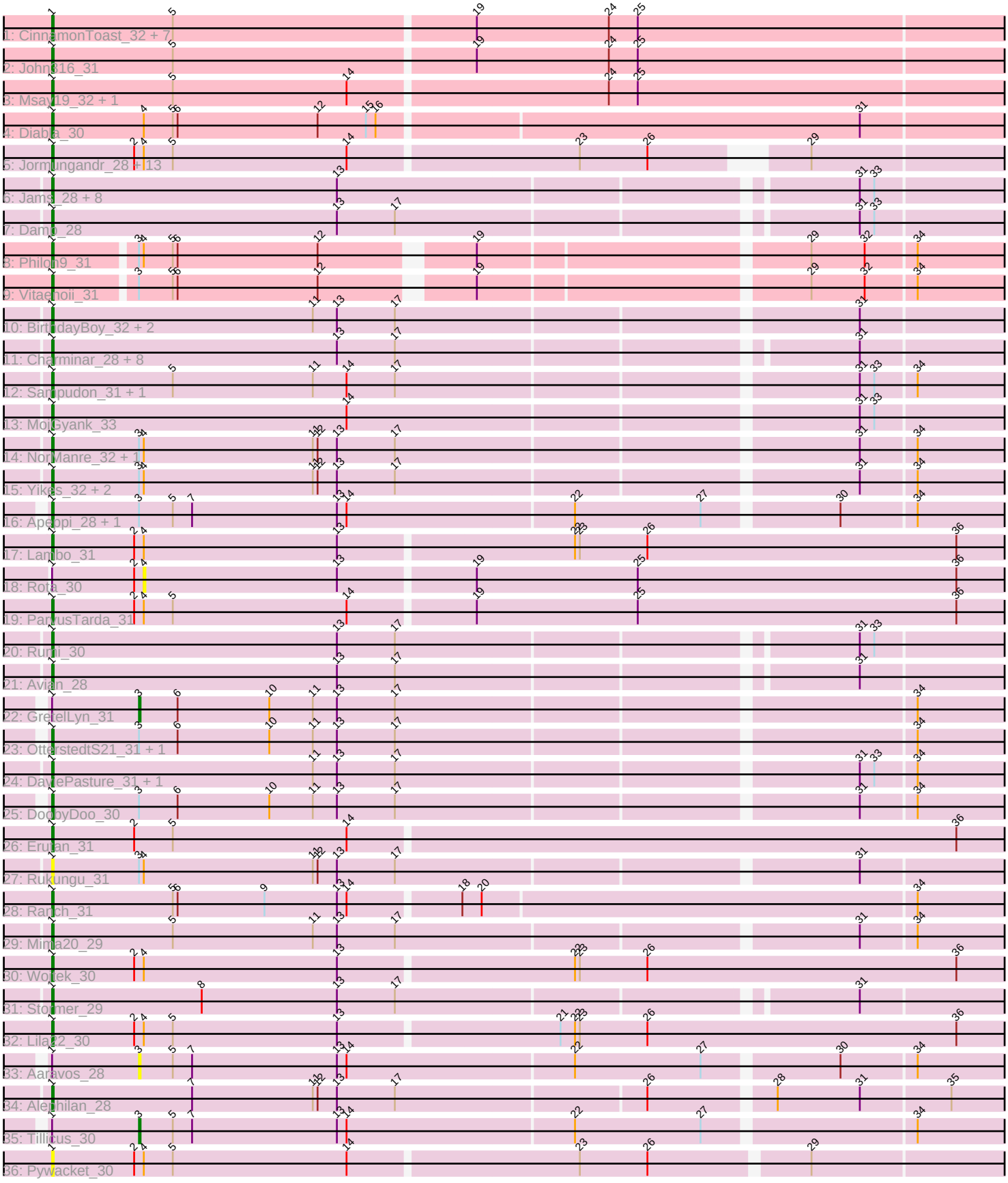
Pham 332746


1: CinnamonToast_32 + 7
2: John316_31
3: Msav19_32 + 1
4: Diabla_30
5: Jormungandr_28 + 13
6: Jams_28 + 8
7: Damo_28
8: Philon9_31
9: Vitachoii_31
10: BirthdayBoy_32 + 2
11: Charminar_28 + 8
12: Sampudon_31 + 1
13: MoiGyank_33
14: NorManre_32 + 1
15: Yikes_32 + 2
16: Apeopi_28 + 1
17: Lambo_31
18: Rota_30
19: ParvusTarda_31
20: Rumi_30
21: Avian_28
22: GretelLyn_31
23: OtterstedtS21_31 + 1
24: DaylePasture_31 + 1
25: DoobyDoo_30
26: Erutan_31
27: Rukungu_31
28: Ranch_31
29: Mima20_29
30: Wojtek_30
31: Stormer_29
32: Lila22_30
33: Aaravos_28
34: Alexhilan_28
35: Tillitus_30
36: Pywacket_30

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 332746 Report

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

Pham number 332746 has 82 members, 7 are drafts.

Phages represented in each track:
• Track 1 : CinnamonToast_32, Jellybones_31, Boneham_31, Butterball_31, FelixAlejandro_32, BirksAndSocks_31, Beaver_31, BillyBobJr_32
• Track 2 : John316_31
• Track 3 : Msay19_32, Poland_32
• Track 4 : Diabla_30
• Track 5 : Jormungandr_28, Harambe_28, Anamika_28, Hail2Pitt_28, Neoevie_28, Nimi13_28, Newt_29, Lahirium_28, Sticker17_28, Teal_28, Guillaume_28, GalacticEye_28, Hello_28, Luker_29
• Track 6 : Jams_28, Kaseim_28, Charianelly_28, Minos_29, Lidong_28, Bianmat_28, Shelley_28, Berries_28, MrWormie_28
• Track 7 : Damp_28
• Track 8 : Philon9_31
• Track 9 : Vitaenoii_31
• Track 10 : BirthdayBoy_32, Fulcrum_32, GOATification_32
• Track 11 : Charminar_28, NovaSharks_30, Woes_28, Riduram_28, Alyssamiracle_31, Astralis_28, Genamy16_31, Jamemuya19_28, RazorC_29
• Track 12 : Sampudon_31, Jalebi_30
• Track 13 : MoiGyank_33
• Track 14 : NorManre_32, Patos_32
• Track 15 : Yikes_32, Gibbin_32, LavAbarElk_29
• Track 16 : Apeppi_28, LuckyLeo_30
• Track 17 : Lambo_31
• Track 18 : Rota_30
• Track 19 : ParvusTarda_31
• Track 20 : Rumi_30
• Track 21 : Avian_28
• Track 22 : GretelLyn_31
• Track 23 : OtterstedtS21_31, Sadboi_31
• Track 24 : DaviePasture_31, Zany_30
• Track 25 : DoobyDoo_30
• Track 26 : Erutan_31
• Track 27 : Rukungu_31
• Track 28 : Ranch_31
• Track 29 : Mima20_29
• Track 30 : Wojtek_30
• Track 31 : Stormer_29
• Track 32 : Lila22_30

• Track 33 : Aaravos_28
• Track 34 : Alephilan_28
• Track 35 : Tillicus_30
• Track 36 : Pywacket_30

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

The start number called the most often in the published annotations is 1, it was called in 73 of the 75 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Alephilan_28, Alyssamiracle_31, Anamika_28, Apeppi_28, Astralis_28, Avian_28, Beaver_31, Berries_28, Bianmat_28, BillyBobJr_32, BirksAndSocks_31, BirthdayBoy_32, Boneham_31, Butterball_31, Charianelly_28, Charminar_28, CinnamonToast_32, Damp_28, DaviePasture_31, Diabla_30, DoobyDoo_30, Erutan_31, FelixAlejandro_32, Fulcrum_32, GOATification_32, GalacticEye_28, Genamy16_31, Gibbin_32, Guillaume_28, Hail2Pitt_28, Harambe_28, Hello_28, Jalebi_30, Jamemuya19_28, Jams_28, Jellybones_31, John316_31, Jormungandr_28, Kaseim_28, Lahirium_28, Lambo_31, LavAbarElk_29, Lidong_28, Lila22_30, LuckyLeo_30, Luker_29, Mima20_29, Minos_29, MoiGyank_33, MrWormie_28, Msay19_32, Neoevie_28, Newt_29, Nimi13_28, NorManre_32, NovaSharks_30, OtterstedtS21_31, ParvusTarda_31, Patos_32, Philon9_31, Poland_32, Pywacket_30, Ranch_31, RazorC_29, Riduram_28, Rukungu_31, Rumi_30, Sadboi_31, Sampudon_31, Shelley_28, Sticker17_28, Stormer_29, Teal_28, Vitaenoii_31, Woes_28, Wojtek_30, Yikes_32, Zany_30,

Genes that have the "Most Annotated" start but do not call it:
• Aaravos_28, GretelLyn_31, Rota_30, Tillicus_30,

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

Summary by start number:

Start 1:
• Found in 82 of 82 (100.0%) of genes in pham
• Manual Annotations of this start: 73 of 75
• Called 95.1% of time when present
• Phage (with cluster) where this start called: Alephilan_28 (DV), Alyssamiracle_31 (DV), Anamika_28 (CS3), Apeppi_28 (DV), Astralis_28 (DV), Avian_28 (DV), Beaver_31 (CS2), Berries_28 (CS3), Bianmat_28 (CS3), BillyBobJr_32 (CS2), BirksAndSocks_31 (CS2), BirthdayBoy_32 (DV), Boneham_31 (CS2), Butterball_31 (CS2), Charianelly_28 (CS3), Charminar_28 (DV), CinnamonToast_32 (CS2), Damp_28 (CS3), DaviePasture_31 (DV), Diabla_30 (CS2), DoobyDoo_30 (DV), Erutan_31 (DV), FelixAlejandro_32 (CS2), Fulcrum_32 (DV), GOATification_32 (DV), GalacticEye_28 (CS3), Genamy16_31 (DV), Gibbin_32 (DV), Guillaume_28 (CS3), Hail2Pitt_28 (CS3), Harambe_28 (CS3), Hello_28 (CS3), Jalebi_30 (DV), Jamemuya19_28 (DV), Jams_28 (CS3), Jellybones_31 (CS2), John316_31 (CS2), Jormungandr_28 (CS3), Kaseim_28 (CS3), Lahirium_28 (CS3), Lambo_31 (DV), LavAbarElk_29 (DV), Lidong_28 (CS3), Lila22_30 (DV), LuckyLeo_30 (DV), Luker_29

(CS3), Mima20_29 (DV), Minos_29 (CS3), MoiGyank_33 (DV), MrWormie_28 (CS3), Msay19_32 (CS2), Neoevie_28 (CS3), Newt_29 (CS3), Nimi13_28 (CS3), NorManre_32 (DV), NovaSharks_30 (DV), OtterstedtS21_31 (DV), ParvusTarda_31 (DV), Patos_32 (DV), Philon9_31 (CS4), Poland_32 (CS2), Pywacket_30 (DV), Ranch_31 (DV), RazorC_29 (DV), Riduram_28 (DV), Rukungu_31 (DV), Rumi_30 (DV), Sadboi_31 (DV), Sampudon_31 (DV), Shelley_28 (CS3), Sticker17_28 (CS3), Stormer_29 (DV), Teal_28 (CS3), Vitaenoii_31 (CS4), Woes_28 (CS3), Wojtek_30 (DV), Yikes_32 (DV), Zany_30 (DV),

Start 3:
• Found in 16 of 82 (19.5%) of genes in pham
• Manual Annotations of this start: 2 of 75
• Called 18.8% of time when present
• Phage (with cluster) where this start called: Aaravos_28 (DV), GretelLyn_31 (DV), Tillicus_30 (DV),

Start 4:
• Found in 28 of 82 (34.1%) of genes in pham
• No Manual Annotations of this start.
• Called 3.6% of time when present
• Phage (with cluster) where this start called: Rota_30 (DV),

Summary by clusters:

There are 4 clusters represented in this pham: DV, CS4, CS3, CS2,

Info for manual annotations of cluster CS2:
•Start number 1 was manually annotated 10 times for cluster CS2.

Info for manual annotations of cluster CS3:
•Start number 1 was manually annotated 25 times for cluster CS3.

Info for manual annotations of cluster CS4:
•Start number 1 was manually annotated 2 times for cluster CS4.

Info for manual annotations of cluster DV:
•Start number 1 was manually annotated 36 times for cluster DV.
•Start number 3 was manually annotated 2 times for cluster DV.

Gene Information:

Gene: Aaravos_28 Start: 28082, Stop: 28624, Start Num: 3
Candidate Starts for Aaravos_28:
(Start: 1 @28028 has 73 MA's), (Start: 3 @28082 has 2 MA's), (5, 28103), (7, 28115), (13, 28205), (14, 28211), (22, 28349), (27, 28427), (30, 28505), (34, 28550),

Gene: Alephilan_28 Start: 27950, Stop: 28543, Start Num: 1
Candidate Starts for Alephilan_28:
(Start: 1 @27950 has 73 MA's), (7, 28037), (11, 28112), (12, 28115), (13, 28127), (17, 28163), (26, 28313), (28, 28385), (31, 28436), (35, 28490),

Gene: Alyssamiracle_31 Start: 26760, Stop: 27347, Start Num: 1
Candidate Starts for Alyssamiracle_31:
(Start: 1 @26760 has 73 MA's), (13, 26937), (17, 26973), (31, 27240),

Gene: Anamika_28 Start: 37634, Stop: 38209, Start Num: 1
Candidate Starts for Anamika_28:
(Start: 1 @37634 has 73 MA's), (2, 37685), (4, 37691), (5, 37709), (14, 37817), (23, 37955), (26, 37997), (29, 38072),

Gene: Apeppi_28 Start: 28090, Stop: 28686, Start Num: 1
Candidate Starts for Apeppi_28:
(Start: 1 @28090 has 73 MA's), (Start: 3 @28144 has 2 MA's), (5, 28165), (7, 28177), (13, 28267), (14, 28273), (22, 28411), (27, 28489), (30, 28567), (34, 28612),

Gene: Astralis_28 Start: 26350, Stop: 26937, Start Num: 1
Candidate Starts for Astralis_28:
(Start: 1 @26350 has 73 MA's), (13, 26527), (17, 26563), (31, 26830),

Gene: Avian_28 Start: 26742, Stop: 27329, Start Num: 1
Candidate Starts for Avian_28:
(Start: 1 @26742 has 73 MA's), (13, 26919), (17, 26955), (31, 27222),

Gene: Beaver_31 Start: 37090, Stop: 37692, Start Num: 1
Candidate Starts for Beaver_31:
(Start: 1 @37090 has 73 MA's), (5, 37165), (19, 37348), (24, 37429), (25, 37447),

Gene: Berries_28 Start: 37592, Stop: 38179, Start Num: 1
Candidate Starts for Berries_28:
(Start: 1 @37592 has 73 MA's), (13, 37769), (31, 38072), (33, 38081),

Gene: Bianmat_28 Start: 37632, Stop: 38219, Start Num: 1
Candidate Starts for Bianmat_28:
(Start: 1 @37632 has 73 MA's), (13, 37809), (31, 38112), (33, 38121),

Gene: BillyBobJr_32 Start: 37117, Stop: 37719, Start Num: 1
Candidate Starts for BillyBobJr_32:
(Start: 1 @37117 has 73 MA's), (5, 37192), (19, 37375), (24, 37456), (25, 37474),

Gene: BirksAndSocks_31 Start: 37064, Stop: 37666, Start Num: 1
Candidate Starts for BirksAndSocks_31:
(Start: 1 @37064 has 73 MA's), (5, 37139), (19, 37322), (24, 37403), (25, 37421),

Gene: BirthdayBoy_32 Start: 28776, Stop: 29369, Start Num: 1
Candidate Starts for BirthdayBoy_32:
(Start: 1 @28776 has 73 MA's), (11, 28938), (13, 28953), (17, 28989), (31, 29262),

Gene: Boneham_31 Start: 37063, Stop: 37665, Start Num: 1
Candidate Starts for Boneham_31:
(Start: 1 @37063 has 73 MA's), (5, 37138), (19, 37321), (24, 37402), (25, 37420),

Gene: Butterball_31 Start: 37063, Stop: 37665, Start Num: 1
Candidate Starts for Butterball_31:
(Start: 1 @37063 has 73 MA's), (5, 37138), (19, 37321), (24, 37402), (25, 37420),

Gene: Charianelly_28 Start: 37342, Stop: 37929, Start Num: 1
Candidate Starts for Charianelly_28:
(Start: 1 @37342 has 73 MA's), (13, 37519), (31, 37822), (33, 37831),

Gene: Charminar_28 Start: 26353, Stop: 26940, Start Num: 1
Candidate Starts for Charminar_28:
(Start: 1 @26353 has 73 MA's), (13, 26530), (17, 26566), (31, 26833),

Gene: CinnamonToast_32 Start: 37117, Stop: 37719, Start Num: 1
Candidate Starts for CinnamonToast_32:
(Start: 1 @37117 has 73 MA's), (5, 37192), (19, 37375), (24, 37456), (25, 37474),

Gene: Damp_28 Start: 36506, Stop: 37093, Start Num: 1
Candidate Starts for Damp_28:
(Start: 1 @36506 has 73 MA's), (13, 36683), (17, 36719), (31, 36986), (33, 36995),

Gene: DaviePasture_31 Start: 28575, Stop: 29168, Start Num: 1
Candidate Starts for DaviePasture_31:
(Start: 1 @28575 has 73 MA's), (11, 28737), (13, 28752), (17, 28788), (31, 29061), (33, 29070), (34, 29094),

Gene: Diabla_30 Start: 36917, Stop: 37516, Start Num: 1
Candidate Starts for Diabla_30:
(Start: 1 @36917 has 73 MA's), (4, 36974), (5, 36992), (6, 36995), (12, 37082), (15, 37112), (16, 37118), (31, 37409),

Gene: DoobyDoo_30 Start: 27725, Stop: 28318, Start Num: 1
Candidate Starts for DoobyDoo_30:
(Start: 1 @27725 has 73 MA's), (Start: 3 @27779 has 2 MA's), (6, 27803), (10, 27860), (11, 27887), (13, 27902), (17, 27938), (31, 28211), (34, 28244),

Gene: Erutan_31 Start: 28223, Stop: 28828, Start Num: 1
Candidate Starts for Erutan_31:
(Start: 1 @28223 has 73 MA's), (2, 28274), (5, 28298), (14, 28406), (36, 28778),

Gene: FelixAlejandro_32 Start: 37261, Stop: 37863, Start Num: 1
Candidate Starts for FelixAlejandro_32:
(Start: 1 @37261 has 73 MA's), (5, 37336), (19, 37519), (24, 37600), (25, 37618),

Gene: Fulcrum_32 Start: 28753, Stop: 29346, Start Num: 1
Candidate Starts for Fulcrum_32:
(Start: 1 @28753 has 73 MA's), (11, 28915), (13, 28930), (17, 28966), (31, 29239),

Gene: GOATification_32 Start: 28753, Stop: 29346, Start Num: 1
Candidate Starts for GOATification_32:
(Start: 1 @28753 has 73 MA's), (11, 28915), (13, 28930), (17, 28966), (31, 29239),

Gene: GalacticEye_28 Start: 37316, Stop: 37891, Start Num: 1
Candidate Starts for GalacticEye_28:
(Start: 1 @37316 has 73 MA's), (2, 37367), (4, 37373), (5, 37391), (14, 37499), (23, 37637), (26, 37679), (29, 37754),

Gene: Genamy16_31 Start: 26760, Stop: 27347, Start Num: 1
Candidate Starts for Genamy16_31:
(Start: 1 @26760 has 73 MA's), (13, 26937), (17, 26973), (31, 27240),

Gene: Gibbin_32 Start: 28852, Stop: 29445, Start Num: 1
Candidate Starts for Gibbin_32:
(Start: 1 @28852 has 73 MA's), (Start: 3 @28906 has 2 MA's), (4, 28909), (11, 29014), (12, 29017), (13, 29029), (17, 29065), (31, 29338), (34, 29371),

Gene: GretelLyn_31 Start: 29165, Stop: 29704, Start Num: 3
Candidate Starts for GretelLyn_31:
(Start: 1 @29111 has 73 MA's), (Start: 3 @29165 has 2 MA's), (6, 29189), (10, 29246), (11, 29273), (13, 29288), (17, 29324), (34, 29630),

Gene: Guillaume_28 Start: 37366, Stop: 37941, Start Num: 1
Candidate Starts for Guillaume_28:
(Start: 1 @37366 has 73 MA's), (2, 37417), (4, 37423), (5, 37441), (14, 37549), (23, 37687), (26, 37729), (29, 37804),

Gene: Hail2Pitt_28 Start: 37843, Stop: 38418, Start Num: 1
Candidate Starts for Hail2Pitt_28:
(Start: 1 @37843 has 73 MA's), (2, 37894), (4, 37900), (5, 37918), (14, 38026), (23, 38164), (26, 38206), (29, 38281),

Gene: Harambe_28 Start: 37633, Stop: 38208, Start Num: 1
Candidate Starts for Harambe_28:
(Start: 1 @37633 has 73 MA's), (2, 37684), (4, 37690), (5, 37708), (14, 37816), (23, 37954), (26, 37996), (29, 38071),

Gene: Hello_28 Start: 37595, Stop: 38170, Start Num: 1
Candidate Starts for Hello_28:
(Start: 1 @37595 has 73 MA's), (2, 37646), (4, 37652), (5, 37670), (14, 37778), (23, 37916), (26, 37958), (29, 38033),

Gene: Jalebi_30 Start: 29287, Stop: 29880, Start Num: 1
Candidate Starts for Jalebi_30:
(Start: 1 @29287 has 73 MA's), (5, 29362), (11, 29449), (14, 29470), (17, 29500), (31, 29773), (33, 29782), (34, 29806),

Gene: Jamemuya19_28 Start: 26350, Stop: 26937, Start Num: 1
Candidate Starts for Jamemuya19_28:
(Start: 1 @26350 has 73 MA's), (13, 26527), (17, 26563), (31, 26830),

Gene: Jams_28 Start: 36792, Stop: 37379, Start Num: 1
Candidate Starts for Jams_28:
(Start: 1 @36792 has 73 MA's), (13, 36969), (31, 37272), (33, 37281),

Gene: Jellybones_31 Start: 37122, Stop: 37724, Start Num: 1
Candidate Starts for Jellybones_31:
(Start: 1 @37122 has 73 MA's), (5, 37197), (19, 37380), (24, 37461), (25, 37479),

Gene: John316_31 Start: 37075, Stop: 37677, Start Num: 1
Candidate Starts for John316_31:

(Start: 1 @37075 has 73 MA's), (5, 37150), (19, 37333), (24, 37414), (25, 37432),

Gene: Jormungandr_28 Start: 37348, Stop: 37923, Start Num: 1
Candidate Starts for Jormungandr_28:
(Start: 1 @37348 has 73 MA's), (2, 37399), (4, 37405), (5, 37423), (14, 37531), (23, 37669), (26, 37711), (29, 37786),

Gene: Kaseim_28 Start: 36777, Stop: 37364, Start Num: 1
Candidate Starts for Kaseim_28:
(Start: 1 @36777 has 73 MA's), (13, 36954), (31, 37257), (33, 37266),

Gene: Lahirium_28 Start: 37870, Stop: 38445, Start Num: 1
Candidate Starts for Lahirium_28:
(Start: 1 @37870 has 73 MA's), (2, 37921), (4, 37927), (5, 37945), (14, 38053), (23, 38191), (26, 38233), (29, 38308),

Gene: Lambo_31 Start: 28762, Stop: 29367, Start Num: 1
Candidate Starts for Lambo_31:
(Start: 1 @28762 has 73 MA's), (2, 28813), (4, 28819), (13, 28939), (22, 29080), (23, 29083), (26, 29125), (36, 29317),

Gene: LavAbarElk_29 Start: 27226, Stop: 27819, Start Num: 1
Candidate Starts for LavAbarElk_29:
(Start: 1 @27226 has 73 MA's), (Start: 3 @27280 has 2 MA's), (4, 27283), (11, 27388), (12, 27391), (13, 27403), (17, 27439), (31, 27712), (34, 27745),

Gene: Lidong_28 Start: 37592, Stop: 38179, Start Num: 1
Candidate Starts for Lidong_28:
(Start: 1 @37592 has 73 MA's), (13, 37769), (31, 38072), (33, 38081),

Gene: Lila22_30 Start: 28717, Stop: 29322, Start Num: 1
Candidate Starts for Lila22_30:
(Start: 1 @28717 has 73 MA's), (2, 28768), (4, 28774), (5, 28792), (13, 28894), (21, 29026), (22, 29035), (23, 29038), (26, 29080), (36, 29272),

Gene: LuckyLeo_30 Start: 28090, Stop: 28686, Start Num: 1
Candidate Starts for LuckyLeo_30:
(Start: 1 @28090 has 73 MA's), (Start: 3 @28144 has 2 MA's), (5, 28165), (7, 28177), (13, 28267), (14, 28273), (22, 28411), (27, 28489), (30, 28567), (34, 28612),

Gene: Luker_29 Start: 37823, Stop: 38398, Start Num: 1
Candidate Starts for Luker_29:
(Start: 1 @37823 has 73 MA's), (2, 37874), (4, 37880), (5, 37898), (14, 38006), (23, 38144), (26, 38186), (29, 38261),

Gene: Mima20_29 Start: 28476, Stop: 29069, Start Num: 1
Candidate Starts for Mima20_29:
(Start: 1 @28476 has 73 MA's), (5, 28551), (11, 28638), (13, 28653), (17, 28689), (31, 28962), (34, 28995),

Gene: Minos_29 Start: 37334, Stop: 37921, Start Num: 1
Candidate Starts for Minos_29:
(Start: 1 @37334 has 73 MA's), (13, 37511), (31, 37814), (33, 37823),

Gene: MoiGyank_33 Start: 29157, Stop: 29750, Start Num: 1
Candidate Starts for MoiGyank_33:
(Start: 1 @29157 has 73 MA's), (14, 29340), (31, 29643), (33, 29652),

Gene: MrWormie_28 Start: 36495, Stop: 37082, Start Num: 1
Candidate Starts for MrWormie_28:
(Start: 1 @36495 has 73 MA's), (13, 36672), (31, 36975), (33, 36984),

Gene: Msay19_32 Start: 37256, Stop: 37858, Start Num: 1
Candidate Starts for Msay19_32:
(Start: 1 @37256 has 73 MA's), (5, 37331), (14, 37439), (24, 37595), (25, 37613),

Gene: Neoevie_28 Start: 37610, Stop: 38185, Start Num: 1
Candidate Starts for Neoevie_28:
(Start: 1 @37610 has 73 MA's), (2, 37661), (4, 37667), (5, 37685), (14, 37793), (23, 37931), (26, 37973), (29, 38048),

Gene: Newt_29 Start: 37837, Stop: 38412, Start Num: 1
Candidate Starts for Newt_29:
(Start: 1 @37837 has 73 MA's), (2, 37888), (4, 37894), (5, 37912), (14, 38020), (23, 38158), (26, 38200), (29, 38275),

Gene: Nimi13_28 Start: 37355, Stop: 37930, Start Num: 1
Candidate Starts for Nimi13_28:
(Start: 1 @37355 has 73 MA's), (2, 37406), (4, 37412), (5, 37430), (14, 37538), (23, 37676), (26, 37718), (29, 37793),

Gene: NorManre_32 Start: 28358, Stop: 28951, Start Num: 1
Candidate Starts for NorManre_32:
(Start: 1 @28358 has 73 MA's), (Start: 3 @28412 has 2 MA's), (4, 28415), (11, 28520), (12, 28523), (13, 28535), (17, 28571), (31, 28844), (34, 28877),

Gene: NovaSharks_30 Start: 26350, Stop: 26937, Start Num: 1
Candidate Starts for NovaSharks_30:
(Start: 1 @26350 has 73 MA's), (13, 26527), (17, 26563), (31, 26830),

Gene: OtterstedtS21_31 Start: 28433, Stop: 29026, Start Num: 1
Candidate Starts for OtterstedtS21_31:
(Start: 1 @28433 has 73 MA's), (Start: 3 @28487 has 2 MA's), (6, 28511), (10, 28568), (11, 28595), (13, 28610), (17, 28646), (34, 28952),

Gene: ParvusTarda_31 Start: 27891, Stop: 28496, Start Num: 1
Candidate Starts for ParvusTarda_31:
(Start: 1 @27891 has 73 MA's), (2, 27942), (4, 27948), (5, 27966), (14, 28074), (19, 28149), (25, 28248), (36, 28446),

Gene: Patos_32 Start: 28358, Stop: 28951, Start Num: 1
Candidate Starts for Patos_32:
(Start: 1 @28358 has 73 MA's), (Start: 3 @28412 has 2 MA's), (4, 28415), (11, 28520), (12, 28523), (13, 28535), (17, 28571), (31, 28844), (34, 28877),

Gene: Philon9_31 Start: 39420, Stop: 39992, Start Num: 1

Candidate Starts for Philon9_31:
(Start: 1 @39420 has 73 MA's), (Start: 3 @39468 has 2 MA's), (4, 39471), (5, 39489), (6, 39492), (12, 39579), (19, 39663), (29, 39855), (32, 39888), (34, 39918),

Gene: Poland_32 Start: 37235, Stop: 37837, Start Num: 1
Candidate Starts for Poland_32:
(Start: 1 @37235 has 73 MA's), (5, 37310), (14, 37418), (24, 37574), (25, 37592),

Gene: Pywacket_30 Start: 29248, Stop: 29841, Start Num: 1
Candidate Starts for Pywacket_30:
(Start: 1 @29248 has 73 MA's), (2, 29299), (4, 29305), (5, 29323), (14, 29431), (23, 29569), (26, 29611), (29, 29704),

Gene: Ranch_31 Start: 27251, Stop: 27850, Start Num: 1
Candidate Starts for Ranch_31:
(Start: 1 @27251 has 73 MA's), (5, 27326), (6, 27329), (9, 27383), (13, 27428), (14, 27434), (18, 27500), (20, 27512), (34, 27776),

Gene: RazorC_29 Start: 26742, Stop: 27329, Start Num: 1
Candidate Starts for RazorC_29:
(Start: 1 @26742 has 73 MA's), (13, 26919), (17, 26955), (31, 27222),

Gene: Riduram_28 Start: 26320, Stop: 26907, Start Num: 1
Candidate Starts for Riduram_28:
(Start: 1 @26320 has 73 MA's), (13, 26497), (17, 26533), (31, 26800),

Gene: Rota_30 Start: 28685, Stop: 29233, Start Num: 4
Candidate Starts for Rota_30:
(Start: 1 @28628 has 73 MA's), (2, 28679), (4, 28685), (13, 28805), (19, 28886), (25, 28985), (36, 29183),

Gene: Rukungu_31 Start: 28953, Stop: 29546, Start Num: 1
Candidate Starts for Rukungu_31:
(Start: 1 @28953 has 73 MA's), (Start: 3 @29007 has 2 MA's), (4, 29010), (11, 29115), (12, 29118), (13, 29130), (17, 29166), (31, 29439),

Gene: Rumi_30 Start: 26353, Stop: 26940, Start Num: 1
Candidate Starts for Rumi_30:
(Start: 1 @26353 has 73 MA's), (13, 26530), (17, 26566), (31, 26833), (33, 26842),

Gene: Sadboi_31 Start: 29111, Stop: 29704, Start Num: 1
Candidate Starts for Sadboi_31:
(Start: 1 @29111 has 73 MA's), (Start: 3 @29165 has 2 MA's), (6, 29189), (10, 29246), (11, 29273), (13, 29288), (17, 29324), (34, 29630),

Gene: Sampudon_31 Start: 29287, Stop: 29880, Start Num: 1
Candidate Starts for Sampudon_31:
(Start: 1 @29287 has 73 MA's), (5, 29362), (11, 29449), (14, 29470), (17, 29500), (31, 29773), (33, 29782), (34, 29806),

Gene: Shelley_28 Start: 36819, Stop: 37406, Start Num: 1
Candidate Starts for Shelley_28:
(Start: 1 @36819 has 73 MA's), (13, 36996), (31, 37299), (33, 37308),

Gene: Sticker17_28 Start: 37346, Stop: 37921, Start Num: 1
Candidate Starts for Sticker17_28:
(Start: 1 @37346 has 73 MA's), (2, 37397), (4, 37403), (5, 37421), (14, 37529), (23, 37667), (26, 37709), (29, 37784),

Gene: Stormer_29 Start: 26356, Stop: 26943, Start Num: 1
Candidate Starts for Stormer_29:
(Start: 1 @26356 has 73 MA's), (8, 26449), (13, 26533), (17, 26569), (31, 26836),

Gene: Teal_28 Start: 37814, Stop: 38389, Start Num: 1
Candidate Starts for Teal_28:
(Start: 1 @37814 has 73 MA's), (2, 37865), (4, 37871), (5, 37889), (14, 37997), (23, 38135), (26, 38177), (29, 38252),

Gene: Tillicus_30 Start: 27738, Stop: 28280, Start Num: 3
Candidate Starts for Tillicus_30:
(Start: 1 @27684 has 73 MA's), (Start: 3 @27738 has 2 MA's), (5, 27759), (7, 27771), (13, 27861), (14, 27867), (22, 28005), (27, 28083), (34, 28206),

Gene: Vitaenoii_31 Start: 39419, Stop: 39991, Start Num: 1
Candidate Starts for Vitaenoii_31:
(Start: 1 @39419 has 73 MA's), (Start: 3 @39467 has 2 MA's), (5, 39488), (6, 39491), (12, 39578), (19, 39662), (29, 39854), (32, 39887), (34, 39917),

Gene: Woes_28 Start: 37853, Stop: 38440, Start Num: 1
Candidate Starts for Woes_28:
(Start: 1 @37853 has 73 MA's), (13, 38030), (17, 38066), (31, 38333),

Gene: Wojtek_30 Start: 27970, Stop: 28575, Start Num: 1
Candidate Starts for Wojtek_30:
(Start: 1 @27970 has 73 MA's), (2, 28021), (4, 28027), (13, 28147), (22, 28288), (23, 28291), (26, 28333), (36, 28525),

Gene: Yikes_32 Start: 29366, Stop: 29959, Start Num: 1
Candidate Starts for Yikes_32:
(Start: 1 @29366 has 73 MA's), (Start: 3 @29420 has 2 MA's), (4, 29423), (11, 29528), (12, 29531), (13, 29543), (17, 29579), (31, 29852), (34, 29885),

Gene: Zany_30 Start: 28893, Stop: 29486, Start Num: 1
Candidate Starts for Zany_30:
(Start: 1 @28893 has 73 MA's), (11, 29055), (13, 29070), (17, 29106), (31, 29379), (33, 29388), (34, 29412),