePie_38 Start: 16691, Stop: 16518, Start Num: 11
Candidate Starts for PinkiePie_38:
(1, 16844), (2, 16781), (3, 16775), (5, 16754), (Start: 11 @16691 has 47 MA's), (19, 16562),

Gene: PinkiePie_37 Start: 16521, Stop: 16354, Start Num: 11
Candidate Starts for PinkiePie_37:
(Start: 11 @16521 has 47 MA's), (20, 16380),

Gene: PumpkinSpice_41 Start: 17915, Stop: 17751, Start Num: 11
Candidate Starts for PumpkinSpice_41:
(Start: 11 @17915 has 47 MA's), (18, 17825), (21, 17762),

Gene: Quaran19_42 Start: 17906, Stop: 17742, Start Num: 11
Candidate Starts for Quaran19_42:
(Start: 11 @17906 has 47 MA's), (18, 17816), (21, 17753),

Gene: SaltySpitoon_42 Start: 17915, Stop: 17751, Start Num: 11
Candidate Starts for SaltySpitoon_42:
(Start: 11 @17915 has 47 MA's), (18, 17825), (21, 17762),

Gene: Samisti12_40 Start: 18640, Stop: 18470, Start Num: 10
Candidate Starts for Samisti12_40:
(Start: 10 @18640 has 19 MA's), (19, 18505),

Gene: Sollertia_42 Start: 17715, Stop: 17551, Start Num: 11
Candidate Starts for Sollertia_42:
(7, 17736), (Start: 11 @17715 has 47 MA's), (15, 17667),

Gene: Spelly_42 Start: 17870, Stop: 17706, Start Num: 11
Candidate Starts for Spelly_42:
(Start: 11 @17870 has 47 MA's), (18, 17780), (21, 17717),

Gene: Spilled_42 Start: 17624, Stop: 17460, Start Num: 11
Candidate Starts for Spilled_42:
(Start: 11 @17624 has 47 MA's), (21, 17471),

Gene: Squillium_38 Start: 16520, Stop: 16353, Start Num: 11
Candidate Starts for Squillium_38:
(Start: 11 @16520 has 47 MA's), (20, 16379),

Gene: Squillium_39 Start: 16690, Stop: 16517, Start Num: 11
Candidate Starts for Squillium_39:
(Start: 11 @16690 has 47 MA's), (19, 16561),

Gene: Stanimal_42 Start: 17715, Stop: 17551, Start Num: 11
Candidate Starts for Stanimal_42:
(Start: 10 @17718 has 19 MA's), (Start: 11 @17715 has 47 MA's), (15, 17667),

Gene: StarPlatinum_41 Start: 17714, Stop: 17550, Start Num: 11
Candidate Starts for StarPlatinum_41:
(Start: 10 @17717 has 19 MA's), (Start: 11 @17714 has 47 MA's), (15, 17666), (17, 17639), (19, 17585), (21, 17561),

Gene: Starbow_40 Start: 17891, Stop: 17727, Start Num: 11
Candidate Starts for Starbow_40:
(Start: 11 @17891 has 47 MA's), (18, 17801), (21, 17738),

Gene: Sushi23_41 Start: 18266, Stop: 18096, Start Num: 10
Candidate Starts for Sushi23_41:
(Start: 10 @18266 has 19 MA's), (19, 18131),

Gene: Targaryen_41 Start: 18931, Stop: 18755, Start Num: 11
Candidate Starts for Targaryen_41:
(9, 18937), (Start: 11 @18931 has 47 MA's),

Gene: Targaryen_40 Start: 18758, Stop: 18591, Start Num: 11
Candidate Starts for Targaryen_40:
(Start: 11 @18758 has 47 MA's), (16, 18686), (22, 18599),

Gene: Teutsch_40 Start: 17959, Stop: 17789, Start Num: 10
Candidate Starts for Teutsch_40:
(Start: 10 @17959 has 19 MA's), (19, 17824),

Gene: TomSawyer_40 Start: 17509, Stop: 17345, Start Num: 11
Candidate Starts for TomSawyer_40:
(Start: 11 @17509 has 47 MA's), (18, 17419), (21, 17356),

Gene: Tomas_44 Start: 19790, Stop: 19614, Start Num: 8
Candidate Starts for Tomas_44:
(4, 19868), (Start: 8 @19790 has 1 MA's), (12, 19778),

Gene: Tribute_39 Start: 17737, Stop: 17567, Start Num: 10
Candidate Starts for Tribute_39:
(Start: 10 @17737 has 19 MA's), (19, 17602),

Gene: Warpy_43 Start: 18220, Stop: 18053, Start Num: 11
Candidate Starts for Warpy_43:
(Start: 11 @18220 has 47 MA's), (22, 18061),

Gene: Warpy_44 Start: 18393, Stop: 18217, Start Num: 11
Candidate Starts for Warpy_44:
(Start: 11 @18393 has 47 MA's),

Gene: Watermoore_40 Start: 18172, Stop: 18002, Start Num: 10
Candidate Starts for Watermoore_40:
(Start: 10 @18172 has 19 MA's), (19, 18037),

Gene: WhereRU_39 Start: 16377, Stop: 16204, Start Num: 11
Candidate Starts for WhereRU_39:
(1, 16530), (2, 16467), (3, 16461), (5, 16440), (Start: 11 @16377 has 47 MA's), (19, 16248),

Gene: WhereRU_38 Start: 16207, Stop: 16040, Start Num: 11
Candidate Starts for WhereRU_38:
(Start: 11 @16207 has 47 MA's), (20, 16066),

Gene: Wipeout_39 Start: 17531, Stop: 17367, Start Num: 11
Candidate Starts for Wipeout_39:
(Start: 11 @17531 has 47 MA's), (18, 17441), (21, 17378),

Gene: Wofford_40 Start: 18259, Stop: 18092, Start Num: 10
Candidate Starts for Wofford_40:
(Start: 10 @18259 has 19 MA's), (Start: 11 @18256 has 47 MA's),

Gene: Yaboi_42 Start: 17691, Stop: 17527, Start Num: 11
Candidate Starts for Yaboi_42:
(7, 17712), (Start: 11 @17691 has 47 MA's), (15, 17643),