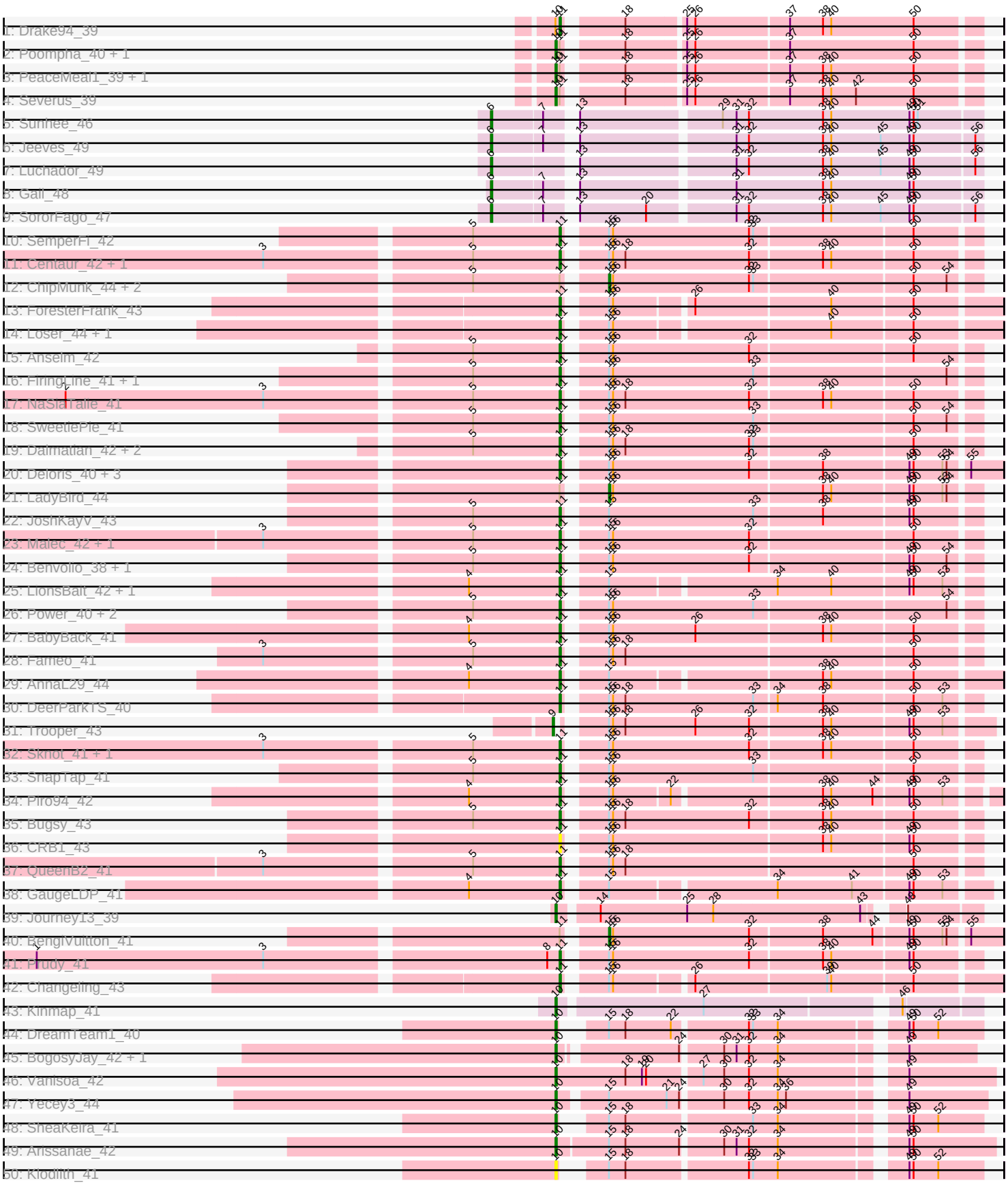
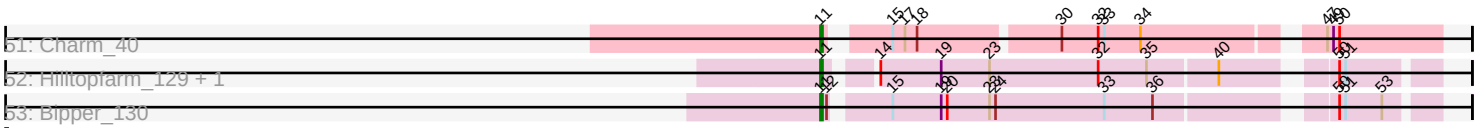
Pham 343919


1: Drake94_39
2: Poompha_40 + 1
3: PeaceMeal1_39 + 1
4: Severus_39
5: Sunnee_46
6: Jeeves_49
7: Luchador_49
8: Gail_48
9: SororFago_47
10: SemperFI_42
11: Centaur_42 + 1
12: ChipMunk_44 + 2
13: ForesterFrank_43
14: Loser_44 + 1
15: Anselm_42
16: FiringLine_41 + 1
17: NaSianTalie_41
18: SweetiePie_41
19: Dalmatian_42 + 2
20: Deloris_40 + 3
21: LadyBird_44
22: JoshKayV_43
23: Malec_42 + 1
24: Benvolio_38 + 1
25: LionsBait_42 + 1
26: Power_40 + 2
27: BabyBack_41
28: Fameo_41
29: AnnaL29_44
30: DeerParkTS_40
31: Trooper_43
32: Skhot_41 + 1
33: SnapTap_41
34: Piro94_42
35: Bugsy_43
36: CRB1_43
37: QueenB2_41
38: GaugeLDP_41
39: Journey13_39
40: BengiVuitton_41
41: Pludy_41
42: Changeling_43
43: Kinmap_41
44: DreamTeam1_40
45: BogosyJay_42 + 1
46: Vanisoa_42
47: Yecey3_44
48: SheaKeira_41
49: Anissanae_42
50: Kloolith_41

Pham 343919



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 343919 Report

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

Pham number 343919 has 73 members, 4 are drafts.

Phages represented in each track:
- Track 1 : Drake94_39
- Track 2 : Poompha_40, Trike_38
- Track 3 : PeaceMeal1_39, KittenMittens_38
- Track 4 : Severus_39
- Track 5 : Sunhee_46
- Track 6 : Jeeves_49
- Track 7 : Luchador_49
- Track 8 : Gail_48
- Track 9 : SororFago_47
- Track 10 : SemperFi_42
- Track 11 : Centaur_42, Terrific_42
- Track 12 : ChipMunk_44, EvilGenius_44, KingCyrus_44
- Track 13 : ForesterFrank_43
- Track 14 : Loser_44, RedRock_44
- Track 15 : Anselm_42
- Track 16 : FiringLine_41, QueenBeesly_41
- Track 17 : NaSiaTalie_41
- Track 18 : SweetiePie_41
- Track 19 : Dalmatian_42, DudeLittle_40, Retro23_42
- Track 20 : Deloris_40, AN3_42, 20ES_42, First_0041
- Track 21 : LadyBird_44
- Track 22 : JoshKayV_43
- Track 23 : Malec_42, Larenn_41
- Track 24 : Benvolio_38, Echild_41
- Track 25 : LionsBait_42, HippoHollow_42
- Track 26 : Power_40, Georgie2_42, Crucio_41
- Track 27 : BabyBack_41
- Track 28 : Fameo_41
- Track 29 : AnnaL29_44
- Track 30 : DeerParkTS_40
- Track 31 : Trooper_43
- Track 32 : Sknot_41, Flare16_41
- Track 33 : SnapTap_41
- Track 34 : Piro94_42
- Track 35 : Bugsy_43
- Track 36 : CRB1_43
- Track 37 : QueenB2_41

• Track 38 : GaugeLDP_41
• Track 39 : Journey13_39
• Track 40 : BengiVuitton_41
• Track 41 : Prudy_41
• Track 42 : Changeling_43
• Track 43 : Kinmap_41
• Track 44 : DreamTeam1_40
• Track 45 : BogosyJay_42, Maminiaina_42
• Track 46 : Vanisoa_42
• Track 47 : Yecey3_44
• Track 48 : SheaKeira_41
• Track 49 : Arissanae_42
• Track 50 : Klodlith_41
• Track 51 : Charm_40
• Track 52 : Hilltopfarm_129, Faiyaz_127
• Track 53 : Bipper_130

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 44 of the 69 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• 20ES_42, AN3_42, AnnaL29_44, Anselm_42, BabyBack_41, Benvolio_38, Bipper_130, Bugsy_43, CRB1_43, Centaur_42, Changeling_43, Charm_40, Crucio_41, Dalmatian_42, DeerParkTS_40, Deloris_40, Drake94_39, DudeLittle_40, Echild_41, Faiyaz_127, Fameo_41, FiringLine_41, First_0041, Flare16_41, ForesterFrank_43, GaugeLDP_41, Georgie2_42, Hilltopfarm_129, HippoHollow_42, JoshKayV_43, Larenn_41, LionsBait_42, Loser_44, Malec_42, NaSiaTalie_41, Piro94_42, Power_40, Prudy_41, QueenB2_41, QueenBeesly_41, RedRock_44, Retro23_42, SemperFi_42, Sknot_41, SnapTap_41, SweetiePie_41, Terrific_42,

Genes that have the "Most Annotated" start but do not call it:
• BengiVuitton_41, ChipMunk_44, EvilGenius_44, KingCyrus_44, KittenMittens_38, LadyBird_44, PeaceMeal1_39, Poompha_40, Severus_39, Trike_38,

Genes that do not have the "Most Annotated" start:
• Arissanae_42, BogosyJay_42, DreamTeam1_40, Gail_48, Jeeves_49, Journey13_39, Kinmap_41, Klodlith_41, Luchador_49, Maminiaina_42, SheaKeira_41, SororFago_47, Sunhee_46, Trooper_43, Vanisoa_42, Yecey3_44,

Summary by start number:

Start 6:
• Found in 5 of 73 (6.8%) of genes in pham
• Manual Annotations of this start: 5 of 69
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Gail_48 (A14), Jeeves_49 (A14), Luchador_49 (A14), SororFago_47 (A14), Sunhee_46 (A14),

Start 9:
• Found in 1 of 73 (1.4%) of genes in pham
• Manual Annotations of this start: 1 of 69
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Trooper_43 (A2),

Start 10:
• Found in 16 of 73 (21.9%) of genes in pham
• Manual Annotations of this start: 14 of 69
• Called 93.8% of time when present
• Phage (with cluster) where this start called: Arissanae_42 (A9), BogosyJay_42 (A9), DreamTeam1_40 (A9), Journey13_39 (A2), Kinmap_41 (A21), KittenMittens_38 (A10), Klodlith_41 (A9), Maminiaina_42 (A9), PeaceMeal1_39 (A10), Poompha_40 (A10), Severus_39 (A10), SheaKeira_41 (A9), Trike_38 (A10), Vanisoa_42 (A9), Yecey3_44 (A9),

Start 11:
• Found in 57 of 73 (78.1%) of genes in pham
• Manual Annotations of this start: 44 of 69
• Called 82.5% of time when present
• Phage (with cluster) where this start called: 20ES_42 (A2), AN3_42 (A2), AnnaL29_44 (A2), Anselm_42 (A2), BabyBack_41 (A2), Benvolio_38 (A2), Bipper_130 (Y), Bugsy_43 (A2), CRB1_43 (A2), Centaur_42 (A2), Changeling_43 (A2), Charm_40 (A9), Crucio_41 (A2), Dalmatian_42 (A2), DeerParkTS_40 (A2), Deloris_40 (A2), Drake94_39 (A10), DudeLittle_40 (A2), Echild_41 (A2), Faiyaz_127 (Y), Fameo_41 (A2), FiringLine_41 (A2), First_0041 (A2), Flare16_41 (A2), ForesterFrank_43 (A2), GaugeLDP_41 (A2), Georgie2_42 (A2), Hilltopfarm_129 (Y), HippoHollow_42 (A2), JoshKayV_43 (A2), Larenn_41 (A2), LionsBait_42 (A2), Loser_44 (A2), Malec_42 (A2), NaSiaTalie_41 (A2), Piro94_42 (A2), Power_40 (A2), Prudy_41 (A2), QueenB2_41 (A2), QueenBeesly_41 (A2), RedRock_44 (A2), Retro23_42 (A2), SemperFi_42 (A2), Sknot_41 (A2), SnapTap_41 (A2), SweetiePie_41 (A2), Terrific_42 (A2),

Start 15:
• Found in 55 of 73 (75.3%) of genes in pham
• Manual Annotations of this start: 5 of 69
• Called 9.1% of time when present
• Phage (with cluster) where this start called: BengiVuitton_41 (A2), ChipMunk_44 (A2), EvilGenius_44 (A2), KingCyrus_44 (A2), LadyBird_44 (A2),

Summary by clusters:

There are 6 clusters represented in this pham: A14, A10, A21, Y, A2, A9,

Info for manual annotations of cluster A10:
•Start number 10 was manually annotated 5 times for cluster A10.
•Start number 11 was manually annotated 1 time for cluster A10.

Info for manual annotations of cluster A14:
•Start number 6 was manually annotated 5 times for cluster A14.

Info for manual annotations of cluster A2:
•Start number 9 was manually annotated 1 time for cluster A2.

•Start number 10 was manually annotated 1 time for cluster A2.
•Start number 11 was manually annotated 39 times for cluster A2.
•Start number 15 was manually annotated 5 times for cluster A2.

Info for manual annotations of cluster A21:
•Start number 10 was manually annotated 1 time for cluster A21.

Info for manual annotations of cluster A9:
•Start number 10 was manually annotated 7 times for cluster A9.
•Start number 11 was manually annotated 1 time for cluster A9.

Info for manual annotations of cluster Y:
•Start number 11 was manually annotated 3 times for cluster Y.

Gene Information:

Gene: 20ES_42 Start: 28994, Stop: 28695, Start Num: 11
Candidate Starts for 20ES_42:
(Start: 11 @28994 has 44 MA's), (Start: 15 @28970 has 5 MA's), (16, 28967), (32, 28868), (38, 28817), (49, 28757), (50, 28754), (53, 28733), (54, 28730), (55, 28718),

Gene: AN3_42 Start: 29377, Stop: 29078, Start Num: 11
Candidate Starts for AN3_42:
(Start: 11 @29377 has 44 MA's), (Start: 15 @29353 has 5 MA's), (16, 29350), (32, 29251), (38, 29200), (49, 29140), (50, 29137), (53, 29116), (54, 29113), (55, 29101),

Gene: AnnaL29_44 Start: 30276, Stop: 29986, Start Num: 11
Candidate Starts for AnnaL29_44:
(4, 30342), (Start: 11 @30276 has 44 MA's), (Start: 15 @30252 has 5 MA's), (38, 30108), (40, 30102), (50, 30045),

Gene: Anselm_42 Start: 29438, Stop: 29154, Start Num: 11
Candidate Starts for Anselm_42:
(5, 29501), (Start: 11 @29438 has 44 MA's), (Start: 15 @29414 has 5 MA's), (16, 29411), (32, 29312), (50, 29198),

Gene: Arissanae_42 Start: 29990, Stop: 29694, Start Num: 10
Candidate Starts for Arissanae_42:
(Start: 10 @29990 has 14 MA's), (Start: 15 @29954 has 5 MA's), (18, 29942), (24, 29903), (30, 29876), (31, 29867), (32, 29858), (34, 29837), (49, 29756), (50, 29753),

Gene: BabyBack_41 Start: 29807, Stop: 29523, Start Num: 11
Candidate Starts for BabyBack_41:
(4, 29873), (Start: 11 @29807 has 44 MA's), (Start: 15 @29783 has 5 MA's), (16, 29780), (26, 29720), (38, 29630), (40, 29624), (50, 29567),

Gene: BengiVuitton_41 Start: 28935, Stop: 28660, Start Num: 15
Candidate Starts for BengiVuitton_41:
(Start: 11 @28959 has 44 MA's), (Start: 15 @28935 has 5 MA's), (16, 28932), (32, 28833), (38, 28782), (44, 28746), (49, 28722), (50, 28719), (53, 28698), (54, 28695), (55, 28683),

Gene: Benvolio_38 Start: 28491, Stop: 28207, Start Num: 11
Candidate Starts for Benvolio_38:
(5, 28554), (Start: 11 @28491 has 44 MA's), (Start: 15 @28467 has 5 MA's), (16, 28464), (32, 28365), (49, 28254), (50, 28251), (54, 28227),

Gene: Bipper_130 Start: 74639, Stop: 74914, Start Num: 11
Candidate Starts for Bipper_130:
(Start: 11 @74639 has 44 MA's), (12, 74642), (Start: 15 @74666 has 5 MA's), (19, 74690), (20, 74693), (23, 74714), (24, 74717), (33, 74771), (36, 74795), (50, 74870), (51, 74873), (53, 74891),

Gene: BogosyJay_42 Start: 29291, Stop: 29019, Start Num: 10
Candidate Starts for BogosyJay_42:
(Start: 10 @29291 has 14 MA's), (24, 29213), (30, 29186), (31, 29177), (32, 29168), (34, 29147), (49, 29066),

Gene: Bugsy_43 Start: 29586, Stop: 29302, Start Num: 11
Candidate Starts for Bugsy_43:
(5, 29649), (Start: 11 @29586 has 44 MA's), (Start: 15 @29562 has 5 MA's), (16, 29559), (18, 29550), (32, 29460), (38, 29409), (40, 29403), (50, 29346),

Gene: CRB1_43 Start: 29506, Stop: 29222, Start Num: 11
Candidate Starts for CRB1_43:
(Start: 11 @29506 has 44 MA's), (Start: 15 @29482 has 5 MA's), (16, 29479), (38, 29329), (40, 29323), (49, 29269), (50, 29266),

Gene: Centaur_42 Start: 29431, Stop: 29147, Start Num: 11
Candidate Starts for Centaur_42:
(3, 29635), (5, 29494), (Start: 11 @29431 has 44 MA's), (Start: 15 @29407 has 5 MA's), (16, 29404), (18, 29395), (32, 29305), (38, 29254), (40, 29248), (50, 29191),

Gene: Changeling_43 Start: 30267, Stop: 29977, Start Num: 11
Candidate Starts for Changeling_43:
(Start: 11 @30267 has 44 MA's), (Start: 15 @30243 has 5 MA's), (16, 30240), (26, 30189), (39, 30096), (40, 30093), (50, 30036),

Gene: Charm_40 Start: 28780, Stop: 28505, Start Num: 11
Candidate Starts for Charm_40:
(Start: 11 @28780 has 44 MA's), (Start: 15 @28756 has 5 MA's), (17, 28750), (18, 28744), (30, 28678), (32, 28660), (33, 28657), (34, 28639), (47, 28561), (49, 28558), (50, 28555),

Gene: ChipMunk_44 Start: 30914, Stop: 30654, Start Num: 15
Candidate Starts for ChipMunk_44:
(5, 31001), (Start: 11 @30938 has 44 MA's), (Start: 15 @30914 has 5 MA's), (16, 30911), (32, 30812), (33, 30809), (50, 30698), (54, 30674),

Gene: Crucio_41 Start: 29021, Stop: 28737, Start Num: 11
Candidate Starts for Crucio_41:
(5, 29084), (Start: 11 @29021 has 44 MA's), (Start: 15 @28997 has 5 MA's), (16, 28994), (33, 28892), (54, 28757),

Gene: Dalmatian_42 Start: 29414, Stop: 29130, Start Num: 11
Candidate Starts for Dalmatian_42:

(5, 29477), (Start: 11 @29414 has 44 MA's), (Start: 15 @29390 has 5 MA's), (16, 29387), (18, 29378), (32, 29288), (33, 29285), (50, 29174),

Gene: DeerParkTS_40 Start: 28776, Stop: 28492, Start Num: 11
Candidate Starts for DeerParkTS_40:
(Start: 11 @28776 has 44 MA's), (Start: 15 @28752 has 5 MA's), (16, 28749), (18, 28740), (33, 28647), (34, 28632), (38, 28599), (50, 28536), (53, 28515),

Gene: Deloris_40 Start: 28628, Stop: 28329, Start Num: 11
Candidate Starts for Deloris_40:
(Start: 11 @28628 has 44 MA's), (Start: 15 @28604 has 5 MA's), (16, 28601), (32, 28502), (38, 28451), (49, 28391), (50, 28388), (53, 28367), (54, 28364), (55, 28352),

Gene: Drake94_39 Start: 28139, Stop: 27858, Start Num: 11
Candidate Starts for Drake94_39:
(Start: 10 @28142 has 14 MA's), (Start: 11 @28139 has 44 MA's), (18, 28103), (25, 28064), (26, 28058), (37, 27992), (38, 27968), (40, 27962), (50, 27902),

Gene: DreamTeam1_40 Start: 28657, Stop: 28388, Start Num: 10
Candidate Starts for DreamTeam1_40:
(Start: 10 @28657 has 14 MA's), (Start: 15 @28639 has 5 MA's), (18, 28627), (22, 28594), (32, 28543), (33, 28540), (34, 28522), (49, 28441), (50, 28438), (52, 28420),

Gene: DudeLittle_40 Start: 29080, Stop: 28796, Start Num: 11
Candidate Starts for DudeLittle_40:
(5, 29143), (Start: 11 @29080 has 44 MA's), (Start: 15 @29056 has 5 MA's), (16, 29053), (18, 29044), (32, 28954), (33, 28951), (50, 28840),

Gene: Echild_41 Start: 28515, Stop: 28231, Start Num: 11
Candidate Starts for Echild_41:
(5, 28578), (Start: 11 @28515 has 44 MA's), (Start: 15 @28491 has 5 MA's), (16, 28488), (32, 28389), (49, 28278), (50, 28275), (54, 28251),

Gene: EvilGenius_44 Start: 30918, Stop: 30658, Start Num: 15
Candidate Starts for EvilGenius_44:
(5, 31005), (Start: 11 @30942 has 44 MA's), (Start: 15 @30918 has 5 MA's), (16, 30915), (32, 30816), (33, 30813), (50, 30702), (54, 30678),

Gene: Faiyaz_127 Start: 73078, Stop: 73350, Start Num: 11
Candidate Starts for Faiyaz_127:
(Start: 11 @73078 has 44 MA's), (14, 73096), (19, 73126), (23, 73150), (32, 73204), (35, 73228), (40, 73261), (50, 73306), (51, 73309),

Gene: Fameo_41 Start: 29208, Stop: 28924, Start Num: 11
Candidate Starts for Fameo_41:
(3, 29412), (5, 29271), (Start: 11 @29208 has 44 MA's), (Start: 15 @29184 has 5 MA's), (16, 29181), (18, 29172), (50, 28968),

Gene: FiringLine_41 Start: 29002, Stop: 28718, Start Num: 11
Candidate Starts for FiringLine_41:
(5, 29065), (Start: 11 @29002 has 44 MA's), (Start: 15 @28978 has 5 MA's), (16, 28975), (33, 28873), (54, 28738),

Gene: First_0041 Start: 28870, Stop: 28571, Start Num: 11
Candidate Starts for First_0041:
(Start: 11 @28870 has 44 MA's), (Start: 15 @28846 has 5 MA's), (16, 28843), (32, 28744), (38, 28693), (49, 28633), (50, 28630), (53, 28609), (54, 28606), (55, 28594),

Gene: Flare16_41 Start: 29094, Stop: 28810, Start Num: 11
Candidate Starts for Flare16_41:
(3, 29298), (5, 29157), (Start: 11 @29094 has 44 MA's), (Start: 15 @29070 has 5 MA's), (16, 29067), (32, 28968), (38, 28917), (40, 28911), (50, 28854),

Gene: ForesterFrank_43 Start: 30336, Stop: 30046, Start Num: 11
Candidate Starts for ForesterFrank_43:
(Start: 11 @30336 has 44 MA's), (Start: 15 @30312 has 5 MA's), (16, 30309), (26, 30258), (40, 30162), (50, 30105),

Gene: Gail_48 Start: 31208, Stop: 30876, Start Num: 6
Candidate Starts for Gail_48:
(Start: 6 @31208 has 5 MA's), (7, 31172), (13, 31157), (31, 31052), (38, 30989), (40, 30983), (49, 30926), (50, 30923),

Gene: GaugeLDP_41 Start: 29706, Stop: 29422, Start Num: 11
Candidate Starts for GaugeLDP_41:
(4, 29772), (Start: 11 @29706 has 44 MA's), (Start: 15 @29682 has 5 MA's), (34, 29568), (41, 29514), (49, 29475), (50, 29472), (53, 29451),

Gene: Georgie2_42 Start: 29047, Stop: 28763, Start Num: 11
Candidate Starts for Georgie2_42:
(5, 29110), (Start: 11 @29047 has 44 MA's), (Start: 15 @29023 has 5 MA's), (16, 29020), (33, 28918), (54, 28783),

Gene: Hilltopfarm_129 Start: 73903, Stop: 74175, Start Num: 11
Candidate Starts for Hilltopfarm_129:
(Start: 11 @73903 has 44 MA's), (14, 73921), (19, 73951), (23, 73975), (32, 74029), (35, 74053), (40, 74086), (50, 74131), (51, 74134),

Gene: HippoHollow_42 Start: 30793, Stop: 30515, Start Num: 11
Candidate Starts for HippoHollow_42:
(4, 30859), (Start: 11 @30793 has 44 MA's), (Start: 15 @30769 has 5 MA's), (34, 30655), (40, 30616), (49, 30562), (50, 30559), (53, 30538),

Gene: Jeeves_49 Start: 30151, Stop: 29819, Start Num: 6
Candidate Starts for Jeeves_49:
(Start: 6 @30151 has 5 MA's), (7, 30115), (13, 30100), (31, 29995), (32, 29986), (38, 29932), (40, 29926), (45, 29890), (49, 29869), (50, 29866), (56, 29824),

Gene: JoshKayV_43 Start: 29529, Stop: 29245, Start Num: 11
Candidate Starts for JoshKayV_43:
(5, 29592), (Start: 11 @29529 has 44 MA's), (Start: 15 @29505 has 5 MA's), (33, 29400), (38, 29352), (49, 29292), (50, 29289),

Gene: Journey13_39 Start: 28370, Stop: 28092, Start Num: 10
Candidate Starts for Journey13_39:
(Start: 10 @28370 has 14 MA's), (14, 28346), (25, 28283), (28, 28265), (43, 28160), (48, 28142),

Gene: KingCyrus_44 Start: 30913, Stop: 30653, Start Num: 15
Candidate Starts for KingCyrus_44:
(5, 31000), (Start: 11 @30937 has 44 MA's), (Start: 15 @30913 has 5 MA's), (16, 30910), (32, 30811), (33, 30808), (50, 30697), (54, 30673),

Gene: Kinmap_41 Start: 28859, Stop: 28578, Start Num: 10
Candidate Starts for Kinmap_41:
(Start: 10 @28859 has 14 MA's), (27, 28760), (46, 28631),

Gene: KittenMittens_38 Start: 28150, Stop: 27866, Start Num: 10
Candidate Starts for KittenMittens_38:
(Start: 10 @28150 has 14 MA's), (Start: 11 @28147 has 44 MA's), (18, 28111), (25, 28072), (26, 28066), (37, 28000), (38, 27976), (40, 27970), (50, 27910),

Gene: Klodlith_41 Start: 28674, Stop: 28405, Start Num: 10
Candidate Starts for Klodlith_41:
(Start: 10 @28674 has 14 MA's), (Start: 15 @28656 has 5 MA's), (18, 28644), (32, 28560), (33, 28557), (34, 28539), (49, 28458), (50, 28455), (52, 28437),

Gene: LadyBird_44 Start: 29444, Stop: 29184, Start Num: 15
Candidate Starts for LadyBird_44:
(Start: 11 @29468 has 44 MA's), (Start: 15 @29444 has 5 MA's), (16, 29441), (38, 29291), (40, 29285), (49, 29231), (50, 29228), (53, 29207), (54, 29204),

Gene: Larenn_41 Start: 29331, Stop: 29047, Start Num: 11
Candidate Starts for Larenn_41:
(3, 29535), (5, 29394), (Start: 11 @29331 has 44 MA's), (Start: 15 @29307 has 5 MA's), (16, 29304), (32, 29205), (50, 29091),

Gene: LionsBait_42 Start: 30776, Stop: 30498, Start Num: 11
Candidate Starts for LionsBait_42:
(4, 30842), (Start: 11 @30776 has 44 MA's), (Start: 15 @30752 has 5 MA's), (34, 30638), (40, 30599), (49, 30545), (50, 30542), (53, 30521),

Gene: Loser_44 Start: 30219, Stop: 29929, Start Num: 11
Candidate Starts for Loser_44:
(Start: 11 @30219 has 44 MA's), (Start: 15 @30195 has 5 MA's), (16, 30192), (40, 30045), (50, 29988),

Gene: Luchador_49 Start: 31942, Stop: 31610, Start Num: 6
Candidate Starts for Luchador_49:
(Start: 6 @31942 has 5 MA's), (13, 31891), (31, 31786), (32, 31777), (38, 31723), (40, 31717), (45, 31681), (49, 31660), (50, 31657), (56, 31615),

Gene: Malec_42 Start: 29895, Stop: 29611, Start Num: 11
Candidate Starts for Malec_42:
(3, 30099), (5, 29958), (Start: 11 @29895 has 44 MA's), (Start: 15 @29871 has 5 MA's), (16, 29868), (32, 29769), (50, 29655),

Gene: Maminiaina_42 Start: 29273, Stop: 29001, Start Num: 10
Candidate Starts for Maminiaina_42:
(Start: 10 @29273 has 14 MA's), (24, 29195), (30, 29168), (31, 29159), (32, 29150), (34, 29129), (49, 29048),

Gene: NaSiaTalie_41 Start: 29091, Stop: 28807, Start Num: 11
Candidate Starts for NaSiaTalie_41:
(2, 29439), (3, 29295), (5, 29154), (Start: 11 @29091 has 44 MA's), (Start: 15 @29067 has 5 MA's), (16, 29064), (18, 29055), (32, 28965), (38, 28914), (40, 28908), (50, 28851),

Gene: PeaceMeal1_39 Start: 28151, Stop: 27867, Start Num: 10
Candidate Starts for PeaceMeal1_39:
(Start: 10 @28151 has 14 MA's), (Start: 11 @28148 has 44 MA's), (18, 28112), (25, 28073), (26, 28067), (37, 28001), (38, 27977), (40, 27971), (50, 27911),

Gene: Piro94_42 Start: 29683, Stop: 29399, Start Num: 11
Candidate Starts for Piro94_42:
(4, 29749), (Start: 11 @29683 has 44 MA's), (Start: 15 @29659 has 5 MA's), (16, 29656), (22, 29617), (38, 29515), (40, 29509), (44, 29479), (49, 29455), (50, 29452), (53, 29431),

Gene: Poompha_40 Start: 28149, Stop: 27865, Start Num: 10
Candidate Starts for Poompha_40:
(Start: 10 @28149 has 14 MA's), (Start: 11 @28146 has 44 MA's), (18, 28110), (25, 28071), (26, 28065), (37, 27999), (50, 27909),

Gene: Power_40 Start: 29055, Stop: 28771, Start Num: 11
Candidate Starts for Power_40:
(5, 29118), (Start: 11 @29055 has 44 MA's), (Start: 15 @29031 has 5 MA's), (16, 29028), (33, 28926), (54, 28791),

Gene: Prudy_41 Start: 29719, Stop: 29435, Start Num: 11
Candidate Starts for Prudy_41:
(1, 30088), (3, 29923), (8, 29728), (Start: 11 @29719 has 44 MA's), (Start: 15 @29695 has 5 MA's), (16, 29692), (32, 29593), (38, 29542), (40, 29536), (49, 29482), (50, 29479),

Gene: QueenB2_41 Start: 29126, Stop: 28842, Start Num: 11
Candidate Starts for QueenB2_41:
(3, 29330), (5, 29189), (Start: 11 @29126 has 44 MA's), (Start: 15 @29102 has 5 MA's), (16, 29099), (18, 29090), (50, 28886),

Gene: QueenBeesly_41 Start: 29002, Stop: 28718, Start Num: 11
Candidate Starts for QueenBeesly_41:
(5, 29065), (Start: 11 @29002 has 44 MA's), (Start: 15 @28978 has 5 MA's), (16, 28975), (33, 28873), (54, 28738),

Gene: RedRock_44 Start: 30432, Stop: 30142, Start Num: 11
Candidate Starts for RedRock_44:
(Start: 11 @30432 has 44 MA's), (Start: 15 @30408 has 5 MA's), (16, 30405), (40, 30258), (50, 30201),

Gene: Retro23_42 Start: 29410, Stop: 29126, Start Num: 11
Candidate Starts for Retro23_42:
(5, 29473), (Start: 11 @29410 has 44 MA's), (Start: 15 @29386 has 5 MA's), (16, 29383), (18, 29374), (32, 29284), (33, 29281), (50, 29170),

Gene: SemperFi_42 Start: 29270, Stop: 28986, Start Num: 11
Candidate Starts for SemperFi_42:

(5, 29333), (Start: 11 @29270 has 44 MA's), (Start: 15 @29246 has 5 MA's), (16, 29243), (32, 29144), (33, 29141), (50, 29030),

Gene: Severus_39 Start: 28149, Stop: 27865, Start Num: 10
Candidate Starts for Severus_39:
(Start: 10 @28149 has 14 MA's), (Start: 11 @28146 has 44 MA's), (18, 28110), (25, 28071), (26, 28065), (37, 27999), (38, 27975), (40, 27969), (42, 27951), (50, 27909),

Gene: SheaKeira_41 Start: 28743, Stop: 28474, Start Num: 10
Candidate Starts for SheaKeira_41:
(Start: 10 @28743 has 14 MA's), (Start: 15 @28725 has 5 MA's), (18, 28713), (33, 28626), (34, 28608), (49, 28527), (50, 28524), (52, 28506),

Gene: Sknot_41 Start: 29094, Stop: 28810, Start Num: 11
Candidate Starts for Sknot_41:
(3, 29298), (5, 29157), (Start: 11 @29094 has 44 MA's), (Start: 15 @29070 has 5 MA's), (16, 29067), (32, 28968), (38, 28917), (40, 28911), (50, 28854),

Gene: SnapTap_41 Start: 29081, Stop: 28797, Start Num: 11
Candidate Starts for SnapTap_41:
(5, 29144), (Start: 11 @29081 has 44 MA's), (Start: 15 @29057 has 5 MA's), (16, 29054), (33, 28952), (50, 28841),

Gene: SororFago_47 Start: 31263, Stop: 30931, Start Num: 6
Candidate Starts for SororFago_47:
(Start: 6 @31263 has 5 MA's), (7, 31227), (13, 31212), (20, 31164), (31, 31107), (32, 31098), (38, 31044), (40, 31038), (45, 31002), (49, 30981), (50, 30978), (56, 30936),

Gene: Sunhee_46 Start: 29397, Stop: 29065, Start Num: 6
Candidate Starts for Sunhee_46:
(Start: 6 @29397 has 5 MA's), (7, 29361), (13, 29346), (29, 29250), (31, 29241), (32, 29232), (38, 29178), (40, 29172), (49, 29115), (50, 29112), (51, 29109),

Gene: SweetiePie_41 Start: 29081, Stop: 28797, Start Num: 11
Candidate Starts for SweetiePie_41:
(5, 29144), (Start: 11 @29081 has 44 MA's), (Start: 15 @29057 has 5 MA's), (16, 29054), (33, 28952), (50, 28841), (54, 28817),

Gene: Terrific_42 Start: 29446, Stop: 29162, Start Num: 11
Candidate Starts for Terrific_42:
(3, 29650), (5, 29509), (Start: 11 @29446 has 44 MA's), (Start: 15 @29422 has 5 MA's), (16, 29419), (18, 29410), (32, 29320), (38, 29269), (40, 29263), (50, 29206),

Gene: Trike_38 Start: 27982, Stop: 27698, Start Num: 10
Candidate Starts for Trike_38:
(Start: 10 @27982 has 14 MA's), (Start: 11 @27979 has 44 MA's), (18, 27943), (25, 27904), (26, 27898), (37, 27832), (50, 27742),

Gene: Trooper_43 Start: 29540, Stop: 29247, Start Num: 9
Candidate Starts for Trooper_43:
(Start: 9 @29540 has 1 MA's), (Start: 15 @29516 has 5 MA's), (16, 29513), (18, 29504), (26, 29453), (32, 29414), (38, 29363), (40, 29357), (49, 29303), (50, 29300), (53, 29279),

Gene: Vanisoa_42 Start: 29998, Stop: 29699, Start Num: 10
Candidate Starts for Vanisoa_42:
(Start: 10 @29998 has 14 MA's), (18, 29947), (19, 29935), (20, 29932), (27, 29896), (30, 29881), (32, 29863), (34, 29842), (49, 29761),

Gene: Yecey3_44 Start: 28948, Stop: 28664, Start Num: 10
Candidate Starts for Yecey3_44:
(Start: 10 @28948 has 14 MA's), (Start: 15 @28918 has 5 MA's), (21, 28876), (24, 28867), (30, 28840), (32, 28822), (34, 28801), (36, 28795), (49, 28720),